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Improving LGBT Cultural Competence in Senior Nursing Students

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IMPROVING LGBT CULTURAL COMPETENCE IN SENIOR NURSING STUDENTS

by

HALLIE ORGEL

EVIDENCE-BASED PRACTICE PROJECT REPORT

Submitted to the College of Nursing and Health Professions

of Valparaiso University,

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in partial fulfillment of the requirements

For the degree of

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2017

Hallie Orgel 4/21/17
Student Date

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Advisor Date



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DEDICATION

This project is dedicated to every person who told me that they believed in me. It took every small foothold of courage you lent me to come this far. To my family: your voices guide my decisions; I look to your faces for hope, assurance, and joy. You are the force protecting me, and carrying me. To my friends: thank you for letting me practice on you, vent to you, brainstorm with you, and escape with you, thank you for opening your lives to me to help me learn, and for being understanding of my absences. Finally, thank you to the healers of the world who demonstrate profound use of this great resource within us all and who have stirred me to do the same.

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This project would never have become a reality without the assistance of many individuals. My advisor, Dr. Brandy was invaluable in her expertise, her infinite positive attitude, and her astute counsel. Professor Migler, the site facilitator, accommodated this project into her course. Her flexibility, enthusiasm, and excellent command over her classroom allowed the project to be successfully implemented. Professor Kost shared her innovation in simulation activities to aid me in creating an organized, meaningful interactive experience for the project participants. With deepest gratitude and warmest amity, I thank Alliance, Valparaiso University's LGBT community. Their collaboration and fortitude in engaging with the nursing students allowed the experience to transcend conventional education, to an exploration with lasting impact. Finally, I must acknowledge my cherished colleagues. I have been privileged to share the classroom with such strong minds and valiant hearts.

TABLE OF CONTENTS

<u>Chapter</u>	<u>Page</u>
DEDICATION.....	iii
ACKNOWLEDGMENTS.....	iv
TABLE OF CONTENTS	v
LIST OF TABLES.....	vii
LIST OF FIGURES	viii
ABSTRACT.....	ix
CHAPTERS	
CHAPTER 1 – Introduction.....	1
CHAPTER 2 – Theoretical Framework and Review of Literature	9
CHAPTER 3 – Implementation of Practice Change	73
CHAPTER 4 – Findings.....	83
CHAPTER 5 – Discussion.....	98
REFERENCES.....	113
AUTOBIOGRAPHICAL STATEMENT.....	119
ACRONYM LIST.....	120
APPENDICES	
APPENDIX A – The Purnell Model for Cultural Competence.....	121
APPENDIX B – Summary of Appraised Literature.....	122
APPENDIX C – Permission Requests.....	129
APPENDIX D – Confidentiality Oral Script.....	133
APPENDIX E – Participation Invitations to LGBT Group.....	135

APPENDIX F – Knowledge, Attitudes, and Skills Questionnaire.....	136
APPENDIX G – Suggestions for Improvement Prompt.....	141
APPENDIX H – Discussion Board Prompt.....	142
APPENDIX I – Role Play Activity Instructions.....	143
APPENDIX J – LGBT PowerPoint Presentation.....	144

LIST OF TABLES

<u>Table</u>	<u>Page</u>
Table 2.1 Literature Search Summary.....	xx
Table 2.2 Levels of Evidence.....	xx
Table 4.1 Characteristics of the Participants.....	xx
Table 4.2 Paired-Sample <i>t</i> Tests for Knowledge, Attitudes, and Skills.....	xx
Table 4.3 Questionnaire Responses.....	xx

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
Figure 4.1 Post-Test Gender Pie Chart.....	xx
Figure 4.2 Post-Test Sexual Orientation Pie Chart	xx
Figure 4.3 Post-Test Race Pie Chart	xx
Figure 4.4 Post-Test Religion Pie Chart	xx
Figure 4.5 Knowledge, Attitudes, and Skills Bar Graph.....	xx
Figure 4.6 Attitudes Bar Graph.....	xx
Figure 4.7 Skills Bar Graph.....	xx

ABSTRACT

LGBT (lesbian, gay, bisexual, transgender) health care is considered a national priority by The Institute of Medicine (IOM, 2011) and HealthyPeople 2020 (2013). The shortage of LGBT culturally competent health care providers is a top contributor to the oppression and discrimination affecting LGBT health (2013). The purpose of the evidence-based practice (EBP) project was to improve the cultural competence of nursing students by improving their knowledge, attitudes, and skills in working with the LGBT population. A multi-method intervention was provided to seniors in a baccalaureate program. The project took place at a private Midwestern university and utilized a pretest/post-test design. The Purnell Model for Cultural Competence provided the framework for this project and the Model for Evidence-Based Practice Change guided implementation. A questionnaire including demographics, knowledge, attitudes, and skills items, was completed by students during a required nursing course. A PowerPoint lecture, a panel discussion with members of the university LGBT group, and an interactive role-play activity between nursing students and LGBT group members was implemented during three 50-minute class periods over one week. The questionnaire was completed again following the intervention. Paired *t*-tests of the subscales knowledge, attitudes and skills revealed statistically significant improvement of each subscale, indicating improved cultural competence. The knowledge subscale *t*-test revealed a pretest mean of 4.21 (*SD* = 1.64) and a post-test mean of 6.81 (*SD* = 1.12), and a significant increase in knowledge from pretest to post-test ($t(51) = -12.717, p = .000$). The attitudes *t*-test found a pretest mean of 13.08 (*SD* = 3.99), a post-test mean of 11.34 (*SD* = 3.17), and a significant decrease in negative attitudes ($t(52) = 4.86, p = .000$). The paired-samples *t* test for the skills subscale identified a pretest mean of 20.23 (*SD* = 4.71), a post-test mean of 16.34 (*SD* = 4.87), and lack of skills significantly decreased, ($t(52) = 5.64, p = .000$). Maintenance of this intervention at the university would increase LGBT cultural competence of nursing students.

Keywords: LGBT, lesbian, gay, bisexual, transgender, cultural competence, nurse, education

CHAPTER 1

INTRODUCTION

Evidence-Based Practice (EBP) is a strategy utilized by clinicians throughout their careers to form decisions which will improve patient care and health outcomes for individuals and communities (Melnyk & Fineout-Overholt, 2015). This problem-solving approach combines the best available evidence found through systematic search and appraisal of research, clinician experience, and patient preferences and values (2015). A critical reason for employing EBP is that evidence is constantly evolving, and in order for clinicians to provide the best care, they must keep pace with current recommendations. The topic of LGBT health care issues is a prime example of how necessary EBP is to aiding health care providers in giving care which is up-to-date with current knowledge. LGBT is an umbrella term, which stands for lesbian, gay, bisexual, and transgender, but which pertains to all gender and sexual minority individuals. Clinical care for LGBT patients and education concerning LGBT health is lagging behind current national policies, leading to a persistence of health care disparities for this population. EBP utilization can bridge the gap between what the research indicates is required to improve the health care of LGBT individuals, what is included in the education of health care providers, and ultimately the care that clinicians bring to the bedside of LGBT patients. The focus of this EBP project is to implement the best practice supported by current evidence in improving LGBT cultural competence education for undergraduate nursing students in order to increase their knowledge, skills, and attitudes towards LGBT patients. A thorough systematic review and needs assessment were undertaken in order to determine the necessity of a practice change. Analysis of the literature revealed best practice recommendations for improving undergraduate nursing students' LGBT cultural competence. An EBP model and nursing theory were chosen to provide the foundation of the development and implementation of the project. This chapter

provides a concise discussion of the background, problem statement, purpose, and significance of the EBP project.

Background

LGBT health care is currently an issue at the forefront of minority health, granting visibility and attention to a population that has been largely ignored in research, education, laws, and practice efforts to improve minority health disparities. According to The Joint Commission (2011), although members of the LGBT community encompass every race, ethnicity, religion, age, level of physical ability, mental capacity, socioeconomic group, and reside in every county of the United States, initiatives to advance cultural competence to diverse groups have overlooked this population until recently (2011). In addition to the health concerns of the population at large, LGBT individuals suffer disproportionate prevalence of decreased access to health insurance and preventative care like cancer screenings, have lower overall health, have the highest rates of alcohol, tobacco, and substance use, have increased prevalence of sexually transmitted diseases, homelessness, mental illness including anxiety and depression, increased incidence of some cancers, and increased suicide risk (Joint Commission, 2011; Lim, Brown, and Jones, 2013). To illustrate, LGBT youth are two to three times more likely to attempt suicide (Lim, Brown, and Jones, 2013), while an alarming 41% of transgender individuals attempt suicide (Grant, Mottet, & Tanis, 2010). LGBT youth make up approximately 7% of the US population, however, they make up 40% of the homeless population (Williams Institute, 2012). Substance abuse found within the LGBT population are 20-30% compared to 9% of the general population (SAMHSA, 2012). Gay men make up 5% of the population but make up 42% of the population of men with an eating disorder (National Eating Disorders Association, 2016). These disparities are due to social stigma, lack of awareness, insensitivity to LGBT needs, barriers such as refusal of care, delayed and substandard care, mistreatment, inequitable policies and practices, as well as poor outreach and education (Joint Commission, 2011). For example, it has been found that 8% of LGB individuals and 27% of transgender individuals have been

refused health care (National Women's Law Center, 2014). In order to provide quality care, all patients must be treated with respect and should feel comfortable communicating all information relevant to their care including that concerning sexual orientation and gender identity. However, it has been found that 39% of bisexual men, 33% of bisexual women, 13% of gay men, and 10% of lesbians do not disclose their sexual orientation to their health care providers (HRC, 2016). Because of the longstanding history of discrimination and reluctance of LGBT individuals to seek healthcare, efforts to build trust and ensure safety for this population is the responsibility of health care providers (2011).

Increased attention from the Institute of Medicine (IOM, 2011), HealthyPeople 2020 (2013), and the Agency for Healthcare Research and Quality (2012) have lead to reports by these institutions pertaining to LGBT health as a national priority. The Center for Disease Control calls for culturally competent medical care and prevention services for this population (CDC, 2014). HealthyPeople 2020 cites the shortage of LGBT culturally competent and knowledgeable health care providers as one of the top contributors to the oppression and discrimination affecting LGBT health (2013). Initiatives included in the Affordable Care Act and other policies to improve health care equity for LGBT individuals and eliminate disparities have been put into effect (Joint Commission, 2011) However, despite these actions, health care providers and education of health care providers, especially in the nursing profession, have lagged behind in addressing LGBT needs (Eliason, DeJoeseeph, & Dribble, 2010). Nursing curricula continues to include very little LGBT related content, a dearth of research on LGBT patients exists in nursing research, nursing educators have been shown to be ill-prepared to teach about LGBT health, and ignorance and negative attitudes of nurses towards LGBT patients persist (Carabez, Pellegrini, & Mankovitz, 2015). Cultural competence education focused on incorporating LGBT content into nursing curricula has been shown to be effecting in decreasing prejudice, and improving attitudes, knowledge, skills, and behaviors of healthcare

workers towards LGBT patients (Bertos, Berger, & Hegarty, 2014; Kelley, Chou, Dibble, & Robertson, 2008; Sanchez, Rabatin, Sanchez, Hubbard, & Kalet, 2006).

Statement of the problem

According to The Essentials of Baccalaureate Education for Professional Nursing Practice by the American Association of Colleges of Nursing, nursing programs must prepare students to “advocate for social justice, including a commitment to the health of vulnerable populations and the elimination of health disparities” (AACN, 2008). Nursing programs across the country are failing to meet this expectation in regards to the LGBT population despite the clear vulnerability and vast assortment of health care disparities affecting its members.

Data from the literature. Education and training are considered the first steps towards eliminating the health care disparities suffered by the LGBT population (Lim et al., 2013). Research supports the need for improving nursing curricula by incorporating LGBT cultural competence education into baccalaureate nursing programs. In a study published in 2015 sampling 268 nurses from the San Francisco Bay area, a mecca for the LGBT community, 80% reported having little to no training in LGBT health care (Carabez et al. 2015). Nurse educators working in schools, which do include LGBT content in their curricula, report that only approximately two hours are spent on this population throughout an entire program (Lim, Johnson, & Eliason, 2015). This paucity of education may contribute to the lack of cultural competence of nurses towards LGBT patients found in the literature which has revealed that nurses may desire to avoid contact with LGBT patients, fear sexual advances from lesbian patients, harbor strong negative feelings towards LGBT patients, find it difficult to work with LGBT patients, and have poor knowledge about the LGBT population in general (Lim et al., 2013). A systematic review of educational interventions demonstrated that there is excellent evidence to support that cultural competence education improves knowledge, and good evidence that it supports skills and attitudes of health care providers (Beach et al., 2005). Cultural competence is viewed as a multifaceted concept, therefore recommendations found in

the literature prescribe the use of a multi-method educational approach in order to improve more than one aspect of cultural competence for health care providers (Bartoş et al., 2014; Brennan et al, 2012; Kelley et al., 2008; Lim 2013, and Sales et al., 2013)

Data from the clinical agency. Information collected from the university site of project implementation supports the need for a practice change. Undergraduate professors at the university were contacted through email and this correspondence revealed that the cultural competence education provided to undergraduate nursing students in the baccalaureate program included only a brief mention of LGBT health during a PowerPoint lecture where the top risk factors to LGBT people identified by HealthyPeople 2020 were discussed. LGBT health content is not systematically incorporated into classroom content or materials throughout the program and is not specifically addressed in clinical or simulation experiences. In addition, an email correspondence with the university LGBT group revealed that the school's core curriculum that nursing students are exposed to also provides little to no LGBT content. It can be concluded that insufficient LGBT related content is provided to nursing students at the project site, and cultural competence of students towards LGBT patients may require further improvement through curricular development.

Purpose of the EBP project

The purpose of the EBP project is to improve the LGBT cultural competence of undergraduate nursing students by improving their knowledge, attitudes, and skills in working with this population through a multi-method intervention provided to seniors in a baccalaureate nursing program. The results of numerous studies have indicated that cultural competence education is effective in improving health care provider cultural competence. Incorporating LGBT content into cultural competence curriculum has been shown to improve the attitudes, knowledge, and skills of students in regards to LGBT health.

Identify the compelling clinical question. In order to address the purpose of the EBP project, a clinical question was posed: what is the best way to improve undergraduate nursing

students' cultural competence in regards to LGBT patients? Relevant literature was assessed for inclusion of recommendations for undergraduate student educational in health care fields with the purpose of improving cultural competence in working with LGBT patients.

PICOT format. The PICOT format for framing an EBP question ensures that each key component is clearly identified. The PICOT construction is made up of five parts: the population (P), the intervention (I), the comparison intervention or group (C), the outcome (O), and the timeline for the intervention (T) (Melnyk & Fineout-Overholt, 2015). The PICOT question for the EBP project and a brief description of each part is outlined in the following narrative:

(P) – The population of interest for the EBP project was undergraduate nursing students. A convenience sample of senior nursing students enrolled in a required Global Health course at a private, Midwestern, university was utilized for the project. Senior students were chosen for their previous exposure to cultural competence education and clinical practice. The course was chosen for its relevance to LGBT health as a global concern and for its placement within the timeframe allotted for the implementation phase of the project

(I) – The intervention of interest was a three-tiered multi-method educational approach including a 50 minute PowerPoint lecture on LGBT health issues, a 50 minute panel discussion with the university LGBT group members, and a 50 minute role-playing activity between nursing students and LGBT group members practicing skills such as respectful introductions, health history taking, and assessment of social support and health risk factors. The intervention was guided by the Purnell Model for Cultural Competence and informed by the literature review.

(C) – The comparison for this project was current LGBT cultural competence education of the nursing students which includes a brief mention of HealthyPeople 2020 risk factors provided to sophomore nursing students and some readings on LGBT issues provided through the university core curriculum. Data comparison involved utilization of a pretest/post-test study design, assessing the cultural competence of the senior nursing students before the intervention and comparing it with the cultural competence displayed by the students after the intervention in

terms of their knowledge of LGBT issues, their attitudes towards LGBT individuals, and their skills in working with LGBT patients.

(O) – The outcome of interest for this project was increased cultural competence. This was measured through assessing the students' knowledge of LGBT issues, their attitudes towards LGBT individuals, and their skills in working with LGBT patients through assessment of a questionnaire developed to measure these three categories of cultural competence. Descriptive statistics were calculated for demographic information, mean scores were calculated for each individual questionnaire item between the pretests and post-tests, and paired *t*-tests were performed for the pretest and posttest subscales for the areas of knowledge, attitudes, and skills to determine statistical significance. All statistical data was presented as aggregate information.

(T) – The timeframe of the intervention took place over the course of a one-week period. Three consecutive class periods, each 50 minutes in length were devoted to the intervention. As the Global Health class met three times a week, the intervention spanned 1 week. Data was collected immediately before the intervention on the first day and immediately following the intervention on the third day and evaluated for changes in the students' knowledge, attitudes, or skills concerning the LGBT population.

Significance of the project.

The LGBT movement is one of the most important civil rights issues of the current generation. Major political advances such as the nationwide legal recognition of same-sex marriage in 2015, and the expansion of the 1969 U.S Federal Hate Crime Law to include those focused on gender, sexual orientation, or gender identity through The Matthew Shepard Act passed in 2009, seek to improve the lives of LGBT people (PBS, 2013; de Vogue & Diamond, 2015). The first U.S. census to evaluate sexual orientation was performed in 2013 through the CDC National Health Interview Survey (Ward, Dahlhamer, Galinsky, & Joestl, 2014). Statistics released by this report showed that disparities across the LGBT population exist including

higher cigarette and alcohol use by gay, lesbian, and bisexual individuals compared to those who identified as straight, higher obesity rates in bisexual women, lower general health of gay or lesbian women, higher rates of having experienced serious psychological stress in the last 30 days for bisexual adults, lower likelihood of gay, lesbian, or bisexual adults having a usual place to go for health care services, and a higher percentage lesbian, gay, and bisexual adults failed to obtain necessary medical care in the past year compared to straight individuals (2014). The healthcare community on a national scale has extended a call to action for more research pertaining to LGBT healthcare, and for better education to improve the LGBT cultural competence of health care providers, to address these disparities. However, in practice, the topic LGBT health care continues to be left out of school curricula, ignorance and prejudice of health care providers persists leading to substandard quality of care and enduring of disparities suffered by the LGBT population.

The significance of this EBP project is that it initiates a sustainable intervention connecting the university LGBT community with the undergraduate nursing department which can serve to grow a mutually beneficial program of LGBT health care to improve the cultural competence of future generations of nurses and to improve the trust of the LGBT community in health care. The findings of this project contribute to the body of knowledge concerning LGBT cultural competence education of nursing students and its effect on their knowledge of LGBT issues, their attitudes towards LGBT people, and their practical skills in working with LGBT patients. Use of the current best practice recommendations for LGBT cultural competence education provides the strongest foundation possible for the success of this practice change as one step towards eliminating the health care disparities experienced by the LGBT population.

CHAPTER 2

THEORETICAL FRAMEWORK, EBP MODEL, AND REVIEW OF LITERATURE

The purpose of Chapter two is to establish the theoretical underpinnings of the Evidence Based Practice (EBP) Project, discuss the connection between the Evidence Based Practice (EBP) model and the PICOT question, describe the literature search and appraisal of the evidence supporting the project, synthesize the findings into recommendations for best practice and form a model for the EBP Project. The theoretical framework, set as the foundation of the project, is the Purnell Model for Cultural Competence. The EBP model, chosen to advance the project throughout the stages of answering the PICOT question, is the Model for Evidence-Based Practice Change. The PICOT question at the heart of the project's purpose asks: Does a multi-faceted educational intervention including a lecture, panel discussion, and role-playing activity each lasting 50 minutes, improve the cultural competence, particularly the knowledge, attitudes, and skills, of undergraduate nursing students regarding LGBT individuals compared to their cultural competence before this intervention over a one-week time frame? This chapter details the search strategy including databases, keywords, limiters, inclusion and exclusion criteria, and describes the method of appraisal of the evidence representing the best literature available to support the practice change. Finally, a synthesis of this evidence is provided and formed into recommendations for best practice.

Theoretical framework

The Purnell Model for Cultural Competence. This model was created in 1991 by Larry Purnell as an organizational framework for teaching undergraduate students and staff members about their own cultures, the cultures of their patients and families, and also as a format for assessing culture across health care disciplines (Purnell, 2005). In the model, Purnell envisions the health care practitioner advancing through a series of levels towards cultural competence from unconscious incompetence, to conscious incompetence, then conscious competence, and

finally, unconscious competence. The model is constructed in a circle of concentric rings and pie-shaped wedges. The rings depict the phenomena of global society, community, family, and person. The 12 wedges depict cultural domains including overview/heritage, communication, family roles and organization, workforce issues, biocultural ecology, high-risk behaviors, nutrition, pregnancy, death rituals, spirituality, health-care practices, and health-care practitioners. Each cultural domain includes related concepts. At the center of the diagram is a black circle representing the unknown elements of culture, while the jagged line at the bottom of the diagram depicts the non-linear nature of cultural competence (2005).

Application of The Purnell Model for Cultural Competence. The EBP project integrated very well with this framework. Because the project was implemented in a Global Health course, it was beneficial to utilize a model which included broad aspects of culture such as global society and community, as well as more intimate influences on culture such as family and the individual person. The model includes the concepts of politics, world communication, conflicts, education, business, commerce, technology, travel, health science advancements in the phenomena of global society. The LGBT rights movement is a global event, with repercussions on health care in every cultural competence domain included in this model. The phenomena of community is a connection between people through identity, common interest, physical, social, symbolic, or geographical causes, but which may be changed by the individual based on current needs. The EBP project incorporated outreach to the LGBT community on campus and sought to bridge the gap between this group and the community of undergraduate nursing students. The phenomenon of family was very important to the EBP project as the structure of many LGBT families may differ from the social norm. This is a pertinent issue to health care as nurses must be aware of the need to expand their inclusion, assessments and education to members outside of their patients' immediate family. Finally, the phenomenon of person was hugely relevant to the EBP project as much of the intervention was focused on discussion, definitions, and LGBT health issues related to personal identity (2005).

The twelve domains of culture were created to be universal across cultural groups, and indeed, they do apply to individuals and communities identifying as LGBT. The EBP project took a holistic, life-span approach to improving cultural competence education on LGBT issues and in so doing, addressed the domains of biocultural ecology such as biological variations in sex characteristics and presentation, high-risk behaviors such as substance abuse, nutrition issues including the high rate of obesity in lesbian women, pregnancy concerns such as family planning for transgendered individuals, death and bereavement issues pertaining to the high rate of suicide in this population, family roles and organization such as disownment and same-sex marriage, workforce issues such as discrimination, as well as a discussion of health-care practitioners and practices such as disparities in cancer screening, and provided an overview of the cultural influences on LGBT health including economic and political issues like the high rate of homelessness in this population and current laws affecting LGBT access to care (2005).

Strengths and limitations of The Purnell Model for Cultural Competence. The strengths of this model for the EBP project are that the comprehensive incorporation of many aspects of culture through the phenomena and domains of the model provided a detailed framework for ensuring that the educational intervention covered the major elements of a culture, in this application, the LGBT community. The model was originally created for educational purposes across all health care disciplines and for all cultures, and was easily used in organizing an educational intervention for improving the cultural competence of nursing students on LGBT health care. The author of this model recognizes that cultural competence is a process, not a fixed outcome and so this model is used as a process for becoming culturally competent. This fit with the evidence in the literature which showed that educational interventions improved cultural competence but would not bring students to a state where they would be considered culturally competent. The model has been utilized by professionals across disciplines and settings and may be considered widely applicable (2005). The American

Association of Colleges of Nursing recommended this model in their clinical practice guideline for cultural competence education of Baccalaureate nurses (AACN, 2008).

Limitations of this model for the EBP project are that the large number of concepts could not all be addressed within the time frame of the intervention. However, each phenomena and domain were incorporated into the cultural competence education. Another limitation is that because this model was designed for all health care workers and settings, it is not specific to nursing and nursing students. However, the key concepts of the nursing metaparadigm including health, person, community, and environment are present in the model and it was originally designed for use with undergraduate students. The final limitation of this model is that the phenomena of global society, family, and person are depicted by solid black rings, indicating no interaction between these spheres (2005). For the LGBT culture in particular, these lines may be blurred as individuals find support through group members around the world, especially after the recent hate crimes and atrocities inflicted on this group on a global scale, and family and community membership become more intertwined.

Evidence Based Framework

The model that was used to guide this project is the Model for Evidence-Based Practice Change (Larrabee, 2009).

Model for Evidence-Based Practice Change. Larrabee (2009) revised the Model for Evidence-Based Practice Change from a previous version created in collaboration with Rosswurm in 1999. The current model includes six steps in progression to guide nurses through the EBP process.

Step 1. Assessing the need for a practice change is the first step of this model, indeed, identification of a problem or area for improvement is often the catalyst which inspires an EBP project. During this time, key stakeholders are identified and assembled into a team. The team members gather internal and external data concerning the problem. The external data provides benchmark information for comparison with the internal data. The team develops a PICOT

question during this time as a way of streamlining the practice problem and linking it to possible interventions and outcomes (Larrabee, 2009). The EBP project followed this step of the model through collaboration and formation of a team of stakeholders including the university LGBT group, the professor instructing the undergraduate Global Health course acting as site facilitator, the EBP project advisor, and the university reference librarian. Internal data were determined through emails with undergraduate nursing professors for a needs assessment, which uncovered a gap in curriculum in terms of LGBT health care education. This was compared to the current literature which showed that undergraduate nursing curricula provide insufficient education on LGBT issues and gave recommendations for improvement (Brennan et al., 2012; Carabez et al., 2015; Lim et al., 2013; Lim et al., 2014; Kelley et al., 2008; Long, 2012; Sanchez et al., 2006; Strong & Folse, 2015). The development of the PICOT question connected the problem of inadequate education on LGBT cultural competence with possible intervention strategies for improvement and possible outcome measures for undergraduate nursing students.

Step 2. Larrabee identified locating the best evidence as the second step of the model. This step includes determining the types of resources desired to provide evidence for the practice change, reviewing concepts related to research, planning the search, and conducting the literature search (2009). During the EBP process, a class discussion with the university librarian provided the opportunity to identify specific databases and journals which would be most likely to contain relevant evidence as well as a review of research terms and strategies for conducting a thorough search such as Boolean operators and MESH subject headings. Planning the search was accomplished through use of the research question in identifying key terms. Conducting the literature search involved systematic searches through 12 databases using similar keywords and limiters, searching titles and abstracts for relevant studies, identifying exclusion and inclusion criteria for justifying which studies to use as evidence and which to discard, and documenting the research process.

Step 3. The purpose of step three is to critically analyze the evidence through appraisal, synthesis, and assessment of benefits, risks, and feasibility of the practice change (2009). This was accomplished for the EBP project through the literature review in which all resources were appraised for level as well as quality in order to determine which could be considered best practice evidence to support a change. The findings were synthesized in the literature review and assessed for use in the EBP project. Fourteen resources were determined to represent the best evidence and included four level I, three level III, two level VI and five level VII pieces using Melyk and Fineout-Overholt's method of appraisal (2015). These included a range of studies such as systematic reviews, meta-analyses, a clinical guideline, quasi-experimental studies, descriptive and mixed designs, literature reviews, and expert opinion. The recommendations found in the literature suggested interventions which were of benefit to the students, of low risk, and which would be feasible in the classroom setting and allotted time frame.

Step 4. Step four involves designing the practice change including detailing a proposal of change, identifying the resources needed, designing the evaluation of a pilot and implementation of the project (2009). The EBP project followed these parameters through discussion with the site facilitator concerning class time allotted to the project, designing the components of the intervention and pretest and post-test evaluation tools, and compiling Chapter 3, the section of the project proposal concerning implementation of a practice change.

Step 5. The progression of this model continues with step five which focuses on the implementation and evaluation of the practice change. This involves evaluation of three elements of the change: the process, outcomes, and costs (2009). Developing conclusions and recommendations are also included in this step. The EBP project incorporated this step through the activities detailed in Chapter 5 of the EBP project. This section of the project was devoted to statistical analysis of data and examination of results. The process and outcomes were evaluated through statistical analysis of the pretest and post-tests administered to the students .

The monetary cost associated with this project was incurred through printing the pretests, post-tests, LGBT member questionnaires, and activity instructions, and purchase of the lock box.

Step 6. The final step of this model concerns integration and maintenance of the practice change. Larrabee suggests that this step incorporate communicating the recommendations to stakeholders, integrating the change into the standards of practice, and celebrating and disseminating the project results (2009). These actions were followed in the EBP project. Recommendations generated by analysis of the results of the project were discussed with the site facilitator, LGBT group members, and project advisor. Connecting the campus LGBT community with the undergraduate nursing program allowed an avenue for perpetuation and maintenance of the practice change to improve cultural competence education concerning LGBT health care each year. The final presentation of the EBP project at the end of the DNP program as well as publication on the university website for research, scholarship, and creative work, served to celebrate and disseminate the project results.

Strengths and limitations. The Model for Evidence-Based Practice Change is a strong choice for use in this project as it closely mirrors the outline for the EBP design in terms of the progression of steps in the model and progression of actions necessary to complete each chapter of the project. The intuitive diagram of this model allowed for a clear and practical guide in advancing through the EBP process while still incorporating all key components for creating and maintaining a clinical practice change. Limitations of this model are that there are no aspects of the steps which require analysis of whether or not the change is a priority to the site, the appropriateness of the change, and identification of barriers to the practice change. These elements were vital for ensuring the successful implementation and maintenance of the project. The requirements of the EBP project included a needs assessment which addressed this lack of identification of priority to the site. The needs assessment also determined the appropriateness of the change, and inclusion of a site facilitator to the team ensures that the intervention fits into the curriculum. The evaluation of the process, outcomes, and cost step to this process may

incorporate an analysis of the appropriateness of the change for future implementation although this is not explicitly stated by Larrabee. Barriers to the change were identified during the creation of chapter three of the EBP project and were added to the design process of step four of the model.

Literature search

National health care organizations such as The Joint Commission and Institute of Medicine have charged health care workers to increase attention to the needs of the LGBT population, however, despite this call to action, disparities tied to social stigma prevail (Lim, Brown, & Kim, 2014). Healthy People 2020 determined that LGBT cultural competence training was a vital aspect of health care curricula (Strong & Folse, 2015). However, gaps in research, inadequate education, and provider incompetence in LGBT health care endure (2015). The purpose of the literature search was to identify the current best practice standards for improving education of health care providers on LGBT cultural competence. The literature search was undertaken by means of a thorough examination of 12 electronic databases. Articles which were chosen for inclusion into the literature review were then examined for additional resources through a hand search of their reference lists. Collaboration with the research librarian ensured that the best search strategies were utilized and all relevant databases were searched in order to identify all key resources.

Search engines and keywords. The search engines used listed in order of search included ValpoScholar, Joanna Briggs Institute (JBI), Cochrane Library, *guideline.gov*, Cinahl, ProQuest Nursing & Allied Health Source, Medline via Ebsco, Medline via Pubmed, Health Source, Web of Science, ERIC via Ebsco, and Google. The keywords used included the following terms and their various configurations: education, teaching, nurse, students, lesbian, gay, transgender, homosexual, LGBT, GLBT, and cultural competence. Limiters were applied to the searches including that the resources must be peer reviewed, written in English, and published within the last ten years: 2006-2016. One resource was found through citation chase

and fell one year outside of the publication date parameters, however, it was referenced in a high-level evidence source and was included in the literature review based on the strength of the evidence it provided.

Inclusion and exclusion criteria. Refining the search results involved application of inclusion and exclusion criteria to the literature search. Inclusion criteria were the determinants that studies had to meet to be considered for use in the literature review. Exclusion criteria were the factors that caused a study to be deemed inappropriate for use in the literature review. Inclusion criteria included that the study must be peer reviewed, current within the last 10 years, written in the English language, the authors must provide concrete recommendations for educational strategies to improve cultural competence, the educational interventions must be feasible for the classroom setting (no immersion, study abroad, or entire curriculum change), and evaluation of the intervention must assess more than knowledge. Exclusion criteria were that the intervention must not be directed towards graduate students, faculty members, LGBT patients, LGBT nursing students, or institutional or organizational changes, and the topic could not be too specific to a single aspect of LGBT health such as aging, HIV, smoking, or suicide.

The search began through ValpoScholar in order to determine if any previous students had executed a study related to the EBP project topic. There were eight results, however, none were applicable to the EBP project as they did not relate to cultural competence education. The same occurred with JBI, when the search yielded 29 results, none of which were related to cultural competence education. A search of Cochrane resulted in 6 hits, one was saved, but did not ultimately meet the inclusion criteria because it did not offer recommendations for interventions to improve cultural competence education. The next database searched was *guideline.gov*. This search yielded three results, one was saved because it had specific data concerning assessment of patients who identify as LGBT, however, it was not ultimately used as evidence because it did not offer recommendations for improving cultural competence education. The search of Cinahl yielded 264 results. Of these, 10 were saved and four were

used which met the inclusion and exclusion criteria. A search of ProQuest returned 298 resources, two were duplicates, and 19 were saved for review for inclusion. Of the 19, four met the exclusion and inclusion criteria and were used in the literature review. Medline via Ebsco was the next database searched. There were 507 hits, seven of which were duplicates of resources saved from previous databases. No additional resources were found in this database which met the inclusion and exclusion criteria, so none were used in the literature review. Medline via Pubmed was then searched yielding 178 results. There were five duplicates and although one article was saved, it was deemed inappropriate for the literature review based on inclusion and exclusion criteria. A search of Health Source yielded 214 articles, three were duplicates, two were saved, and one was used in the literature review. The next database searched was Web of Science, which found 70 studies, three of which were duplicates from previous databases, three were saved and none were ultimately used in the review. ERIC was searched next, yielding 371 resources, none of which met the inclusion and exclusion criteria. The final database searched was Google, which yielded thousands of results, only the first three pages of results were searched in an effort to limit the amount of resources reviewed in this database to only the most relevant results. Two resources were saved from Google and used in the review. A hand search of the articles chosen for the review identified seven potentially relevant articles, which were found through citation chase. Of these resources, three were ultimately used in the literature review.

The evidence discovered through the literature search was appraised for level and quality. Melnyk and Finout-Overholt (2009) created a method for rating the levels of evidence from level I through level VII. Using this method, the resources used in the literature review were determined to be levels I, III, VI, and VII. According to this method, level I evidence may be a systematic review, a meta-analysis of randomized control trials (RCTs), or a guideline. The literature search yielded four pieces of evidence determined to be level I. Level II evidence is described as that which is found in RCTs. No resources were found to be level II evidence while

meeting the inclusion criteria for the literature review. Level III evidence includes well-designed controlled trials without randomization. There were three resources included in the review which met the criteria for a level III study. Level IV evidence is from well-designed case-control or cohort studies. None of the resources used in the review were found to be level IV evidence. Likewise, none of the evidence included in the literature review met the criteria for Level V evidence, which is found in systematic reviews of descriptive and qualitative studies. Level VI evidence comes from single descriptive and qualitative studies. There were two articles rated as level VI. Finally, level VII evidence includes opinions of authorities based on scientific evidence including literature reviews, or expert committee reports. Of the resources included in the literature review, five were determined to be level VII evidence.

The inclusion and exclusion criteria were applied to titles, abstracts, and full article text, refining the search results, and appraisal of the literature was performed leading to a definitive collection of 14 articles representing the best evidence to answer the PICOT question. A summary of the literature search is provided in Table 2.1 and a summary of the levels of evidence are depicted in Table 2.2.

Table 2.1

Literature Search Summary

Database	Results	Duplicates	Saved	Used
Valpo Scholar	8	0	0	0
JBI	29	0	0	0
Cochrane	6	0	1	0
Guideline.gov	3	0	1	0
Cinahl	264	0	10	4

ProQuest	298	2	19	4
Medline via Ebsco	507	7	4	0
Medline via Pubmed	178	5	1	0
Health Source	214	3	2	1
Web of Science	70	3	3	0
ERIC via Ebsco	371	0	0	0
Google	NA	NA	NA	2
Citation Chase	NA	NA	7	3
Totals	1948	20	48	14

Note. Databases are listed in order of search. A version of this table was previously published in Orgel, H. (2017). Improving LGBT cultural competence in nursing students: An integrative review. *ABNF Journal* 28(1),14-18

Table 2.2

Levels of Evidence

Resource	Level of Evidence	Database
AACN, 2008	I	Google
Bartoş et al., 2014	I	Health Source
Beach et al., 2005	I	Citation Chase
Gallagher & Polanin, 2015	I	ProQuest
Kelley et al., 2008	III	Citation Chase
Sales et al., 2013	III	ProQuest

Strong & Folse, 2015	III	Cinahl
Carabez et al., 2015	VI	Cinahl
Sanchez et al., 2006	VI	Citation Chase
Brennan et al., 2012	VII	Cinahl
Lim et al., 2013	VII	ProQuest
Lim et al., 2014	VII	Cinahl
Long, 2012	VII	ProQuest
Margolies et al., 2014	VII	Google

“Rating System for the Hierarchy of Evidence for Intervention/Treatment Questions” by B. M. Melnyk and E. Fineout-Overhold, 2015, *Evidence-Based Practice in Nursing and Healthcare*, (3rd ed.), p.11. Copyright 2015 by Wolters Kluwer Health. A version of this table was previously published in Orgel, H. (2017). Improving LGBT cultural competence in nursing students: An integrative review. *ABNF Journal* 28(1),14-18.

Appraisal of Relevant Evidence

Level I evidence. Level I evidence is represented by four resources included in this review and consists of one clinical guideline, one systematic review, and two meta-analyses. Three of these resources discuss educational interventions to improve cultural competence in general and one evaluates educational interventions to reduce sexual prejudice specifically. The American Association of Colleges of Nursing (AACN, 2008) published the clinical practice guideline. It was created as a compilation of resources and exemplars organized into a toolkit with the purpose of assisting professionals in providing cultural competence education to baccalaureate nursing students. Gallagher and Polanin (2015) published a meta-analysis in *Nurse Education Today* with the purpose of examining educational interventions meant to increase cultural competence in nurses and nursing students. Beach, MD; Price, MD; Gary, PhD; Robinson, Gozu, Palacio, Smarth, Jenckes, Feuerstein, Bass, Powe, & Cooper (2005) published a systematic review in *Med Care* with the purpose of identifying which cultural competence intervention strategies have been shown to improve cultural competence and

determining what the costs of these strategies are. Finally, Bartoş Berger, and Hegarty (2014) published a study-space analysis and meta-analytic review in the *Journal of Sex Research* with the purpose of investigating the efficacy of interventions intended to decrease prejudice of lesbian, gay, and bisexual people.

The samples, methods, interventions, instruments, and results included in the level I resources vary as they synthesize the data of a wide range of studies to form scientifically based conclusions and recommendations. However, each of these four resources is similar in the comprehensive quality of the body of their studies. The AACN guide begins with a description of five key competencies required for nursing students to provide culturally competent care upon graduation. These include:

Competency 1: Apply knowledge of social and cultural factors that affect nursing and health care across multiple contexts. Competency 2: Use relevant data sources and best evidence in providing culturally competent care. Competency 3: Promote achievement of safe and quality outcomes of care for diverse populations. Competency 4: Advocate for social justice, including commitment to the health of vulnerable populations and the elimination of health disparities. Competency 5: Participate in continuous cultural competence development. (AACN, 2008, p. 2)

The following section of the guide details key concepts to be incorporated into cultural competence education. The authors discuss the many different definitions of the concepts and describe that the most important element of cultural competence is understanding the interconnection between concepts as well as the complex and dynamic nature of culture. The concepts and definitions include acculturation, culture, cultural awareness, cultural competence, cultural imposition, cultural sensitivity, discrimination, diversity, health disparity and healthcare disparity, and stereotyping. Several nursing models related to cultural competence are identified and summarized. These include the Campinha-Bacote Model of Cultural Competence, Giger and Davidhizer's Model of Transcultural Nursing, Leininger's Cultural Care Diversity and

Universality Theory/Model, Purnell's Model of Transcultural Health Care, and Spector's Health Traditions Model (AANC, 2008)

The next section of the toolkit describes integrative learning strategies to be used in improving cultural competence. These include both classroom and clinical strategies. Recommended classroom strategies are cultural self-assessments, oral presentations on a cultural assessment of a family and neighborhood, guest presentations, case studies, discussion of journal articles, ethnographies, novels, or videos, fieldtrips to ethnic neighborhoods, incorporating information on alternative practices into course material, practicing using religious calendars to create treatment schedules, role-playing, critiquing health care materials for cultural competence, linking students to students at other schools, creating care plans for culturally diverse patients, hosting events celebrating diversity, and simulated emersion living experiences such as living within the poverty threshold. Clinical teaching strategies include: clinical orientation that focuses on cross-cultural issues, providing diverse experiences, journaling, clinical experiences in different settings, immersion in diverse communities, improving cultural assessment skills, participation in community activities, identifying alternative therapies used in specific communities, case presentations on appropriate cultural care, communication between students and interprofessional team members, attending student seminars, presentations, and events, and monitoring facility compliance with Culturally & Linguistically Appropriate Services (CLAS) standards. The remainder of the toolkit is devoted to listing additional resources for curriculum development, practice, and research (AACN, 2008).

Gallagher and Polanin (2015), searched four major databases and several smaller databases, and identified the search terms used. The reference lists from the included studies were searched and key researchers were contacted to identify further resources or provide resource clarification. The authors performed the searches independently and reached consensus on the included studies. A total of 25 studies were used in this review. These studies utilized within-group, pre-test/post-test design, or treatment-control design. The sample included

nurses or nursing students. Twenty-three of the studies were conducted in the United States, with a majority of participants identified as white and female. The methods used in the studies included educational interventions to increase cultural competence such as lecture, discussion, reflective journaling, multimedia, a three-day training course, immersion, simulation, clinical experiences, and role-playing. The cultural competence programs on average spanned 3.8 months, and used a variation of the Inventory for Assessing the Process of Cultural Competence among Healthcare Professionals (IAPPC), Transcultural Self-Efficacy Tool (TSET), the Cultural Self-Efficacy Scale (CSES), the Caffery Cultural Competence Healthcare Scale (CCCHS) or a measure created by the authors of the study to assess cultural competence. The authors of this review appraised the studies using separate meta-analyses for the different types of study designs, coded the interventions and grouped the studies by intervention strategy. The authors also assessed Risk of Bias for the treatment-control studies and found a moderate to high risk of bias for most of those studies (Gallagher & Polanin, 2015).

The authors used several methods of analysis to synthesize the results of the studies and assess their validity. The effect size of each study was determined independently and then combined in a study-level effect size. The inverse-variance weighted effect size and standard error was calculated. All calculations were based on the R package metaphor (Veichtbauer, (2010) and Q formula for effect size heterogeneity was done following Borenstein, Hedges, Higgins, and Rothstein (2009). The results of the treatment-control designs indicated that there was an insignificant but moderately positive increase in cultural competence (effect size=0.38, $p=.08$). Effect sizes were modified by type of measure ($Q_b=21.26$, $p<.001$), type of participant ($Q_b=3.91$, $p=.05$), funding ($Q_b=4.60$, $p<.03$), and date of publication ($B=-.07$, $p=.03$). The type of measure was either a version of the Inventory for Assessing the Process of Cultural Competence among Healthcare Professionals (IAPCC), the Transcultural Self-Efficacy Tool (TSET), the Cultural Self-Efficacy Scale (CSES), or the Caffery Cultural Competence Healthcare Scale (CCCHS). The type of participants were either nurses or nursing students and

studies were either funded or not funded. The results of the pre-test/post-test designs indicated that interventions led to a moderate positive increase in cultural competence with an average weighted effect size of 0.45 and $p < .01$. Moderator analyses were conducted to determine the stability of the effect size estimates and meta-regression was used to test for moderating effects, which revealed that the percentage of white participants had a significant impact on the effect size. Conclusions based on these results indicate that there was a statistically significant moderate effect on cultural competence for the pretest/post-test designs, and a non-statistically significant but positive effect of the treatment-design programs. These results were supported across settings, designs, measures, and length of program. Only 4 of the 25 studies showed a decrease in cultural competence (Gallagher & Polanin, 2015).

The types of studies included in the systematic review by Beach et al. (2005), were randomized controlled trials, pretest/post test designs, and controlled clinical trials. The search strategy included keywords: cultural sensitivity, transcultural, cultural diversity, multicultural, and cultural competency. Six electronic databases were searched, a hand search was performed of priority journals, which were scanned for resources, and reference lists from all articles were also searched. A flow diagram of the search process was included in the study. Details of the studies were presented in tables. The study setting was categorized as in the US or non-US. The sample was defined as either physicians or nurses, at the level of pre-professional or practicing professional. The content was described as addressing specific cultures, general concepts, language, doctor-patient interaction, access, racism, and socioeconomic status. The methods used in the study were categorized as lectures, discussion groups, case scenarios, clinical experience, small group, cultural immersion, audio/visual, interviewing other cultures, and role-play. The contact times of the interventions were identified as less than eight hours, between one to five days, and greater than one week. The outcomes were divided by type and described as provider knowledge, provider attitude, provider skills/behaviors, and patient satisfaction, and outcome assessment was determined to be either objective or not objective.

The evaluation instruments used in the studies included the Multicultural Assessment Questionnaire (MAQ), Cultural Self-Efficacy Scale (CSES), Cancer Attitude Inventory (CAI), Pittsburgh Attitude Survey (PAS), Measure of Epistemological Reflection (MER), Transcultural Self-Efficacy Tool (TCSET), Ethnic Competency Skills Assessment (ECSA), Michigan Longitudinal Study Scales (MLSS), Barrett-Lennard Relationship Inventory (B.L RI), Counselor Effectiveness Scale (CES), and the Counselor Rating Form (CRF) (Beach et al., 2005).

The authors appraised the quality and strength of each study using quality assessment forms containing 21 questions with three to four answer choices each. The agreement between reviewers was calculated to be mean kappa= 0.81 and 0.87 for a serial review process where 10 articles were assessed to determine reviewer agreement. This result is considered excellent agreement. One reviewer completed the quality assessment and a second reviewer read each article and ensured the completeness and accuracy of the assessment. Consensus on any differences between assessments was reached by the entire team. Strength of evidence supporting each outcome (knowledge, attitude, skills, outcomes, and cost) was graded A-D. The requirement for grade A was that at least one piece of evidence had to be a randomized controlled trial, and 75% of the studies had to have objective assessment. To be considered grade B the evidence had to have a controlled trial and 50% of studies had to have objective assessment. Grade C or D was given when there were no controlled trials and less than 50% of studies had objective assessment. For an outcome to be considered grade A, there had to be at least four studies supporting it, three studies for grade B, two studies for grade C, and one for grade D. The results of the studies also had to show consistency either that the intervention was beneficial or harmful. Grade A required all studies to be consistent, B required reasonable consistency, inconsistency for grade C, and if there were too few studies to show any consistency, the evidence was given a grade of D (Beach et al., 2005).

The results of the studies were categorized by provider knowledge, attitudes, skills, cultural competence effect on outcomes, and costs of training. Out of the studies pertaining to

provider knowledge, 17 of 19 showed that the training was beneficial. The authors conclude that there is excellent evidence supporting cultural competence training as a means of improving knowledge. There were 25 studies which evaluated the effect of cultural competence training on provider attitudes. Of these, 21 showed benefit, one showed no effect, and three showed mixed effect. Attitude was most often measured using the Bernal and Freeman Cultural Self-Efficacy Scale. There was sufficient evidence and consistent results, however the quality of the studies reached grade B because less than 75% used objective assessment. The authors conclude that there is good evidence that cultural competence training improves provider attitudes. Provider skills were evaluated in 14 studies and all demonstrated positive effects of cultural competence training on skills. The quantity of evidence and consistency was sufficient, however there was no randomized controlled trial in this group of studies and less than 75% used objective assessment resulting in a grade B appraisal. The authors conclude that there is good evidence supporting that cultural competence improves provider skills. The effect of cultural competence training on patient outcomes was measured in three studies, all of which demonstrated benefit to patient satisfaction and one showed improvement in adherence to follow-up. The authors concluded that evidence for improvement of patient satisfaction was good, grade B, but adherence was given grade D, as the evidence to support this outcome was poor. Cost of training was discussed in four articles, three of which described interventions of international travel. Limited data was provided on cost of classroom interventions, and only one study provided complete data. The authors conclude that there is poor data (grade D) for determining the cost of cultural competence training (Beach et al., 2005).

The review by Bartoş et al. (2014), incorporated 159 intervention studies, both published and unpublished, across disciplines, countries, and languages and of experiment and quasi-experimental designs. The authors employed the Cochrane Handbook for Systematic Reviews of Interventions (Higgins & Green, 2008) search strategy. They compiled two lists of keywords, one pertaining to interventions and one to reactions to homosexuality, which they presented in a

table. The authors search 10 electronic databases, listed in the article, and the search was repeated in March 2012 to uncover any recent studies. A hand search of reference lists of systematic reviews and journals was performed. French, German, and Spanish keyboard searches were completed and African, Eastern European, and Indian databases were searched. Gray literature was searched, especially for postgraduate research, also performed across global databases. Websites of gay and human rights organizations were searched and 19 key individuals with expertise in prejudice reduction were contacted for recommendations of further resources (Bartoş et al., 2014).

The study designs included random assignment in 70 of the studies, 36 had pretest and nonrandomized control groups, 50 had either pretests or nonrandomized control groups, three studies contained post-intervention data only, and 25 included follow-up data. The sample contained 19,782 total participants across the studies with a median sample size of 92 individuals. The majority of participants were female, young, and white. The majority of studies were performed in North America and Western Europe and 87% used undergraduate students as their participants. The authors addressed the methods of the studies by classifying them into 12 intervention groups and identifying different forms of prejudice reduction. Study outcomes were measured as attitudinal, behavioral, cognitive, emotional, or implicit, with 89% of studies focusing on attitudinal measures (Bartoş et al., 2014).

The results indicated that three of the 12 interventions were most effective, with a moderate impact on several measures of sexual prejudice. These interventions included education, contact with LGB individuals, and a combination of contact and education. The authors analyzed the research using a 4-step guideline by Borenstein et al. (2009). Studies were grouped by intervention and outcome. Effect sizes were determined for each individual study using Cohen's d and an online calculator based on post test scores and benchmarks of small= $d < 0.30$, medium= $d < 0.5$, and large= $d > 0.5$. The summary effect sizes were then calculated based on the random effects model using IBM SPSS Statistics Syntax by Field and Gillett

(2010). Then the heterogeneity of the effect sizes was determined, revealing that none of the studies had significant heterogeneity. Lastly, publication bias was assessed using Begg and Mazumdar's method (1994). For the education studies, the effect size was medium: $d=0.46$ with the size of the effect as $SE=0.07$. The contact studies also showed a medium effect with $d=0.36$ and $SE=0.05$. For contact plus education studies, again, the effect was medium, $d=0.41$ and $SE=0.06$. There was no evidence found for publication bias or heterogeneity in any of these groups (Bartoş et al., 2014).

In summary, the level I evidence for improving cultural competence education offers conclusions which support that strategies improve cultural competence and that this type of education should be included in the curricula of health care providers. The recommendations are broad and provide guidance as to the types of strategies, which have been shown to be effective while allowing flexibility for the educator to choose a method that is appropriate for their needs. The AACN guide provides recommendations supported by current literature pertaining to the five key competencies that nursing students should meet in order to provide culturally competent care, the key concepts that should be discussed in cultural competence education, the nursing models on which cultural competence education can be based, a variety of integrative strategies for both classroom and clinical cultural competence education, as well as a multitude of additional resources for curriculum development, research, and practice of cultural competence (AACN, 2008). Gallagher and Polanin (2015) conclude that regardless of program design, setting, participants, intervention, or measurement strategy, cultural competence education of the methods described in their review have been shown to improve cultural competence. The findings of Beach et al. (2005) indicate that there is excellent evidence to support that cultural competence training improves provider knowledge, good evidence that it improves attitudes and skills, good evidence that it improves patient satisfaction, and poor evidence that it improves patient adherence. There is also poor evidence for determining the cost of training. The authors also conclude that all types of interventions were shown to be

effective: long and short duration, experiential and non-experiential, and teaching on general or specific content. Although it is difficult to determine which types of interventions are most effective for each type of outcome, the authors conclude that all interventions have shown positive effect so that any intervention may be effective for cultural competence training. The authors suggest that interventions should include general concepts of culture, avoid bias, and be patient centered (2005). In terms of education specifically focused on LGBT cultural competence, Bartoş et al. (2014), conclude that interventions consisting of education, contact with LGBT individuals, and a combination of education and contact have a moderate effect on sexual prejudice and are the best interventions out of 12 strategies supported by the evidence found across 159 studies.

Appraisal of the evidence included in the literature review was performed using the Melnyk and Fineout-Overholt's method to determine level and Johns Hopkins appraisal tool to determine the quality of each study (Dearholt & Dang, 2012). The AACN guide was appraised as level I and quality B. The recommendations were clear and supported by current scientific evidence published within five years of the guideline. The national expertise is evident and the material was officially published by the AACN. However, several key factors prevent this toolkit from being considered quality A and are limitations to the resource. There is no formal literature review identifying the types of designs of the studies on which the recommendations are based, no discussion of result consistency between studies, and no evaluation of the strengths and limitations of these studies. The authors do not identify the stakeholders involved in the formation of this guide, and there was no clear explanation of the search strategy used to identify the supporting literature. The strengths of this resource are that it was created by a nationally recognized organization of experts, it was designed specifically for baccalaureate nursing students, it identifies and defines the key concepts determined to be necessary for inclusion in cultural competence training which allows for some consistency across cultural competence programs, it utilizes nursing theories as a foundation to cultural competence

education which advances the nursing field in this area, it provides concrete examples of educational strategies which have been shown to improve cultural competence but are varied enough to allow educators to tailor interventions to their setting and participant group, and it includes a multitude of additional resources for cultural competence educators.

The meta-analysis by Gallagher and Polanin (2014) is also rated as level I quality B. Strengths of this review are the comprehensive literature search, the rigorous analysis of the studies for effect size, moderating effects, and bias, and synthesis of evidence from a collection of studies of varied designs. The search was reproducible with key terms identified, multiple databases searched, and inclusion and exclusion criteria identified. Details of study designs were discussed including their sample, methods, results, outcomes, strengths, and limitations. Conclusions were clearly drawn from the evidence and information contained in the tables and narrative were consistent. Limitations of this study are that the search description did not identify the smaller databases used, only the major ones which limits the reproducibility of the search. There was no flow diagram of the search process and although bias, moderating effects and effect sizes were calculated, no discussion of appraisal of the level and quality of the studies was included. The authors discussed the limitations of the individual studies but did not identify the limitations of their own study. Because of these limitations, the study was appraised to be quality B, good quality, rather than high quality evidence.

Beach et al. (2005) was appraised as level I, quality A. The strength of the study is evident in that it meets all of the Johns Hopkins criteria for a high quality study. The strength and quality of the evidence was vigorously appraised, the search strategy was comprehensive and reproducible, multiple databases were searched, exclusion criteria and key terms were provided, and a flow diagram of the research process was included. The details of each study and statistical results included in the review were outlined in tables and synthesized in the narrative. Limitations of the studies included were discussed and recommendations for future research were provided. The limitations of this review were that only published studies were

included, which can result in publication bias towards the positive effects of cultural competence training. The studies were limited to the English language and published after 1980, however the authors argue that these limitations allowed for the most relevant studies to be identified. Another limitation was that the authors developed an original grading criteria, however the authors defend this by stating that no other evaluative method was available for educational interventions and that the detailed description would allow other researchers to apply different standards if necessary. Finally the authors cite their focus on health care providers as a limitation rather than gathering evidence of all organizational strategies for cultural competence.

Bartoş et al. (2014) was also rated as level I, quality A. The authors clearly state the purpose of the review, and provide a detailed reproducible search strategy with tables of key search terms, a flow diagram of the study elimination process, multiple databases, and inclusion and exclusion criteria discussed. Details of the studies were offered including their design, sample, methods, results, outcomes, strengths, and limitations, as well as a 4-point system of appraising the studies based on their design. The authors included interpretation of the results in the narrative and their conclusions were clearly based on the results. Limitations of the study were identified and addressed. The limitations of this study involve problems of the sampling and design of the available research. Authors point to oversampling of young American participants who are a far less prejudiced population compared to that of many other countries. Study researchers did not record the sexuality of the participants, although it has been found that LGBT individuals are both more likely to participate in such studies and are more positive about homosexuality than heterosexual individuals. Countries other than the United States do not have grey literature databases and many interventions are performed without generating data for research, so this evidence could not be included in the study. The research also focused mainly on attitudes, with little information on cognition, behaviors, emotions, and implicit prejudice. Finally, the studies found in this review were not firmly based in theory. Strengths of the review were that the search for relevant studies was very comprehensive and the analysis of

evidence was rigorous. The study space analysis revealed interventions requiring future research and the meta-analysis identified three intervention strategies, which have been shown to be the most effective in reducing sexual prejudice. The review included all elements of a high quality study on Johns Hopkins appraisal tool, and each area was discussed in detail. The use of unpublished work and comparison of these studies with published work showed that unpublished studies were generally more robust than the published works and therefore a vital contribution to this review.

The usefulness of the level I studies for the EBP project lies in the strong scientific foundation supporting their recommendations. The AACN guide was useful for the EBP project in several ways. The five key competencies were used to create appropriate goals and objectives of the intervention. The key concepts and definitions were incorporated into the lecture component of the intervention. The project must be based on a theoretical framework, and utilized one of the nursing models related to cultural competence identified in this toolkit. The classroom interventions recommended in this guide included several which were feasible and appropriate for the EBP project, including guest presentations, and role-playing. The usefulness of the review by Gallagher et al. (2015), was in the interventions described including discussion, lecture, simulation, and role-playing which are feasible and appropriate for the EBP project. The sample identified in the review mirrors the population of interest in the EPB project, the majority of were white, female, American, nursing students. The review shows that these interventions will moderately improve the students' cultural competence and is therefore appropriate support for the project. The systematic review by Beach et al. (2005), supports the use of cultural competence training to improve the knowledge, attitudes, and skills of health care providers, which is the purpose of the EBP project. Although the study determined that one intervention did not seem to be better than another, the authors recommendation of an educational intervention which is patient-centered, with general concepts and which avoids bias were key components of developing the EBP project. The Bartoş et al. (2014) review was useful

for the EBP project because all three of the top interventions identified for reducing sexual prejudice supported the EBP intervention strategy and were feasible for the project. The sample included in this review mirrors the sample of the EBP project (young, mostly female, American, undergraduate students) so results were expected to be generalizable. The majority of studies included in the review assessed attitudes which was one of the three categories evaluated in the EBP project: skills, attitudes, and knowledge. The high level and quality of these studies allowed them to be considered excellent evidence an appropriate for use in the EBP project.

Level III evidence. Level III evidence included three studies of quasi-experimental pretest/post-test design utilized in this literature review. Strong and Folse (2015), published an article in the *Journal of Nursing Education* with the purpose of addressing the educational gaps in literature and determining the possibility of improving undergraduate nursing students' knowledge, attitudes, and cultural competence related to LGBT patients. Sales, Jonkman, Connor, and Hall (2013), published a study in the *American Journal of Pharmaceutical Education* with the purpose of identifying the ability of three different educational strategies to improve cultural competency in pharmacy students. Kelly, Choe, Dibble, and Robertson (2008), published a study in *Teaching and Learning in Medicine: An International Journal* with the purpose of describing the effect of a curriculum designed to discuss LGBT health care disparities and provide opportunity for dialogue between medical students and LGBT community members.

These resources are similar on the basis of design and purpose, however, their samples differ: one studies nursing students, one medical students, and one focuses on pharmacy students, however they all focus on determining the efficacy of interventions to increase the cultural competence of health care providers. Strong and Folse (2015) utilized a convenience sample of 88 students at an undergraduate university in the Midwest in the United States. These students had to meet the requirements of being at least 18 years old, and a declared nursing major. The sample contained students from all years, first through fourth, of the

program, with a majority of third and fourth year students. Of these students, the responses of 58 were included in the analysis (Strong & Folse, 2015).

The researchers obtained IRB approval, and informed consent was obtained and separated from pretest/post-test materials to maintain confidentiality. Gender was not included in the demographic survey questions, as the small number of male students in the class would threaten confidentiality. The test materials were coded to match during analysis. No incentives were offered for participation and there were no consequences for refusal to participate in the study. The intervention involved a 40-45 minute PowerPoint presentation based on recommended content by Brennan et al (2012). The lecture was tested for validity by first piloting it to an expert panel of the university's LGBT group members who provided feedback. The lecture content included information on definitions, LGBT health disparities, cultural competence, and transgender health. Several tools were modified for use in this study. The *Attitudes Towards Lesbians and Gay Men (ATLG) Scale* was used to assess student attitudes (Herek, 1997). Permission was gained by the original authors to use and modify this instrument and the researchers expended it to include bisexual and transgender questions. The questions were scored on a 5-point Likert scale. This instrument was been found to be reliable with a Cronbach's alpha >0.85. The *Lesbian, Gay, Bisexual, and Transgender Healthcare (LGBT Healthcare) Scale* was a combination of questions based on a previous study (Harris, Nightengale, & Owens, 1995) and questions developed by the authors of the current study. This was a 6-point Likert scale, allowing students to provide additional written responses. The Lesbian, Gay, Bisexual, and Transgender Knowledge (LGBT Knowledge) Questionnaire was also a combination of questions created by the authors and questions taken from the Harris et al. (1995) study (Strong & Folse, 2015).

The reliability of each of these instruments was assessed. The modified ATLG Scale was measured using internal consistency with Cronbach's alpha. This demonstrated a high degree of reliability of 0.95. The LGBT Healthcare Scale showed suboptimal reliability with a

Chronbach's alpha of 0.54. The reliability of the LGBT Knowledge Questionnaire was evaluated using the alpha coefficient Kuder-Richardson 20 (KR-20), which also showed suboptimal reliability of 0.54. Validity was also assessed by the researchers. A paired sample *t* test was used to demonstrate whether or not the differences between the pre and post-tests were due to chance. Frequencies were used to identify which questions were missed most frequently on the Knowledge questionnaire between the pretest and post-test (Strong & Folse, 2015).

The results of the study were analyzed using IBM SPSS Statistics for Windows 21.0. Demographic data showed that all students who completed both surveys identified as heterosexual, there was a mix of religious and non-religious students, and a mix of democrat, republican, and non-affiliated students. A majority of students (79%) reported having a friend who identified as part of the LGBT community, 55.2% had an acquaintance, and 24.1% had a family member in this community. The factors that they reported most influence their attitudes were the attitudes of family or friends and positive or negative experience with the LGBT community. The authors used a paired sample *t* test to ensure that the differences between pre and post-tests were not a result of chance alone. The results of the three instruments used provided the following information: the modified ATLG Scale demonstrated a mean increase from pretest to post-test, which demonstrated an increase in positive attitudes. This scale included subscales of lesbian, bisexual, and transgender questions all of which showed statistical significance at the level of 0.05. The lesbian subscale showed significance of 0.013, bisexual was <0.001, and transgender was <0.001. The LGBT Healthcare Scale showed a mean increase from pretest to posttest in all but one item, which discussed refusal of care for LGBT patients. Two items showed statistical significance: "I feel competent to provide nursing care for LGBT patients" (0.004), and "LGBT patients do not have any specific health needs" (<0.001), (Strong & Folse, 2015). This tool allowed for narrative responses from the students which indicated that they felt the need for more LGBT specific content in nursing curricula and showed that new knowledge had been gained. The LGBT Knowledge Questionnaire scores

showed statistical significance when comparing the entire pretest and post-test, (mean score=14.67, $t=6.699$, significance < 0.001), and statistical significance was also shown between the pre and post-tests of five specific questions: “sex and gender have the same meanings” ($t=3.856$, significance <0.001), “homosexual men are more likely to be the victims of violent crime than the general public” ($t=2.005$, significance=0.044), “homosexuals may experience some or all of the six phases of ‘coming out’” ($t=2.430$, significance=0.018), “It is important to conduct a suicide assessment when working with LGBT patients” ($t=3.035$, significance=0.004), and “LGBT patients do not seek medical treatment as early as heterosexuals because of fear of discrimination” ($t=2.403$, significance=0,020) (Strong & Folse, 2015).

The authors concluded that the intervention significantly improved attitudes towards LGBT individuals. Bisexuality was found to be connected with the most negative attitudes. Knowledge was also significantly improved as shown by the differences in mean scores between the pre and post-tests. The students’ responses to a question pertaining to the current nursing curriculum supports the authors’ recommendations that more content on LGBT patient care should be incorporated into nursing curricula (Strong & Folse, 2015).

The sample described by Sales et al. (2013) included 108 second-year pharmacy students attending a course entitled Profession of Pharmacy at the University of Pittsburgh School of Pharmacy. The method involved dividing the students into three groups of 36 students. Each group participated in one of three interventions. The interventions were each one hour in length. One group was given a lecture about cultural competence, which included two patient cases. Another group received a 10-minute lecture on background cultural competence material and then was further split into groups of six to complete a written case study. The third group also began with a 10 minute lecture on cultural competence, was then broken into groups of six and participated in two simulation encounters. The simulated patients were played by pharmaceutical science graduate students and the simulation involved

interviewing a patient of non-caucasian background. The three intervention groups all had the same objectives: to describe the characteristics of a culturally competent practitioner and the characteristics that might be found when working with patients from diverse backgrounds, to discuss how cultural competence effects the pharmacist-patient relationship, and to identify cultural issues that should be considered when forming a care plan for patients (Sales et al., 2013).

A cultural assessment survey was used as an evaluation instrument. This tool consisted of 15 items on a 5-point Likert scale, three of which were demographic questions, and 12 of which assessed six areas of cultural competence: cultural awareness, knowledge, skills, encounters, desire, and empathy. Students took the pretest during class time before the interventions, and they took the post-test at the completion of the interventions. The tool was developed by combining questions found on a previously validated tool by Sealy, Burnett, and Johnson (2006) and original questions developed by the authors but based on themes and questions found in the literature. These original questions were tested for validity by pharmacy and non-pharmacy faculty members with experience in cultural competence, however, reliability was not discussed. The surveys were matched by giving each student a random 3-digit number. The numbers were kept separate from the surveys in a locked cabinet, monitored by a staff member un-associated with the study. The numbers were available to students for the post-survey for any who had forgotten their numbers. The University IRB approved this study as exempt (Sales et al., 2013).

Several analytical tests were performed using SPSS 18.0 software. The demographic data was analyzed through a chi-square test. The mean change in score for each question on the pre and post-tests within each of the three groups were analyzed using paired *t* tests. The mean change in scores for each question were also compared among the three groups using an ANOVA test (Sales et al., 2013).

There was a 91% response rate to the pre and post-tests, so that 84 total survey instruments were analyzed. Demographic results showed that the majority of students were white, male, and aged 20-25. No difference in age, sex, or ethnicity was found between groups. When analyzing the combined mean scores of the groups for pretests and post-tests, two questions had significant change. Students were more likely to agree or strongly agree with the skills statement of modifying their interview during clinical encounters ($p < .01$), especially those students in the simulation ($p = .008$) and lecture groups ($p = .037$). The students as a whole also were more likely to agree or strongly agree with the empathy statement that patients prefer health care providers who are concerned with their cultural preferences ($p = .011$). The analysis within each group showed that the simulation group had a statistically significant change in the desire question that they would be interested in learning about the health beliefs and practices of different cultures ($p = .037$). The case-control group showed statistically significant change in the awareness question about mastering cultural competence ($p = .041$). The lecture group showed significant changes in the cultural skills question about modifying the interview during clinical encounters ($p = .001$) and the empathy question about addressing medication issues from the patients' personal and cultural perspective ($p = .032$) (Sales et al., 2013).

The authors concluded that no single intervention improved survey scores in all categories of cultural competence. Each intervention improved scores in different categories: the simulation group increased students' cultural skills and desires, the case-study group improved on cultural awareness, and the lecture group improved on skills and empathy. These results led the authors to believe that a combination of interventions would be required to improve student cultural competence. The one-hour time frame of the interventions is supported by this study, which shows improvement of several cultural competence domains. The authors recommend integrating cultural competence education throughout degree programs by determining which areas of cultural competency need improvement and choosing activities to target those areas. Because of the lack of improvement in the categories of knowledge and

encounters, the authors suggest interventions such as research, reading, and consulting with individuals from diverse backgrounds, inviting members of different cultures for guest lectures or panel discussions (Sales et al., 2013).

Kelley et al. (2008), included a sample of 143 second year medical students enrolled in an interdisciplinary Life Cycle Course. The study method involved a three part intervention: a syllabus with basic information on LGBT health issues, term definitions, and homophobia health hazards, a one-hour patient discussion panel with three participants: an older gay man, a young transgender man, and a middle aged lesbian woman who each gave a brief presentation and question answer session, and finally a one-hour session working on case studies in 10 small groups of 14 students each. A 16-item survey was given two weeks before the panel and delivered again directly after the small group intervention. The survey was based on the Index of Attitudes toward Homosexuals (Hudson & Ricketts, 1980) and Blumenfeld's conceptual framework concerning personal, interpersonal, institutional, and cultural homophobia (1992). The questions were formatted using a Likert scale of 1 (strongly agree) to 5 (strongly disagree). This survey was piloted with fourth year medical students in 2003, and exhibited content validity. However, since the survey included knowledge questions measuring multiple concepts, testing for reliability was deemed inappropriate. Students completed the surveys anonymously, but each student used the last three digits of their cell phone numbers in order to match pre and post surveys (Kelley et al., 2008).

Results of the study indicated that not all enrolled students participated in all three of the interventions. The survey response rate to both pre and post-tests was 52% (75 students). Of these 75 students, 80% read the syllabus component, 85% attended the panel discussion, and all 143 students participated in the small group case study session. The demographic characteristics determined by the survey of participants indicated a majority of female respondents, with a mean age of 25 years old, of white or Asian/Asian American ethnicity, and heterosexual orientation. A curriculum evaluation included in the survey showed that 90% of

respondents felt that the syllabus, panel, and small group case study work were helpful in educating them about LGBT issues, especially hearing personal stories from patients and physicians. The students also responded that the three-part intervention helped them identify personal prejudices, and that the intervention could be improved through more time, and skill exercises such as role-playing. Of the 16 survey questions, 25% (four questions) showed statistically significant improvement between pre and post-tests. The survey was broken into three categories: knowledge, attitudes, and experiences. The knowledge section had two statistically significant responses, the attitudes section also had two questions which showed statistically significant change, and the experiences questions showed no statistically significant improvement. The knowledge question, “access to health care is the same for LGBT persons as for other members of the population” had an effect size of 0.59, $p < .001$, the knowledge question, “LGBT people are less likely than heterosexual people to be in long-term monogamous relationships” had an effect size of 0.38. $p < .001$, the attitudes question, “as a physician, I feel it is important for me to know about my patients’ sexual orientation, sexual practices and gender identity” had an effect size of 0.42, $p < .001$, and the attitudes question, “I would prefer not to treat patients with gender identity issues” had an effect size of 0.33, $p < .001$ (Kelly et al., 2008).

The authors concluded that a short intervention can significantly change knowledge and attitudes of medical students towards LGBT people. They consider their curriculum to be brief, flexible, and the first to demonstrate that small group work can teach medical students about health care. The authors cite a major contribution of their study as demonstrating the outcome that students showed increased willingness to give care to transgender patients and to feel that knowing about their patients’ sexual orientations and gender identities were important to care. By comparing the questions which did not show change to those that did, the authors speculate that student changes in attitudes and discomfort are most likely related to lack of exposure (Kelley et al., 2008).

In summary, these quasi-experimental studies examined the ability of different educational interventions to improve multiple aspects of cultural competence including knowledge, skills, behaviors, attitudes, desire, awareness, empathy, and encounters. Strong & Folse (2014), found that a 40-45 minute PowerPoint lecture significantly improved nursing students' attitudes and knowledge. Sales et al. (2013), determined that although all three of their interventions (lecture, simulation, and case studies) improved some aspect of cultural competence in pharmacy students, no single activity increased all domains of cultural competence. Lecture was found to improve cultural skills and empathy, simulation improved skills and desire, and case studies improved cultural awareness. Therefore, the authors concluded that a combination of interventions is recommended. Kelley et al. (2008) utilized a three-part intervention including an informational syllabus, patient panel discussion, and small group case study work. The knowledge and attitudes of medical students were found to be improved by this intervention and the students expressed desire to practice cultural competence skills through role-playing. Cultural competence is a multi-faceted concept and no single intervention may improve cultural competence as a whole, however, use of several educational interventions can improve the cultural competence of health care providers.

Appraisal of these studies places them at level III as a result of their quasi-experimental design. Strong and Folse (2014) was appraised as quality A, high quality. The study met the criteria for a high quality study including a response rate of 61%, well over the limit of 25%, a majority of supportive literature from current or classic sources, a sufficient sample size, and a discussion of validity and limitations. The authors provided several clearly presented tables which were consistent with the data presented in the narrative, and the conclusions drawn by the authors were based on the results of their study. Strengths of the study were that it met the standards for high quality, it provided statistical data for the results of all instruments used as well as a discussion of their reliability and validity, it listed the specific items which showed statistical significance as well as those which did not, and the procedure and intervention were

described in detail so that future researchers could easily replicate the study. Limitations were that two of the three tools were shown to have suboptimal reliability. Because no current instruments met the authors' needs, they created their own and because of the lack of reliability, the authors recommend that these tools be revised. The authors also state that the sample size was limited by barriers to recruitment and data collection, and the constraints of class time limited the amount of material that could be covered. The authors state that the convenience sample from a single university of highly homogeneous students has limited generalizability. Finally, the study design did not allow for evaluating changes in attitudes and knowledge over time following the intervention, so suggest future studies using a longitudinal design.

Sales et al. (2013) was rated as quality C. This study met all requirements for a high quality rating except one, the sample size. In the simulation groups, only 12 of the 36 students were able to actually perform the interview while the other members observed, this low sample was compounded by the fact that only nine surveys from this group were actually paired and analyzed. The small sample size of this group may have affected the survey scores as more significant changes may have been identified if all of the students in the group had been able to participate as an interviewer. Other limitations of this study were that there is a potential for bias as the students may self-report responses they feel are most socially or politically correct. The authors discussed the possibility of response bias if more students volunteer to do a survey who are already more culturally competent, however, they addressed this issue by stating that the large number of students who completed the survey could moderate this risk. Some of the surveys were not coded correctly which decreased the number of studies that could be analyzed. Finally, the survey instrument allowed for a neutral response which could have weakened the measured impact of the interventions. The authors suggested modifying the instrument to include only positive and negative responses. Strengths of the study are that it clearly identified gaps in the current literature and addressed the lack of studies comparing the efficacy of cultural competence interventions through this research study, comparing three such

interventions. The demographics between each intervention group were the same and were treated equally in terms of the instruction given, time allotted, objectives, and evaluation. The data collection method was clearly explained and the survey tool was provided. The tables and narrative explanation of results were consistent and the conclusions drawn by the authors were based on these results.

Kelley et al. (2008) was rated as quality A. The researchers reviewed what was already known in the literature, identified gaps in this knowledge and included a discussion of current and classic studies. The sample size of 143 students was appropriate for this quasi-experimental design, and the survey response rate of 52% was acceptable, as it is over the Johns Hopkins limit of 25%. The results of the study were clearly presented in narrative form in and in tables which showed each survey item in its entirety along with statistical changes pre and post test. The authors also included a table detailing the demographics of the participants, and another table of the curriculum evaluation survey questions. The information contained in the narrative and tables was consistent. The authors provided a discussion of the limitations of their study and the conclusions were based on the results of their study. The strengths of this study were that it met every criteria of Johns Hopkins appraisal tool, indicating that it is high quality. The researchers provided a clear explanation of the methods so that the intervention would be easily reproducible, including the entire validated tool used to assess the effect of the intervention. Limitations of the study were that the change elicited by the intervention was marginal as a result of the low survey response rate and significant change in only 4 of the 16 survey items. The largest response change was 0.57 on a 5-point scale. The authors also stated that long-term effects of the intervention were not assessed in terms of how it affected the students' practice. Additionally, authors stated that portability might be a limitation as not all schools may have access to faculty and community members willing to engage in a panel discussion, but offer the alternative of recruiting individuals from a broader range such as nurses, residents, and heterosexual but LGBT-sensitive colleagues.

The usefulness of these studies as evidence to support the EBP project is in the details of the sample, methods and description of the interventions and instruments used which can be replicated or used to guide the EBP project. Strong and Folse (2014) authored a high quality study which demonstrated statistically significant results when using a PowerPoint lecture intervention to improve knowledge and attitudes of undergraduate nursing students. The intervention is feasible in terms of design and length and the participants are similar to those that would be participating in the EBP project. One of the three tools used in the study was shown to be reliable and may be appropriate to incorporate into the EBP project. The students in the study indicated that one of the most influential factors in determining their attitude towards LGBT individuals is a positive or negative experience with the LGBT community. The EBP project intervention of a panel discussion and face-to-face interaction between LGBT community members and nursing students would create such a positive experience. Sales et al. (2013), provided evidence supporting a multi-intervention approach to cultural competence education. The results showed improvements in several areas of cultural competence, and the authors suggested further interventions such as panel discussions to improve upon more areas of cultural competence such as practitioner comfort working with diverse patients. The survey instrument was validated and may be useful as a tool for the EBP project. Although the participants in this study were pharmacy students and mostly male, which is dissimilar to the demographic make up of the EBP project participants of mostly female nursing students, the prevailing issues of cultural competence and the intervention strategies are similar across health care education. Furthermore, the age group and ethnicity of the participants are similar. Although the quality of this study was rated as a C, the positive results of the study would not have been diminished by a larger sample size and these results represent appropriate support of the EBP project. Kelley et al. (2008) demonstrated a mixed method approach containing several of the approaches feasible and appropriate for the EBP project such as a panel discussion of LGBT members, knowledge content, and small group work. Although the

participants in this study were medical students, they were comparable to the participants in the EBP project as they were demographically similar, being largely female, young, white, and heterosexual. The intervention described is feasible and the improvements to the curriculum suggested such as role-playing may be included in the EBP project as well. The validated survey tool was divided into categories useful for the EBP project: Knowledge, attitudes, and experiences, and it is possible that inclusion of role-playing would have a positive impact on the experiences/skills component, not found in this study. The survey tool was largely appropriate for use with the nursing students with some modification. The two-hour time frame of the intervention is comparable with the time frame allotted to this EBP project compared to other studies with interventions spanning time frames out of the scope of this project, yet yielded statistically significant improvement in students' cultural competence with the LGBT population. The study, as a level III and quality A is appropriate evidence for use in this project.

Level VI evidence. Two studies included in this literature review are considered level VI evidence. One is a mixed-method study including both quantitative and qualitative data, and the other utilizes a descriptive survey design. Carabez, Pellegrini, Mankovitz, Eliason, Ciano, and Scott (2015) published an article in the *Journal of Professional Nursing* with the purpose of exploring the education and training of nurses as well as the reasons behind nurses' feelings of discomfort when providing care to LGBT patients. Sanchez, Rabatin, Sanchez, Hubbard, and Kalet, published a study in *Family Medicine* in 2006, researching the ability of medical students to care for LGBT patients and to uncover any deficiencies in the current curriculum related to care for this population. The authors used the cultural competence domains of students' attitudes, knowledge and skills as a framework to complete a needs assessment of the educational needs of medical students.

Both of these studies focus on improving health care practitioners' cultural competence concerning LGBT health. Neither performed an intervention, however they determined the effects of LGBT cultural competence education, or the lack thereof, on health care

professionals. The results of these studies informed the recommendations for improving education. Carabez et al. (2015) performed a needs assessment utilizing highly structured interviews with key informants. The sample included 268 nurses from across all nursing positions and settings in the San Francisco Bay Area who were interviewed by nursing students enrolled in a Community/Public Health nursing course at a large urban university. Demographic information on the informants was not collected, however, 9.6% voluntarily disclosed that they identified as LGBT. The interview instrument was based on the Health Care Equality Index (HEI), a survey instrument which was designed to be used by organizations to evaluate the care that they provide to LGBT patients. The reliability and validity of this tool were not discussed. The interview included 16 scripted items based on four categories of the HEI, and this study focused on the results of only the three items in the categories of training and comfort level working with LGBT patients: “ (a) Does your organization provide training for key staff members in LGBT patient-centered care? (b) Have you received training or orientation regarding care of lesbian, gay, bisexual, or transgender patients? (c) How prepared/comfortable are nurses working with LGBT patients?” (2015, p.325). The interviews were completed face-to-face and were recorded. Transcripts were analyzed through content analysis. Transcripts were divided among the authors and reviewed independently to identify themes which were then discussed and refined until consensus was reached among the authors. Three themes emerged: organizational training, comfort level, and revelations sparked by interviews (Carabez et al., 2015).

The results of this study revealed that even in a region of the United States with a disproportionately large LGBT population, 80% of the nurses interviewed had had no training at all in working with this population, and those who reported training had only a single lecture in school or general diversity training including a brief mention of LGBT issues. Furthermore, approximately 30% of nurses reported discomfort linked to this lack of education. Nurses expressed stereotypical beliefs about the LGBT population, microaggressive comments and

slights, reported inappropriate workplace behaviors, and used the concept of “we treat everyone the same” as a rationale for not needing to learn about LGBT issues (2015, p.328). The interview itself increased awareness in some nurses, prompting 20% of them to state that they wanted more training. Recommendations for nursing education were to improve nurses’ understanding that some patients and coworkers may be LGBT and to move past the notion that there are no differences between the care of heterosexual and LGBT patients. LGBT education should be integrated into nursing school, continuing education, cultural diversity training, and institutional orientation (Carabez et al., 2015).

Sanchez et al. (2006) obtained a sample of 248 out of 320 third and fourth year medical students, at a large, private, urban school. Students were emailed four times (once every 10 days) with an invitation to participate in the survey and were offered a five dollar movie ticket incentive. Students who decided to participate in the study by completing the survey were given a unique user number and password to protect their identification; this information was de-identified from all responses. Only medical students who had registered could complete the survey to prevent it from being submitted more than once by the same individual. Informed consent was obtained from each participant. The needs assessment survey consisted of 64 items to be completed within 15 minutes. The survey consisted of four parts. Part one elicited demographic information about the survey respondents, part two assessed communication skills with LGBT patients, and part three assessed student attitudes about LGBT health care. Items in parts two and three were based on a validated survey of residents and physicians and their attitudes towards patients with AIDS (Yedidia, Berry, & Barr, 1996). Part four assessed knowledge through 10 true/false and four multiple-choice questions on LGBT health care (Sanchez et al., 2006). These questions were not validated but based on *Healthy People 2010: Companion Document for Lesbian, Gay, Bisexual, and Transgender (LGBT) Health objectives* (2001).

Statistical information was reported for each of the three categories: skills, attitudes and knowledge. For skills, student responses were divided by how many clinical encounters they had with LGBT patients: 1-5, 6-10, or 11 or more. The authors compared these groups with the students' abilities to take a complete history and physical of LGBT patients using ANOVA. It was found that students with more encounters with LGBT patients performed a more comprehensive history and physical, showing increased likelihood of screening for same-sex sexual behaviors ($F=12.5$, $P<.001$), identifying a patient's sexual orientation ($F=2.81$, $P<0.04$), and screening for same-sex intimate partner ($F=5.61$, $P<.001$). Students with more experience were found to be better able to gather an oral history ($F=6.74$, $P<.001$) and conduct a genitourinary exam on LGBT patients ($F=6.10$, $P<.001$) (Sanchez et al., 2006). It was also discovered that self-reported comfort did not have significant correlation to higher knowledge or better history taking. The results of the attitudes assessment showed that students with more clinical encounters with LGBT patients also had a higher positive attitude score on 13, 5-point Likert scale questions assessing student desire and willingness to take care of LGBT patients ($F=5.53$, $P<.001$). Students' knowledge was also shown to increase with more clinical encounters with LGBT patients ($F=3.75$, $P=0.15$) and more positive attitudes ($r=.168$, $P=.009$). There were no correlations to knowledge in demographics, training level, gender, race/ethnicity, or religion. The authors concluded that medical students with more clinical exposure to LGBT patients performed better health histories and physical exams, had more positive attitudes towards LGBT patients, and had increased knowledge of LGBT health issues than medical students with little to no exposure (Sanchez et al., 2006).

In summary, Carabez et al. (2015) discovered the enduring lack of education and training, discomfort and damaging attitudes and behaviors of nurses working with LGBT patients. They highlighted the need to improve LGBT health education to nursing students before they enter the workforce. Recommendations included inviting expert guest speakers to class for discussions, hosting panel discussions with LGBT patients, utilizing interactive

experiences in providing LGBT care, providing website and online film links related to LGBT topics, having clinical rotation discussions on dealing with discomfort, using case studies, training modules, readings, and webinars. Sanchez et al. (2006) determined that medical student exposure to people identifying as LGBT improved several aspects of their ability to care for these patients including performing better health histories and physical exams, and having more knowledge and more positive attitudes about LGBT patients.

Although differing in design, both of these studies were appraised as level VI, and both qualified as quality B, good quality evidence. The strengths of the study performed by Carabez et al. (2015), was that the sample size was large, thus increasing its generalizability and decreasing the opportunity for bias, the literature review contained a majority of current studies published within the last five years, the data methods were clearly described and presented using participant quotations to reinforce statistical data, the information in the tables and narrative were consistent, and the conclusions reported by the authors were based on the results of their study. A limitation of the study, which decreased its quality, was that the authors did not discuss the reliability and validity of the HEI tool used for the interview questions. The authors also identified limitations to their study. They stated that the use of undergraduate students to perform the interviews may have had unequal interviewing skills as some moved the interview off-topic or failed to elicit complete information from the participants. The lack of demographic information of the participants decreased the generalizability of the study and prevented analysis of potential sources of bias. The time constraint of one 16-week semester was listed as a limiter as students had difficulty finding participants, decreasing the representativeness of the sample. Finally, the study was completed in one region, known for its large population of LGBT people, which also may influence the generalizability of the findings.

Sanchez et al. (2006) also had a large sample size and a high survey response rate of 77.5% where anything 25% and higher is considered acceptable according to Johns Hopkins Research Evidence Appraisal Tool (2012). The strengths of the study were that a high response

rate decreases potential for bias as the range of respondents increases. It lowers the possibility that certain students who are different than the general student population took the survey and increases the generalizability of the results. Data collection methods were described clearly so that the study could be easily replicated. Although there was an incentive offered to students for completing the survey, this potential source of bias was tempered by the fact that only 50.8% of respondents actually collected the five dollar movie ticket. The results of the study were detailed in tables showing the demographic characteristics of the participants, the exact survey questions assessing attitudes, skills, and knowledge compared to the scores for each question, and the number of clinical encounters with LGBT patients. There was also a table showing the distribution of knowledge scores. This is significant because it identifies specific areas of knowledge requiring additional attention and can guide future practice in LGBT education for health care providers. The information detailed in the tables matched that given in the narrative text, and the conclusions drawn by the authors were based on these results. The validity of the instruments used in the study was discussed by the authors. Part one of the tool assessed demographics and did not require validity or reliability testing. Parts two and three were based on a tool with proven validity which had already been used once at the same school. This may indicate some level of reliability, although the group the tool was used on previously was not the same so it cannot be considered truly test-retest reliability. Part four questions were not tested for validity and no discussion of reliability was included. However these questions were based on information presented in Healthy People 2010, a nationally recognized authority. The range of correct responses to this section also showed scores from 94% to 13% indicating a complete range of difficulty from easy to very difficult (Sanchez et al., 2006).

Limitations of the study were that generalizability was limited by the study setting of a single urban private medical school. The authors reported that students obtained their clinical experience almost exclusively from one public hospital which is the largest in the country and serves a large LGBT population. The students were very diverse in that they came from all over

the United States. These conditions may not be similar in other schools which decreases generalizability. Another limitation was that although there was a high response rate of 77.5%, this leaves non-responders who may have introduced bias in that their responses may have indicated more negative attitudes or fewer clinical experiences with LGBT patients. The authors pose the concern of bias in terms of “socially desirable answers” where students answer questions based on what they feel is most socially acceptable in the fear that researchers or administrators will link them to their answers. Another limitation is that the survey answers were self-reported, and a more objective assessment of the students’ abilities would be a better way of determining their skills in history taking and physical exams. The authors describe mock or observed clinical encounters as a way to address this limitation in future studies. The final limitation discussed the scores of the true/false questions. A mean score of 60% can indicate chance alone rather than knowledge and the results of this study showed a mean score of 57%. However, the authors addressed this limitation by stating that the wide range of scores from 13% to 94% clearly showed that some questions reveal deficient knowledge while others identify common knowledge. All aspects of the appraisal tool were addressed except the reliability of the survey and the validity of the questions in Part four of the survey. This factor and the lack of more current studies in the literature review prevented the study from being considered quality A (Sanchez et al., 2006).

The usefulness of these studies lies in the findings detailing the outcomes for health care providers who have had cultural competence training on LGBT health issues and for those who have had little to no training of this kind. Carabez et al. (2015) highlighted the outcomes of practicing nurses who have experienced the lack of education and training on LGBT health care across the U.S which has been identified in the literature. The EBP project seeks to address this issue and improve education and training for current nursing students so that when they become practicing nurses they will be more LGBT competent than the nurses described in this study. The authors suggested several methods to improve nurse education which could be

applicable to the EBP project including inviting expert guest speakers to class for a discussion about LGBT issues, hosting panel discussions of LGBT patients, and having interactive experiences through simulation for providing LGBT competent care. Sanchez et al. (2006), supported the concept that exposing students to members of the LGBT population improves their abilities to work with these patients across three domains: it improves their clinical skills, their knowledge, and their attitudes towards these patients. Although the intervention for this project would expose the students to individuals identifying as LGBT in the classroom setting rather than the clinical setting, the positive effects of increased personal experience with this population may be expected regardless of the setting in which this exposure occurs. The study also offers validated survey questions for assessing students' skills and attitudes, which may be possible to incorporate into the EBP project. The good quality of this evidence makes these studies appropriate for use in supporting the EBP project.

Level VII evidence. Five articles included in this literature review are level VII studies. This includes three literature reviews and two resources containing expert opinion based on scientific evidence. Lim, Brown Jr., and Kim (2014), published a study in the *American Journal of Nursing* compiling a literature review of LGBT health issues and disparities and providing recommendations for best practice based on standards of care and current evidence. Brennan, Barnsteiner, De Leon Siantz, Cotter, and Everett (2012), published a literature review in the *Journal of Professional Nursing* with the purpose of discussing weaknesses and gaps in nursing curricula concerning LGBT content and gives suggestions for content to include to improve students attitudes, knowledge, and skills in working with LGBT patients. Long (2012), published a literature review in the *Journal of Cultural Diversity* with the purpose of identifying and discussing the most common current teaching methods used to teach cultural competence to nursing students in the United States. Margeolies, Joo, and McDavid (2014), published a manual through the *National LGBT Cancer Network* with the purpose of serving as a guide for individuals planning to deliver LGBT cultural competence training to health and human service

providers, or to assess and update existing curricula. Finally, Lim, Brown Jr., and Jones (2013), published an article in the *Journal of Nursing Education* with the purpose of exploring “the national climate around LGBT individuals and their related health needs” (2013, p. 198).

Both the literature reviews and expert opinion resources synthesized current literature to support recommendations for improving cultural competence education of health care providers. Four of the studies focused on LGBT education and one discussed cultural competence in general. Lim et al., 2014 discussed current literature on a range of topics regarding LGBT health issues and best practice. They began by identifying the need for improvement, citing that although the Institute of Medicine (IOM), Healthy People 2020, and Agency of Healthcare Research and Quality are committed to focusing attention on this group, prevailing sexual stigma has led to legal discrimination, unequal access to care, lack of health insurance and social programs, and a shortage of culturally competent providers. The authors identified a systematic review of nurse attitudes where all 17 included studies showed negative attitudes towards LGBT patients. An IOM report showed that many providers are uncomfortable serving LGBT patients which can negatively affect care and although LGBT people are considered a priority population, schools continue to teach little to no LGBT health content (Lim et al., 2014).

The authors identified gaps in health care curricula on LGBT issues indicating that the pervasive negative attitudes of nursing students may be the result of lack of experience with the population and lack of instruction and content. To address gaps in curricula, the authors suggested simulation, case studies, and clinical partnerships with LGBT community agencies so that students are able to interact with LGBT individuals. The review identified health issues pertinent to the subgroups within the LGBT population such as obesity, breast cancer, diabetes, stroke, osteoarthritis, and heart disease risk in lesbians, HIV, hepatitis B, and HPV infection in men who have sex with men, suicide, depression, intimate partner violence, obesity and asthma in bisexuals, lack of health insurance, denial of care, discrimination, HIV, victimization, suicide, and mental health issues of transgendered individuals, nontraditional care givers,

polypharmacy, and AIDS in older LGBT people, substance abuse, depression, suicide, and homelessness in youth LGBT people, and those issues affecting the population as a whole such as tobacco, alcohol, and substance abuse prevalence (Lim et al., 2014).

The authors also discussed current research on health promotion with this population and offered a practice guide with tools and resources. Along with the practice guidelines, the authors included a table of the top issues that LGBT individuals should address with their care providers, and a table of the Joint Commissions recommendations for care, treatment and services for this population. Laws and regulations related to LGBT health were also reviewed, such as the Department of Health and Human Services law that all hospitals using Medicare and Medicaid must allow patients to choose their own visitors including same-sex partners and the New York City Health and Hospitals Corporation requirement of mandatory LGBT cultural competence training for employees. The authors finished with a discussion of promoting inclusive patient care and implications for future research and practice (Lim et al., 2014).

The authors concluded that despite increased attention to LGBT issues by national health care organizations and prioritization of this population, disparities, sexual stigma, and poor attitudes persist. Nurses are the largest group of health care providers giving direct patient care and are therefore best able to address these disparities across the lifespan. The research and guidelines supplied by this review can inform education and practice and nurses are encouraged to stay open-minded to future best practice in LGBT health care (Lim et al., 2014).

Brennan et al. (2012), discussed current research on nursing curricula and the cultural competence categories of attitudes, knowledge and skills. The authors cited open-mindedness as a necessary ability in nursing students in order to provide “respectful caring” (Brennan et al., 2012). They stated that cultivating awareness is the first step, and educators should provide a safe, calm environment when discussing highly emotional topics. In order to perform complete health histories and physical exams, the authors suggested that students must cultivate an attitude of inclusivity and non-judgment. Their suggestions for curricular change were to have

classroom experiences like an LGBT panel discussion and role-playing LGBT case scenarios. These were stated to improve attitudes and develop skills. The authors discussed the category of knowledge at length, incorporating research in a life span approach to LGBT health care in terms of identity development, childrearing, coming out, risks such as violence, loneliness, depression, suicide, pregnancy, substance use, and sexual behaviors, midlife issues such as lack of support for marriage, adoption, surrogacy, conception, and diverse family structure, and aging issues such as legal barriers in times of illness and death. Health promotion and disease prevention topics supported by the literature were discussed in the knowledge section as well, and include such issues as lesbian patients being at higher risk for breast cancer but having a lower screening rate, HPV vaccinations, STI and cancer screenings, and violence and abuse. Mental health topics to be included in nursing curriculum included partner loss, widowhood, anxiety, panic attacks, the lack of research on the mental health of the aging LGBT population, and the protective effects of living with partners and parenthood on mental health. Education on care for transgendered persons in particular were discussed, including terminology, medical guidelines, hormone treatment process and risks, surgical processes and risks, and continued screening in patients associated with their birth sex such as Pap smears. The authors presented the literature on disorders of sexual development such as intersex conditions and the therapies and decisions related to gender assignment. This review also included discussion of barriers to health care, interventions and resources, legal issues, and policy issues which should be included in curricular content for nursing students. The skills category described quality nursing care to LGBT patients as the ability to do a developmental assessment, a comprehensive health history, sexual history, and physical assessment, comfort and communication skills with patients from diverse backgrounds, and institutional assessments of LGBT care (Brennan et al., 2012).

This review provided strategies supported by the literature to improve the nursing curricula in LGBT health care, citing panels of LGBT individuals to improve students' sensitivity and empathy, group projects to help students identify and reduce heterosexism in their own

lives, exercises to clarify personal beliefs, literature, films, and music to facilitate discussion of questions and concerns on LGBT issues, case studies to identify physical and mental health assessment needs and social concerns, simulation exercises to discuss barrier issues, practice assessment skills, and improve sensitivity, role-playing to discuss risk behavior reduction, clinical experiences where students are assigned LGBT patients, and clinical internships with specialty clinics caring for LGBT patients (Brennan et al., 2012).

The authors conclude that nursing attitudes affect culturally competent care towards LGBT persons and that students' understanding of diversity must be broadened to this population. Curriculum improvements to address knowledge should present content using a life span approach and incorporate topics such as development, health promotion and disease prevention on unique LGBT issues, mental health, transgender and intersex needs, barriers to care, resources and interventions, and legal and policy issues. Improving skills education should include assessment and communication skills with LGBT patients. Content should be integrated throughout nursing and graduate curricula and should include didactic, simulation, and clinical strategies (Brennan et al., 2012).

Long (2012), opened with a discussion of evidence supporting cultural competence education as a means to improve health care workers' attitudes, skills, communication, behaviors, and ultimately, patient outcomes. The authors listed two prominent guides for curriculum development of cultural competence: *Culturally Competent Nursing Modules* from the Office of Minority Health, and *Transforming the Face of Health Professions Through Cultural and Linguistic Competence Education* from the United States Department of Health Resources and Services Administration. The review provided insight into prevailing issues such as inadequate opportunity for practical application and skills training of cultural competence, and feelings of incompetence of faculty members and nursing students despite program compliance with national cultural competence curriculum standards. The author stated that students taught through knowledge-focused curriculum using didactic teaching methods alone scored poorly on

all aspects of cultural competence other than knowledge. Integrating cultural competence across the curriculum is cited as the most common method, however over half of educators do not remember receiving cultural competence education so are teaching content without being adequately prepared themselves. Evaluation methods in cultural competence assessment studies were shown to be largely based on self-assessment. This means that results may be skewed by the social-desirability effect, where students evaluate themselves in a way as to not seem racist or ignorant compared to their classmates. The author cited the wide variety of content, educational strategies, evaluation, teaching styles, and the lack of standard guidelines as barriers to understanding the impact of cultural competence training. Despite these differences, this review highlighted that the research has shown that training does improve cultural competence knowledge, attitudes, and skills, however, and although any intervention may be beneficial, gaining complete cultural competence as a nursing student may not be possible (Long, 2012).

The author provided an overview of the research pertaining to nine most commonly used educational strategies for cultural competence including a summary of the studies researching each method, and the advantages, disadvantages, and outcomes of each strategy. These strategies included lecture style, group discussions, student written reports, clinical experiences, simulation, guest lecturers, mentoring and consultation, educational partnerships with community members, and lived immersion/study abroad. Lecture was described as a traditional method which produces improvements in cultural competence knowledge. It has the advantage of being familiar and comfortable for students and is an easy way to provide information. Disadvantages are that it is passive, has poor retention, and does not promote behavior change. Group discussions are frequently used, promote active learning, show positive improvements in knowledge and attitudes, but may be challenging in terms of group dynamics in the classroom. Written reports can be used to evaluate learning, but students are isolated and may have limited knowledge retention. Clinical experiences increase student confidence and

comfort, however, these experiences might have limited availability. Simulation allows for learning in a safe and controlled environment, allows for repetition of skills, instructor feedback and debriefing, however, may be too expensive for some facilities. Guest lecturers from the community were shown to provide a positive outreach experience, and students have been shown to gain new insights. Mentoring and consultation require more research in order to form conclusions on this method. Educational partnerships with community members is a new approach where individuals teach health care providers about their experiences, and has been shown to improve understanding of cultural differences and provide an opportunity for dialogue. Lived immersion and study abroad opportunities show decrease in anxiety about a new cultural and improved second language skills, they improve self-awareness, sensitivity, flexibility, and decrease stereotyping. This review also provided a table with information on 14 teaching strategies, including the nine discussed in detail in the narrative, and five additional strategies: assigned readings/module, journal keeping, video/virtual experience, organized field trip, and service learning (Long, 2012).

The author concluded that all strategies have shown positive improvements in cultural competence, regardless of cost, strategy, length of the program, or content. However, no study has shown complete cultural competence of students post intervention. Furthermore, the author found that methods which employed clinical experiences, standardized patients, and immersion experiences, have the best results, increasing student awareness, knowledge, and confidence working with diverse patients. The author gave recommendations for future research such as a standardized definition of cultural competence, a standard model for research, an evaluation of instruments and curricula, and a comparison of the effectiveness of teaching methods which looks at the impact of education on health care and patient behavior and outcomes. The author encouraged nurse educators to produce rigorous research on teaching strategies (Long, 2012).

Margolies et al. (2014), authored a manual which provides expert opinion based on a review of 24 cultural competence training curricula across 60 organizations and individuals

providing LGBT cultural competence training, most prominently the New York State LGBTQ Health and Human Services Network and the 2,500 LGBTQ cultural competency trainings this organization provided in 2013. This guide is a conceptual framework designed to integrate adult learning theory, training skills, content, and evaluation.

The authors defined cultural competence as a “commitment to an ongoing engagement with LGBTQ-affirming behaviors, knowledge, attitudes, and policies” (Margolies et al., 2014, p.5). The authors suggested beginning by setting objectives and goals, from which the appropriate teaching methods, content, and evaluation measures can be determined. The authors stated three typical training goals: knowledge, attitude, and behavior and described forming SMART objectives which are specific, measurable, attainable, relevant, and timely. The authors provided examples of goals, immeasurable objectives, SMART objectives, and suggestions for possible content and training methods for each goal. To increase knowledge, it was suggested to use lecture/PowerPoint slides and group exercises. To improve attitudes, they suggested guest speakers, panel discussions, group discussions, and reflective exercises. To improve behavior, the authors suggested role-playing, case studies, or media/video clips (Margolies et al., 2014).

The manual then included a section concerning preparation for training describing professional use of self and two learning theories on which to base the training. These theories included the adult learning theory and the transformative learning theory. This section addressed the use of participant experience within the group, challenges of the material for adult learners, and how to work with unproductive group dynamics and difficult participants such as identifying a common goal or switching the conversation to problem solving. The following section discussed training components and how the topics covered were determined by the length of the training, number of participants, level of participant prior experience, and the goals of the training. The core topics that the authors suggested should be included in trainings are: introduction of trainer, goals, confidentiality and ground rules, introduction of participants, ice

breaker activities, review of LGBTQ terminology, structural systems of oppression and intersectionality, and LGBTQ health disparities. Examples and tips for discussion for each area were presented as well as suggestions on adapting these core concepts to include audience specific education such as LGBTQ homelessness, sexual health, or elders. Recommendations for creating a welcoming environment included: signage, LGBT documentation in-patient intake forms and data collection, communicating with LGBT patients respectfully and openly, and partnering with LGBT community members and organizations (Margolies et al., 2014).

The following section described training methods, provided examples, and discussed the pros and cons of each method. The authors reinforced that cultural competence training is best when a variety of methods are included, using the “pattern interrupt” method of changing content or style every 20 minutes and restricting group activities to 20 minutes. The methods discussed include lecture with PowerPoint slides, guest speakers and panel discussion, media, interactive participation, print materials and learning aids, and web-based learning. PowerPoint slides should contain a maximum of six words per line and six lines per slide, with a minimum font of 18 pt. Pros are that this method is inexpensive and can impart a large amount of information in a short time. Cons are that it is less interactional and there is a tendency to provide too much information and overwhelm participants. Guest speakers or panel discussions provide multiple viewpoints, expertise, a humanized perspective, and allow participants to ask questions. Cons of this method are that it usually takes a minimum of one hour, and it requires time and planning. Use of media can be more interesting and engaging than lecture, include experts who cannot attend in person, or be used to demonstrate skills. Cons are that it is a passive activity. Interactive participation engages participants in an environment that is safe for making mistakes, however the trainer has to be competent and experienced in facilitating, and disruptive participants can decrease the productivity of the activity. Print materials and learning aids such as handouts expand on concepts that could not be fit into the time frame of the training, can include additional references and resources as well as contact information of the

trainer for any follow-up questions. Cons to this are that it may be costly to create and print handouts, they must be regularly updated, and participants may never read them. The final method discussed was web-based learning such as polls, which allow for anonymous audience participation and using real-time results in the training. Cons include technology requirements like wireless networking and that participants must have access to and be comfortable using the internet (Margolies et al., 2014).

The final section of the manual explored training evaluation, emphasizing that all trainings must be evaluated. The authors used the Kirkpatrick Model (Pyramid) of Evaluation as the foundation of their training approach. This model includes four levels: level one is evaluation of reaction, this provides information to the trainer about how the training was received, how well it met the needs of the participants and how satisfied they were with the training. Level two is evaluation of learning, which is usually measured using pre and post-tests to determine changes in knowledge, intentions, attitudes, and self-efficacy. Level three is evaluation of behavior, the application of knowledge gained in the training. This can be evaluated through pre and post-test survey of behavioral intentions, observation or recording of the participant interacting with a client or simulated patient, or collecting feedback from coworkers and patients. Level four is evaluation of results, measuring any change in patient outcomes. This can be accomplished through evaluating patient satisfaction, outcomes, and quality of life. The authors stressed that most cultural competence trainings will only be able to evaluate at levels one and two because of the greater challenges present in levels three and four. The authors provided an appendix of evaluation questions organized by level, as well as an example demographics survey (Margolies et al., 2014).

Lim et al. (2013), began with an overview of historical LGBT health pathologization and criminalization, a review of the social determinants of health such as legal barriers to insurance, employment, housing, marriage, adoption, and retirement. The current health status of LGBT people was identified with a discussion of chronic stress as a contributor to health issues. The

review identified the current lack of scholarly discussion of LGBT issues, the lack of curriculum inclusion of LGBT topics, the absence of LGBT education across health care disciplines, and the assertion that nursing in particular is behind other fields in terms of research, theory, and practice guidelines, stemming from internalized homophobia (Lim et al., 2013).

The authors identified the gap of nursing research on LGBT issues, listing six studies with small sample size but which highlight the lack of knowledge and negative attitudes of nursing students. The authors recommend nurse researchers use the Institute of Medicine (IOM) report to fill these gaps. Recommendations were presented such as increasing the time spent educating on LGBT issues, including more position statements pertaining to LGBT rights, examining text books, assignments, clinical sites, patient assignments, and simulations for LGBT content. The authors provided a template for curricular and activity review for this purpose and also called for a needs assessment survey of students, faculty, and staff for baseline data on LGBT health knowledge to develop site-specific programs. (Lim et al., 2013).

This resource detailed educational and student support strategies to integrate LGBT issues into the curriculum and improve the environment for LGBT students, faculty, and community. Educational strategies included simulation, case studies, nursing care plans, course development with web-based resources, textbooks, and journal articles, independent study and elective courses, and clinical affiliations with LGBT specific agencies. Supportive strategies included utilizing academic advising as a way to connect students with ways to apply nursing education to diverse populations, recruiting diverse faculty, providing inter-professional education by collaborating with LGBT experts, and providing opportunities for students to participate in LGBT interest groups. The authors concluded that nursing curriculum should be designed to aid in the connection between nursing students and LGBT individuals “in real time” (Lim et al., 2013, p. 202).

In summary, these resources paint a complete picture of the state of cultural competence education for health care workers and outline concrete methods to improve

curricula. Lim et al. (2014), used current, high level evidence to identify disparities in LGBT health and provided best practice recommendations for improving health care of LGBT individuals. The included research indicated the legal and professional commitment to this issue as well as the lag of practitioners and education programs in meeting national expectations. Specific health issues for LGBT patients that practitioners should be aware of were identified as well as resources for LGBT individuals to become more empowered in their health care. Resources for improving practice were provided to improve education and practice of health care providers. Brennan et al. (2012) used current research to support curricular changes to improve students' attitudes, knowledge, and skills for providing quality care to LGBT patients. The authors suggested panel discussions with LGBT members, simulation, and role-playing to improve curricula as well as methods such as media, journaling, group projects, clinical assignment and internships, highlighting the importance of integrating LGBT education throughout the curriculum. Long (2012), provided an overview of the current cultural competence teaching strategies with supportive literature for each method and an explanation of the advantages and disadvantages of each method. All methods described were shown to improve cultural competence, however, none were shown to bring students to a state of complete cultural competence. Limitations of nursing research on this topic were highlighted and recommendations are discussed for future research. Margolies et al. (2014), provided a comprehensive guide to LGBT cultural competence training including information, examples, and resources concerning defining cultural competency, creating goals and objectives, preparing for training, core training topics, training methods, and training evaluation. In addition, an appendix of instruments for evaluation was provided. Lim et al. (2013), presented current evidence identifying the need for improvement in LGBT curricula for nursing students, a deficiency in nursing research on this issue, evidence of prevailing negative attitudes, gaps in knowledge, and poor practice of nurses with LGBT patients, and gave recommendations for

educational improvement such as collaborating with LGBT experts and providing opportunities for students to participate in LGBT interest groups.

Appraisal of these studies rated them as level VII; four are of quality A and one is quality B. Lim et al. (2014), is rated as quality A as it meets all the criteria for this type of study. The subject was clearly stated, 32 out of 44 sources referenced were current within the last five years, gaps in the literature were identified, the authors analyzed the literature and drew meaningful conclusions, and offered recommendations for future practice and study. The strengths of this review were the comprehensive range of topics related to best practice and disparities in LGBT health. Use of the most current research and high level studies like systematic reviews and guidelines from the IOM, the Joint Commission, and Healthy People 2020, and Agency of Healthcare Research and Quality supported the conclusions and recommendations provided by the authors. Top issues for each group present in the LGBT designation provided specific information on topics to include in curricular improvement. Limitations of this review were that it did not discuss its own limitations, only those gaps present in the current literature. Although strategies for improving patient care of LGBT individuals was provided as well as information on topics to use in curricular development, specific educational interventions for nursing students were not discussed.

Brennan et al. (2012), was appraised as quality A. The authors clearly stated the purpose of their study and provided a review using a majority of current resources published within the last five years. Gaps in the literature and in current educational practice were identified and the conclusions drawn in the literature were analyzed to provide recommendations for future research and practice. Strengths of this review were that it identified a lifespan approach to LGBT health that improves educators' ability to ensure that their curriculum addresses major health concerns of this population in a comprehensive manner. By organizing the literature into the categories used frequently to evaluate cultural competence: knowledge, attitude, and skills, the authors showed how inclusion of each

recommendation can improve nursing care of LGBT patients. Concrete educational strategies were provided, paired with the improvements that they may be expected to make, along with tables of resources and media for inclusion in to nursing curricula. Limitations of this study were that it does not address its own limitations. Although the section on knowledge is very detailed, the discussion of attitudes and skills education improvement were much more sparse. Additional resources for how to change nursing curricula to improve skills and attitudes with specific activities would be beneficial.

Long (2012), is quality B as the subject matter was clearly identified, the authors identified gaps in the literature, analyzed the conclusions drawn by the reviewed literature, and provided recommendations for future practice and research. Strengths of this study were the critique of the current literature on cultural competence education and discussion of gaps in the research and prevailing issues in cultural competence among nursing students, as well as the comprehensive and clearly outlined narrative and table providing information and comparisons of the most commonly used teaching strategies. This allows educators a way to determine which strategies might be most appropriate for their program and what to expect in terms of advantages and disadvantages of each method. The limitations of this study were that it does not meet the quality appraisal requirement that the majority of references be current within the last five years. This review included current studies but also many that were published outside of the five-year time frame. Another limitation of the study was that the author provided no discussion of limitations of their work. Although the table Long provided gave a sample of the major teaching methods, Long did not attempt to provide a more comprehensive identification of all of the studies utilizing each method.

Margolies et al. (2014), is rated as quality A. This guideline represents published work by the authors providing expert opinions, which are based on the scientific evidence gathered through analysis of 24 cultural competence training curricula. This manual was funded by the AIDS Institute of the NY State Department of Health. The authors' opinions were clearly stated

in their recommendations, however, no discussion of the potential for bias was discussed other than the statement that there is extremely limited research on the efficacy of cultural competence trainings. Strengths of this resource were the concrete examples provide for each aspect of the training process, the strong theoretical foundation discussed throughout the manual supporting each element of training, the comprehensive discussion of training methods, the detailed evaluation guide, and the appendix of instruments used for evaluation. Limitations of this resource were the lack of discussion on potential bias, the lack of listed credentials of the authors, and the lack of discussion of the reliability and validity of the instruments provided in the Appendix.

Lim et al. (2013), is appraised as quality A as well. The quality of the study reflects its strengths in that it met each requirement of the appraisal tool: the subject was clearly stated, a majority- 28 out of 46 references were current within the last five years, gaps in the literature were identified, the authors provided meaningful analysis and drew conclusions based on the literature, and recommendations for future research and practice were presented. Another strength of the study was the concrete and feasible methods of assessing the organization, curriculum, and strategies for improving practice. A limitation of this study was that it does not include a discussion of limitations. Although the authors stated that the lack of time presently committed to LGBT content in nursing education is insufficient, they did not provide recommendations for an appropriate amount, nor did they indicate which interventional strategies for improving nursing education on LGBT issues might give best results.

These studies are useful for the EBP project because they present detailed material which can be used in formulating the project intervention. All topics covered in the review by Lim et al. (2014) were supported by current information and should be used to inform the knowledge portion of the intervention. In addition, the recommendations of effective communication and promoting community involvement and advocacy support the focus of the EBP project. The high quality resources used in this review make this appropriate evidence to support the EBP project.

The literature review by Brennan et al. (2012) identifies specific strategies supported by the literature for improving LGBT education, which are feasible for the project such as panel discussion, simulation, and role-playing. The comprehensive section on topics to be covered to improve students' knowledge provides a foundation for the lecture component of the intervention as well as topics for discussion with the LGBT panel. By using the three categories of attitude, skills, knowledge in the literature supporting curricular changes, this review organizes the EPB project in evaluation of student's improvement in the areas of cultural competence. Long (2012) explains that cultural competence is more than client satisfaction, it is "working with a person within their own community to validate, collaborate, and meet unique needs" (Long, 2012, p. 103). The purpose of the EBP project is to provide an opportunity for nursing students to work with community members of VU's LGBT group in order to help the students understand how to provide culturally competent care in the way defined by the authors of this study. The literature presented describes strategies that are feasible and appropriate and may span the possibilities of the EBP intervention, including elements of lecture, group discussion, guest speaker, educational partnerships, and simulation, all of which are shown to improve cultural competence on several levels. Although methods such as clinical experiences and immersion, are not feasible for this project, the literature shows that the methods determined for use in this project should positively improve the participants' cultural competence.

Margolies et al. (2014), detailed the entire training process, providing a step-by-step guide for designing, implementing, and evaluating the project. The variety of examples and instruments provided suit any audience size or timeframe and allow for adjustments for particular audience needs including several which are applicable to the participants and time constraints of the EBP project. The module was created for training of health care and human services providers in settings such as agencies, organizations, schools, and facilities, so is appropriate for use in training nursing students in the university setting. The interventions

suggested, including PowerPoint presentations, panel discussions, and interactive participation are appropriate for the EBP project. Lim et al. (2013), focused on nursing in terms of bringing to light the particular problems that the nursing field has faced and continues to struggle with in terms of LGBT education, research, and practice. The authors listed recommendations for improving LGBT health education such as simulation and connecting to LGBT experts and interest groups with the goal of increasing the interface between students and LGBT individuals. These methods and this philosophy are integral to the EBP project and may be utilized through the interventions of discussion panel with LGBT community members and role-play or simulation. The focus of the improvements of this study are on education of nursing students, which is the population of interest for the EBP project, and the methods described to improve education are feasible. The quality and comprehensive review of current teaching strategies found in these resources make them appropriate for evidence to support the EBP project.

Construct EBP

A thorough literature search yielded 14 resources concerning educational strategies for improving cultural competence in health care providers, several of which specifically addressed cultural competence towards LGBT patients. Identification of common strategies, findings, and recommendations found in the literature informs the best practice recommendations, which answer the PICOT question.

Synthesis of Evidence. A wide range of interventions were researched including: cultural self-assessment, oral presentations, guest presentations, case studies, journal articles, videos, fieldtrips, assignments using religious calendars, role-play, critiquing health care materials, care plan development, diversity events, journaling, immersion, cultural assessment, intergroup contact, entertainment, media, group discussions, clinical experiences, interviews with members of another culture, cultural immersion, drill/practice exercises, community health activities, lectures, demonstration/role modeling, home visits, panel discussions with LGBT individuals, group projects, individual papers, group exercises, literature, films, music, simulation

exercises, expert guest speakers, training modules, readings, webinars, independent study, elective courses, work with LGBT interest groups, and inter-professional education (AACN, 2008; Bartoş et al., 2014; Beach et al., 2005; Brennan et al., 2012; Carabez et al., 2015; Gallagher & Polanin, 2015; Kelley et al., 2008; Lim et al., 2013; Lim et al., 2014; Long, 2012; Margolies et al., 2014; Sales et al., 2013; Sanchez et al., 2006; and Stong & Folse, 2015).

This list of interventions can be simplified into three main categories: formal education such as lectures and assignments, contact with members of a cultural group, and interactive experiences. The literature findings indicate that all methods improve aspects of cultural competence, and no single method is best for improving cultural competence (Gallagher & Polanin, 2015; Long 2012; and Sales et al., 2013). Because cultural competence is understood as a multifaceted concept, studies recommend use of a multi-method approach in order to improve more than one aspect of cultural competence (Bartoş et al., 2014; Brennan et al., 2012; Kelley et al., 2008; Lim 2013, and Sales et al., 2013). Although the dimensions of cultural competence have been described in a variety of ways, the most common delineation is that the concept encompasses three aspects: knowledge, attitudes and skills (sometimes described as behaviors). A multi-method approach to education has been shown to improve all three of these aspects of cultural competence.

Knowledge was a commonly measured aspect of cultural competence and there is excellent evidence supporting that cultural competence education improves knowledge (Bartoş et al., 2014; Beach et al., 2005; Kelley et al., 2008; Long 2012; Sales et al., 2013; Sanchez, and Strong & Folse, 2015). Lecture was the most commonly identified method of education shown to improve knowledge (Bartoş et al., 2014; Beach et al., 2005; Strong & Folse, 2015). Attitudes have been shown to be improved by cultural competence education, especially when students have opportunities for face-to-face encounters with members of cultural groups through interventions such as panel discussions, guest speakers, and community outreach (Bartoş et al., 2014; Beach et al., 2005; Brennan et al., 2012; Kelley et al., 2008; Lim 2014; and Sales et

al., 2013). Students' cultural competence in terms of skills or behaviors were also assessed and interventions which included opportunities for students to practice cultural competence showed improvement in skills. These interventions included interactive experiences such as role-playing, simulation, and clinical assignments (Beach et al., 2005; Brennan et al., 2012; Carabez, 2015; Long, 2012; Sales et al., 2013; and Schez et al., 2006).

Best practice model recommendation. Based on the evidence provided in the current literature, best practice for improving cultural competence of undergraduate nursing students may be through a multi-method educational approach including a PowerPoint lecture, panel discussion, and role-playing. The focus of this study on cultural competence related to the LGBT health care directs the content of the lecture component, the individuals invited to participate in the panel discussion, and the scenarios used for the interactive experience to be specific to the needs of the LGBT community. Nursing students should be assessed for their knowledge of the health care concerns of this group, their attitudes towards LGBT patients, and their skills in providing nursing care to individuals identifying as LGBT. The theoretical framework on which the intervention will be organized, the Purnell Model for Cultural Competence, will be used to inform the content of the lecture, topics for the panel discussion, and basis for the role-playing activity in order to provide the nursing students with a complete and holistic educational experience on LGBT cultural competence.

Answering the PICOT question. The evidence gathered from this literature review guided the best practice recommendation of using a three tiered multi-method approach to improve cultural competence aspects of knowledge, attitudes, and skills, and addresses the clinical question: What is the best way to improve undergraduate nursing students' cultural competence in regards to LGBT patients? The results found in the literature supports the EBP PICO Question: Does a multi-faceted educational intervention including a lecture, panel discussion, and role-playing activity each lasting 50 minutes, improve the cultural competence, particularly the knowledge, attitudes, and skills, of undergraduate nursing students regarding

LGBT individuals compared to their cultural competence before this intervention over a one-week time frame?

CHAPTER 3

IMPLEMENTATION OF PRACTICE CHANGE

Chapter three details the method used for translating and implementing the best practice recommendation for improving LGBT cultural competence in undergraduate nursing students, answering the PICOT question: Does a multi-faceted educational intervention including a lecture, panel discussion, and role-playing activity each lasting 50 minutes, improve the cultural competence, particularly the knowledge, attitudes, and skills, of undergraduate nursing students regarding LGBT individuals compared to their cultural competence before this intervention over a one-week time frame? This chapter embodies step four of the Model for Evidence-Based Practice Change, which focuses on designing the practice change. During this step, the change is defined, necessary resources are determined, and designs for implementing and evaluating are established (Larrabee, 2009). The elements relevant to the method of implementing the practice change will be described in this chapter, including the participants and setting, outcomes, interventions, planning, recruiting, data, and protection of human subjects.

Participants and setting

Participants in this study were comprised of senior nursing students in a baccalaureate program, enrolled in a mandatory Global Health course at a private, Midwestern university. Senior students were chosen for this study because they had already received some education on cultural competence throughout previous coursework. This meant that time spent on the knowledge component of the intervention could be focused on LGBT cultural competence rather than the concepts of cultural competence in general. In addition, senior students had several previous clinical experiences so that the attitudes and skills components of the intervention could be met with a concrete understanding of their relevance and application to practical nursing work. The Global Health course was chosen for its pertinence to LGBT health as a global concern and was situated within the time frame allotted for the implementation phase of

the EBP project. The setting allowed for convenience sampling of undergraduate nursing students, in accordance with the population of interest. The intervention took place over three 50-minute long class periods over the course of one week in October of 2016: October 10th, 12th, and 14th. All registered students were mandated to attend each of the three classes pertaining to the intervention, however, participation in the project through completion of the pretest and post-test was voluntary.

Outcomes

The goal of the EBP project was to improve the knowledge, attitudes, and skills aspects of LGBT cultural competence in undergraduate nursing students. Therefore, the outcome measures evaluated the nursing students' knowledge of LGBT health care issues, their attitudes towards LGBT patients, and their skills in practicing culturally competent care with LGBT patients. These three concepts were measured immediately before the intervention to provide baseline data, and again immediately following the final part of the intervention. Additionally, members of the LGBT community and nursing students were asked to answer a question concerning how the intervention could be improved in the future. A combination of original questions and questions found in previously researched tools were used to measure the objectives of the EBP project. Permission was gained from the authors Kelley et al. (2008) and Margolies et al. to utilize and modify items found in their studies. Permission was not required for use of items found in the toolkit by Frazer et al. (2011). The content validity of the questionnaire was confirmed by the LGBT group members, a medical anthropologist, and the Associate Director of a university center for sexual health promotion.

Intervention

A review of the literature revealed that although all educational methods improved aspects of cultural competence, no single method was superior, and a multi-method intervention approach was best for improving all aspects of cultural competence (Bartoş et al., 2014; Brennan et al, 2012; Kelley et al., 2008; Lim 2013, and Sales et al., 2013). Therefore, a three-

tiered intervention strategy was utilized in this project: a PowerPoint lecture to improve cultural knowledge, a panel discussion with members of the campus LGBT group to improve cultural attitudes, and an interactive role-playing activity between nursing students and LGBT group members to improve cultural skills. Each of the three tiers took place during a 50-minute, required Global Health course, spanning three consecutive class meetings over the course of one week.

The first tier of the intervention included a PowerPoint lecture based on a culmination of curriculum recommendations found in the literature review. Before beginning the lecture, the senior nursing students enrolled in the required Global Health course were given an introduction explaining the project, procedures, confidentiality measures, and that although all students would receive the educational intervention, participation in the project through completion of the pre and post-tests was strictly voluntary. Time was given to answer questions and concerns and then the students were given the pretest. The students were allotted ten minutes to complete the pretest, if they wished, which contained demographic questions, questions concerning knowledge of LGBT issues, questions concerning attitudes towards LGBT individuals, and questions concerning skills working with LGBT patients. Students were asked to fold their pretest with the answers inside after completion and the project manager and site facilitator collected these and placed them in a sealed envelope and then into a locked box. After the pretests were collected, the project manager provided a 30-minute PowerPoint lecture organized using the Purnell Model for Cultural Competence, addressing LGBT health in terms of the phenomena of global society, community, family, and person, as well as the 12 concepts, starting with overview/heritage, followed by communication, family roles/organization, workforce issues, biocultural ecology, high-risk behaviors, nutrition, pregnancy, death rituals, spirituality, health-care practices, and health-care practitioners (Appendix 3). Following the lecture, a brief explanation of the next tier of the project, the panel discussion, was given, and students were

instructed that their usual online discussion for the class would be devoted to brainstorming questions to ask the panelists.

The second tier of the intervention involved a panel discussion with the campus LGBT group members. The class began with introductions of the panel members and a brief discussion provided by the panelists focused on their personal experiences with health care. This was followed by a question and answer session with the nursing students, incorporating the questions they had brainstormed in their online class discussion. Before the intervention, LGBT group members were provided information about the project in both oral and written form, and it was explained that participation in the project through panel discussion or role-play activity was strictly voluntary. It was explained that they had the right to refuse to answer any questions asked during the panel discussion or role-play activity.

The third and final tier of the intervention involved an interactive role-play activity between the nursing students and the LGBT group members. An introduction of the members was given as well as an explanation of the activity. Nursing students were seated in groups of three with an LGBT group member. One group had four nursing students. Each nursing student took one of three roles in the activity defined in terms of which topics he or she would be in charge of discussing with the patient. The students were given 15 minutes to perform a brief health history utilizing the knowledge gained from the lecture and panel discussion interventions, including topics such as introductions and preferred pronouns and forms of address, safety and confidentiality, individual health concerns, gender, sex, and sexual orientation, social supports, and top risk factors. During this time LGBT members were encouraged to provide feedback to the students about their manner, and how they made the LGBT member feel in terms of comfort and safety in answering the questions. Because of the large number of nursing students, most of the LGBT group members spoke with two groups of nursing students. Following the activity, students were provided the post-test to complete which was identical to the pretest except that it asked them to provide a written response to answer

the following additional item: Please comment on how this LGBT Cultural Competence intervention could be improved in the future. The LGBT members were also asked to provide a written response to that item. Pretests and post-tests were matched using the last three digits of the students' cell phone numbers. All questionnaires were folded, collected, and placed in a sealed envelope and then placed in a locked box. At this time, data analysis on the information given through the pretests, post-tests, and LGBT group questionnaires was initiated.

Planning

The project was organized based on the Model for Evidence-Based Practice Change. Step one of the model assessed the need for a practice change. During this phase of the project, key stakeholders were identified and created into a team, the PICOT question was formulated, a needs assessment was performed through emails with undergraduate professors and the LGBT group on campus, uncovering a gap in LGBT health education, this internal data was compared to external data present in the literature which confirmed a widespread dearth of LGBT education in nursing programs. Finally, possible strategies for improvement and outcome measures found in the literature were linked to the PICOT question. These elements of the PICOT question informed the literature search process integral to the following step of the project.

The second step of the model prescribed locating the best evidence. This was accomplished through the literature review. Twelve databases were systematically searched using similar keywords, MESH headings, and limiters, resources were compared to inclusion and exclusion criteria and a citation chase was performed for items found in the reference lists of those articles chosen for inclusion in the review. Documentation of the research process was accomplished during this step. Identification of the relevant resources meeting the inclusion and exclusion criteria created to base of evidence used for the analysis included in the following step.

Step three of the model involved critical analysis of the evidence concerning the practice change. During this step the resources chosen in Step two were appraised for level and quality, assessed for benefits, risks, and feasibility, and synthesized into a literature review. The conclusions drawn by the authors of these resources were assessed for commonalities and expressed in terms of best practice recommendations which would be used to inform the practice change determined in the following step.

Designing the practice change was the goal of the fourth step of the model. During this time, the proposal for change, the evaluation of the pilot, and the implementation of the project were all designed. Necessary resources were identified, and details concerning class time allotted to the project were discussed with the site facilitator. These preparations allowed for smooth progression to step five of the model.

The fifth step of the model involved implementation and evaluation of the practice change, including process, outcomes, and costs, as well as development of conclusions and recommendations. Statistical analysis of data gathered during the project interventions was performed and evaluation of the project and outcomes was determined through interpretation of these results. The monetary cost of the program was evaluated through calculation of the total cost of printing the testing materials. The conclusions drawn from this step served as a foundation for the final step of the model.

Step six of the model was devoted to integration and maintenance of the practice change. At this point in the project, findings were discussed with stakeholders and recommendations for perpetuating and improving the connection between the nursing students and the campus LGBT group in subsequent years were discussed. The DNP presentation of the EBP project and publication on the university website provided opportunities of dissemination and celebration of the project results.

Recruiting participants

Recruitment of nursing student participants took place at the beginning of class time on the day of the lecture component of the intervention. The nursing students were provided the opportunity to participate voluntarily in the project before the intervention began. Recruitment of LGBT group members to participate in the panel discussion and/or role-playing activity was accomplished through email using the LGBT group's email list, as well as through face-to-face interaction during a weekly LGBT group meeting that the project manager attended. Information about the project, confidentiality and the voluntary nature of participation was provided to all participants verbally through written email correspondence.

Data

Several types of data were collected: demographic information, quantitative data pertaining to the knowledge, attitudes, and skills of the nursing students as well as qualitative data from the students and LGBT group members about their suggestions for future improvement of the program. This information was collected on the pretest and post-test questionnaires for the nursing students and question sheets provided to the LGBT group members after the role-play intervention concerning program improvement.

Measures and their reliability and validity. The pretest and posttest were designed using a compilation of items from several literature sources as well as original questions created by the project manager. As no single tool existed that measured the needs of studies pertaining to LGBT cultural competence, the authors of the studies in the literature review modified and combined resources and original questions to develop their own instruments, and the project manager emulated this strategy. The items utilized for this project which were found in the literature, included those found in the research by Kelley et al. (2008) based on the Index of Attitudes toward Homosexuals (Hudson & Ricketts, 1980) and the Blumenfeld and Cohen description of personal, interpersonal, institutional, and cultural aspects of homophobia (1992), and created by Margolies et al. (2014), and items found in the LGBT Health and Human Services Evaluation Toolkit created by the Fenway Institute (Frazer, Roche, & Mirzayi, 2011).

Use of resources from the Fenway Institute, such as this toolkit were recommended in the literature review (Carabez et al., 2015, and Lim et al., 2014). The specific surveys utilized from this toolkit were Attitudes Towards LGBT People (Riddle, 1994) and LGB Attitudes and Knowledge (5 Dimensions) (Worthington, Dillon, & Becher-Schutte (2005). The survey utilized in Kelley et al. (2008) was initially piloted for validity and was found to have content validity. Testing for reliability of this tool was not deemed appropriate because of the multiple concepts being measured (2008). Validity of all the survey instruments found in the LGBT Health and Human Services Evaluation Toolkit was confirmed by the authors, however, no discussion of the methods used to test for validity was provided (Frazer et al., 2011). Eight knowledge-based questions were formatted as True/False style, and were based on information provided to the students during the PowerPoint Presentation. Additionally, eight items measuring student attitudes and eight items measuring student skills were formatted on a 5-point Likert scale. These items were developed using a combination of questions found in Kelley et al. and the LGBT Health and Human Services Toolkit, and original questions based on the information in the literature review. Content validity for the questionnaire was tested through review by the LGBT group members, a medical anthropologist, and the Associate Director of a university center for sexual health promotion.

Collection. The pretests were provided immediately before the lecture intervention during the Global Health class. Collection of the pretests was completed by the project manager and site facilitator. Post-tests were collected in the same manner immediately following the final phase of the intervention, the role-playing activity, also taking place during the Global Health class. The LGBT group member responses to the question concerning how the intervention might be improved in the future were collected immediately following the role-playing activity.

Management and analysis. Appropriate statistical analyses were utilized to evaluate the impact of the LGBT cultural competence intervention on the knowledge, attitudes, and skills of the undergraduate nursing students. All data were analyzed using an SPSS statistical

software program. The demographic information provided on both the pretests and post-tests allowed for calculation of descriptive statistics. The pretest/post-test design allowed for a comparison of these aspects of cultural competence at baseline and after the intervention. A paired *t*-test with significance set at $p < .05$ was used to compare the pre and post intervention scores of a single group. Subscales were used in order to determine whether or not an improvement in knowledge, attitudes, and skills occurred. Mean scores were calculated for individual questions between pretest and post-test. All statistical data were presented in aggregate. The qualitative question evaluating the intervention collected from the nursing students and LGBT group members was used to identify areas of improvement in future implementation of the project.

Protection of human subjects

Before implementation and throughout the intervention of a study, protection of human subjects must be ensured and sustained. Several methods were utilized to protect the human subjects participating in the EBP project. Before implementation of the project, the manager of the project completed International Review Board (IRB) training through the National Institutes of Health and received a certificate for completion of the web-based training course "Protecting Human Research Participants" on March 30, 2016. IRB approval from the project site was gained at the university where the manager was enrolled as a Doctor of Nursing Practice student. Although class attendance was required for the periods devoted to the intervention, participation in the study in terms of completing the pretest and posttest was voluntary. Verbal information on the voluntary nature of the study was provided to all students before the intervention was implemented. Confidentiality of participants was protected through several means. Students completed the pre and post-tests using the last three digits of their cell phone numbers rather than names or student ID numbers to match pretests and post-tests. Although demographic information such as sex, gender, age, and race of the participants may be identifying in that the majority of the participants were young, white, females, all information was

presented in aggregate form to protect anonymity. All data was stored in a locked box and the project manager alone transferred this data to a password-protected computer. This data will be saved for three years following the project. All statistical information generated through this study was aggregated so that data on one individual could not be distinguished from any other.

CHAPTER 4

FINDINGS

The EBP project, Improving LGBT Cultural Competence in Nursing Students, was developed to determine the best way to improve undergraduate nursing students' cultural competence in regards to LGBT patients. The best evidence determined through the literature review revealed that a multi-method intervention utilizing lecture, panel discussion, and role-playing and testing the outcomes of students' knowledge, attitudes, and skills represents a best practice strategy for improving LGBT cultural competence. These three outcomes were assessed through a pretest/post-test design. This chapter describes data analyses using SPSS statistical software, version 22.0, illustrating the effectiveness of the intervention and revealing participant characteristics.

Participants

Size

The sample size was 78 senior nursing students enrolled in the Global Health course, 76 of whom participated in the EBP project by filling out the pre-test and/or post-test. The pre-test was completed by 70 students for a response rate of 89.7% and 61 completed the post-test for a response rate of 78.2%. Between the pre and post-tests there were 55 total paired tests and 21 tests, which had no match or no ID number: 15 of these were pretests, and six were post-tests. For the qualitative question asking LGBT group members about how to improve the intervention in the future, all 12 members responded for a 100% response rate.

Characteristics

The senior nursing students making up the sample for this project demonstrated the following characteristics, summarized in table 4.1. The participants in this project responded to the items on birth sex and gender as 92.1% female and 7.9% male (Figure 4.1). No participants identified as intersex, transgender, or other. Participants self-identified as 97.4% heterosexual,

and 2.6% bisexual, with 0% identifying as asexual, homosexual, pansexual, or other (Figure 4.2). The group's racial make-up was 82.9% Caucasian/White, 9.2% African American/Black, 5.3% Latino/Hispanic, 1.3% multiracial, and 0% of participants identifying as Asian/Pacific Islander, Middle Eastern/Arab, or Native American/American Indian (Figure 4.3). The group was 76.3% Christian, 13.2% nonaffiliated, 5.3% Atheist, and 1.3% Islamic, and 0% responding as Buddhist, Hindu, Jewish, or other (Figure 4.4). The age of the participants was gathered as ratio level data is not included in table 4.1. Participants ranged from age 20 to age 55 years, with a pretest mean age of 22.2 years and post-test mean age of 22.8 and a mode of 21 years for both pre and post-test.

Table 4.1

Characteristics of the Participants

Characteristic	Pre n (%)	Post n (%)
Birth Sex		
Female	64 (84.2)	56 (73.7)
Male	6 (7.9)	5 (6.6)
Intersex	0 (0)	0 (0)
Other	0 (0)	0 (0)
Gender Identity		
Female	64 (84.2)	56 (73.7)
Male	6 (7.9)	5 (6.6)
Transgender	0 (0)	0 (0)
Other	0 (0)	0 (0)
Sexual Orientation		
Asexual	0 (0)	0 (0)

Bisexual	2 (2.6)	2 (2.6)
Heterosexual	68 (89.5)	59 (77.6)
Homosexual	0 (0)	0 (0)
Pansexual	0 (0)	0 (0)
Other	0 (0)	0 (0)
Racial Group		
African American/Black	5 (6.6)	5 (6.6)
Asian/Pacific Islander	0 (0)	0 (0)
Caucasian/White	60 (78.9)	51 (67.1)
Latino/Hispanic	3 (3.9)	3 (3.9)
Middle Eastern/Arab	0 (0)	0 (0)
Multiracial	1 (1.3)	1 (1.3)
Native American/American Indian	0 (0)	0 (0)
Other	0 (0)	0 (0)
Religion		
Atheism	4 (5.3)	4 (5.3)
Buddhism	0 (0)	0 (0)
Christianity	54 (71.1)	45 (59.2)
Hinduism	0 (0)	0 (0)
Islam	1 (1.3)	1 (1.3)
Judaism	0 (0)	0 (0)
Nonaffiliated	9 (11.8)	8 (10.5)
Other	0 (0)	1 (1.3)

Figure 4.1 Gender Pie Chart

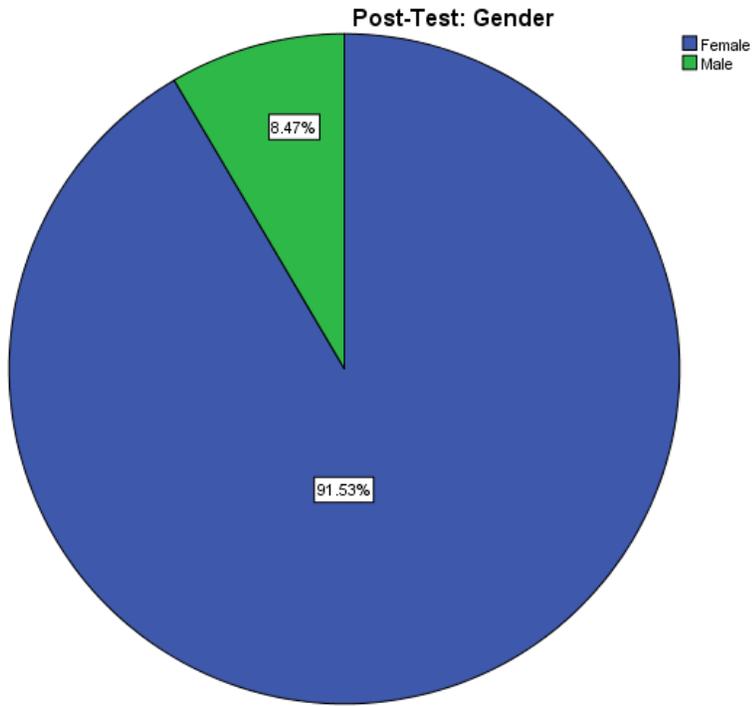


Figure 4.2 Sexual Orientation Pie Chart

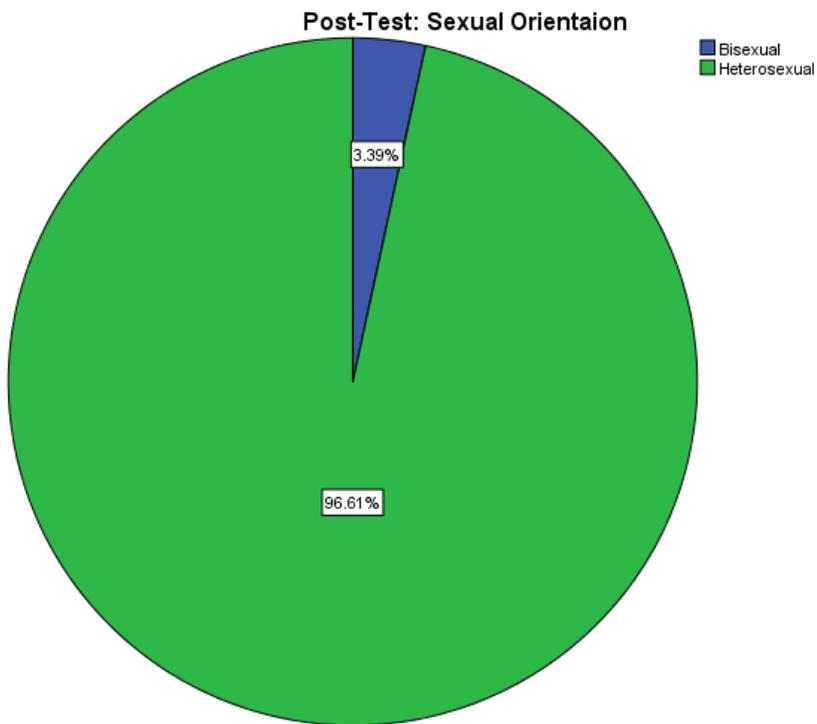


Figure 4.3 Race Pie Chart

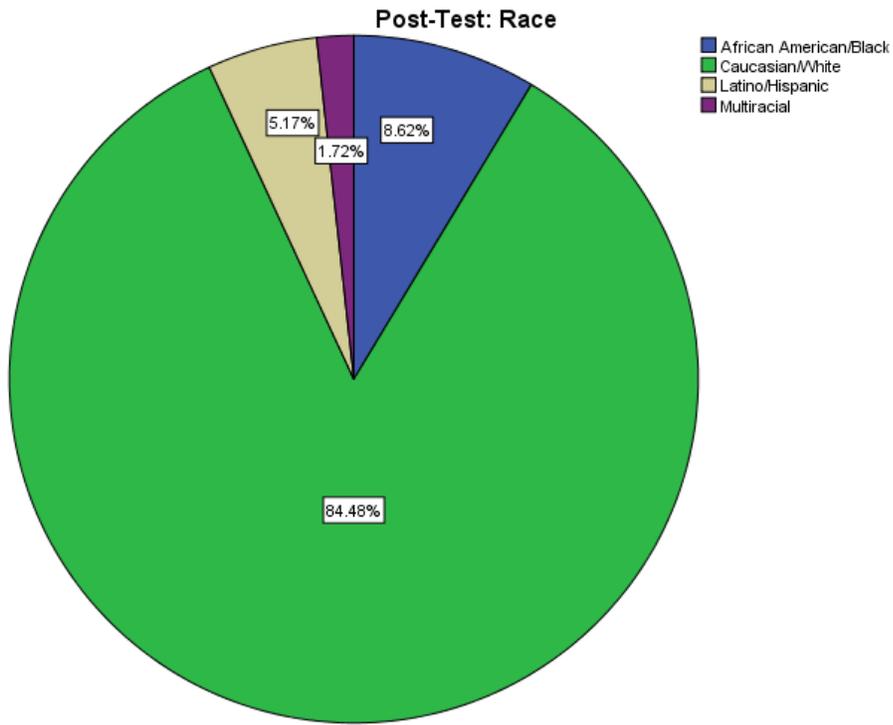
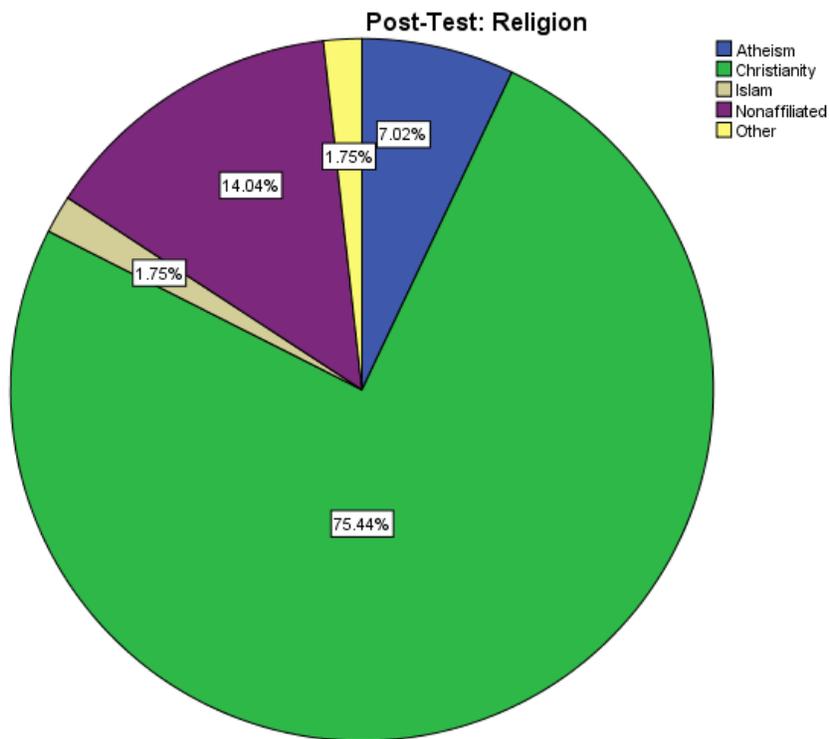


Figure 4.4 Religion Pie Chart



Changes in Outcomes

Statistical Testing

Paired-samples *t* tests on the subscales of knowledge, attitudes, and skills were performed comparing the means of the pretests and post-tests of the nursing students to answer the PICOT question (Table 4.2, Figure 4.5). The knowledge subscale had a possible range of scores from 0-8, with 0 meaning no knowledge questions correctly answered and 8 meaning all knowledge questions correctly answered. Actual scores on the pretest ranged from 1-8 and post-test scores ranged from 2-8. The knowledge subscale *t* test revealed a pretest mean of 4.21 (*sd*=1.64) and a post-test mean of 6.81 (*sd*=1.12). There was a statistically significant increase from pretest to post-test ($t(51)=-12.717, p=.000$). The attitudes subscale had a possible range of 8-40, with 8 meaning all questions were positively answered and 40 meaning all items were negatively answered, therefore lower scores indicate more positive attitudes towards LGBT individuals. The actual range of pretest scores was 8-24 and the range of post-test scores was 8-22. A paired-samples *t* test for the attitudes subscale found a pretest mean of 13.08 (*sd*=3.99) and post-test mean of 11.34 (*sd*=3.17). A statistically significant decrease was found from pretest to post-test ($t(52)=4.86, p=.000$) indicating an increase in positive attitudes. The skills subscale had a possible range of 8-40, with 8 meaning all questions were positively answered and 40 meaning all items were negatively answered, therefore lower scores indicate better skills. The actual pretest scores ranged from 9-29, and the post-test scores ranged from 8-29. The paired-samples *t* test for the skills subscale identified a pretest mean of 20.23 (*sd*=4.71) and a post-test mean of 16.34 (*sd*=4.87). The skills subscale found a statistically significant decrease from pretest to post-test ($t(52)=5.64, p=.000$) indicating an increase in skills.

A Chi-square Test of Independence was performed on the nominal level knowledge questions and Paired-samples *t* tests were also performed on individual questionnaire items of the attitudes and skills as they were interval level data. Of the 24 items, 13 were found to have a

statistically significant change in responses before and after the intervention (Table 4.3). Three of the eight knowledge questions were statistically significant. These items measured the ability to correctly answer questions concerning homelessness, health insurance, the definitions of “men who have sex with men” and “gay,” countries recognizing same sex marriage, access to health care, and obesity in lesbian and heterosexual women. One knowledge item had 100% correct responses from all students on both the pretest and the post-test, so statistical analysis determined that this was a constant value and therefore did not provide further calculations for this item. Chi-square results showed a association between the intervention and being able to correctly answer these items. Although four Chi-square results showed that two cells had a count of less than five and two other results had one cell with a count less than five, these outcomes are positive in that they indicate that the nursing students were improving pretest to post-test, with few providing an incorrect response after the intervention. Paired *t*-tests were performed on individual attitudes and skills questions. All items in the attitudes subscale showed improvement, and four demonstrated a statistically significant increase in positive attitudes (Figure 4.6). These measured feelings that homosexuality is a phase that people grow out of, that LGBT people are emotionally or psychologically ill, that it is important to know about patients’ sexuality an gender identity, and that LGBT people deserve the same rights and privileges as everyone else. All eight items in the skills subscale showed improvement, while six showed a statistically significant increase in skill (Figure 4.7). These items measured use of terms such as partner/spouse rather than boyfriend/girlfriend or husband/wife, assuming that patients or colleagues are heterosexual, being unsure of what to say to someone who is openly LGBT, avoiding asking patients questions about their sexual behavior, asking patients about their gender identity and sexual orientation, and altering their interview to adapt to concerns specific to LGBT patients.

Table 4.2

Paired-Sample t Tests for Knowledge, Attitudes, and Skills

Subscale	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Knowledge				
Pre	4.21	1.64		
Post	6.81	1.12	-12.72	<i>p</i> = .000
Attitudes				
Pre	13.08	3.99		
Post	11.34	3.17	4.86	<i>p</i> = .000
Skills				
Pre	20.23	4.71		
Post	16.34	4.87	5.64	<i>p</i> = .000

M = mean; *SD* = standard deviation; significance *p* < .05.

Table 4.3

Questionnaire Responses

	χ^2	<i>df</i>	<i>p</i>
Knowledge			
7. LGBT youth are more likely to be homeless than the general public	2.09	1	.148
8. Transgender individuals are less likely to have health insurance than heterosexual or LGB individuals	2.56	1	.109
9. The term “MSM” (men who have sex with men) means the same thing as the term “gay”	6.01	1	.014
10. The US, Mexico, and Canada all recognize same sex marriage	1.43	1	.232
11. Biologically, people are either male or female	9.43	1	.002
12. Access to health care is the same for LGBT persons as for other members of the population (Kelley et al., 2008).	6.60	1	.010
13. Lesbian and bisexual women are more likely to be overweight and obese than heterosexual women	.958	1	.433
14. Lesbian patients do not need Pap smears as frequently as heterosexual women (Kelley et al., 2008).	NA	NA	NA

Attitudes	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
16. Homosexuality is a phase that many people go through and most grow out of (Riddle, 1994; Frazer, Roche, & Mirzayi, 2011)	.24	.64	2.75	.008
17. I would prefer not to treat patients with gender identity issues (Kelley et al., 2008).	.04	.71	.389	.699
19. Hearing about a hate crime against an LGBT person would not bother me (Worthington, Dillon, & Becker-Schutte, 2005; Frazer et. al, 2011).	.18	1.16	1.17	.249
21. I would feel comfortable treating patients I know are LGBT (Kelley et al., 2008).	.25	1.00	1.89	.065
22. I feel it is important for me to know about my patients' sexual orientation, sexual practices and gender identity (Kelley et al., 2008).	.47	1.02	3.45	.001
23. LGBT people are emotionally or psychologically ill (Riddle, 1994; Frazer et. al, 2011)	.25	.70	2.70	.009
27. LGBT people deserve the same rights and privileges as everybody else (Riddle, 1994; Frazer et. al, 2011).	.31	.79	2.90	.005
29. It is important for me to stand up to those who demonstrate homophobic attitudes (Riddle, 1994; Frazer et. al, 2011)	.13	1.09	.866	.39
Skills	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
15. When asking about a patient's significant other, I use the terms partner/spouse rather than boyfriend/girlfriend or husband/wife (Margolies & McDavid, 2014).	.42	1.03	3.01	.004
18. When I first meet a patient or colleague, I assume they are heterosexual (Kelley et al., 2008).	.37	1.12	2.43	.019
20. I alter my interview to adapt to the specific concerns of LGBT patients	.84	1.18	5.25	.000
24. I ask my patients about their gender identity and sexual orientation	.96	1.51	4.72	.000
25. I would be unsure what to do or say if I met someone who is openly lesbian, gay, or bisexual (Worthington et al., 2005; Frazer et. al, 2011).	.36	.99	2.73	.009
26. I avoid asking my patients questions about their sexual behavior	.65	1.51	3.16	.003
28. I am not as caring towards patients who I know are LGBT	.18	.82	1.65	.11
30. I have used gender-neutral pronouns with patients before	.13	1.47	.64	.522

Note: Items are grouped by subscale but enumerated as found on the original questionnaire. Bolded items indicate statistical significance. Knowledge questions: 1 point for correct answer, 0 points for incorrect answer. X^2 = Pearson Chi-Square value, *df* = degrees of freedom. Attitudes and skills questions: 1 (*strongly agree*), 2 (*agree*), 3 (*neutral*), 4 (*disagree*), 5 (*strongly disagree*). Citations included for items adapted from previous research.

Figure 4.5 Knowledge, Attitudes, and Skills Bar Graph

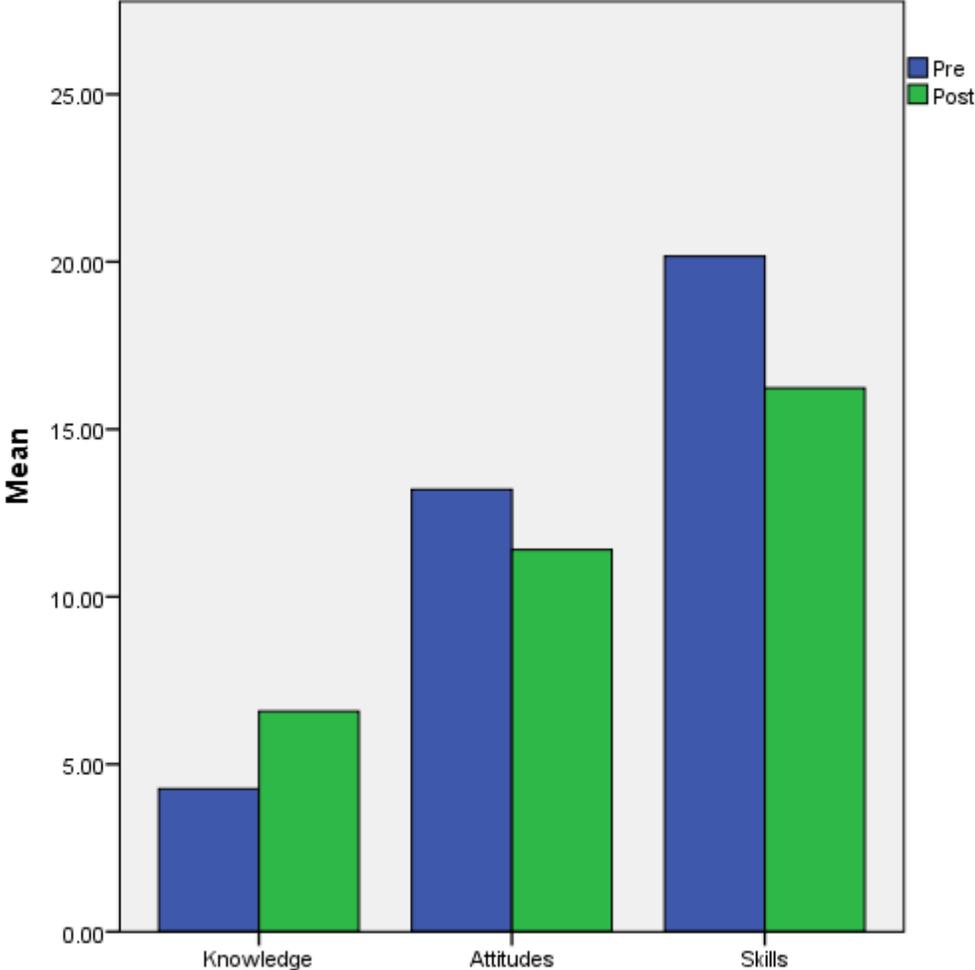


Figure 4.6 Attitudes Bar Graph

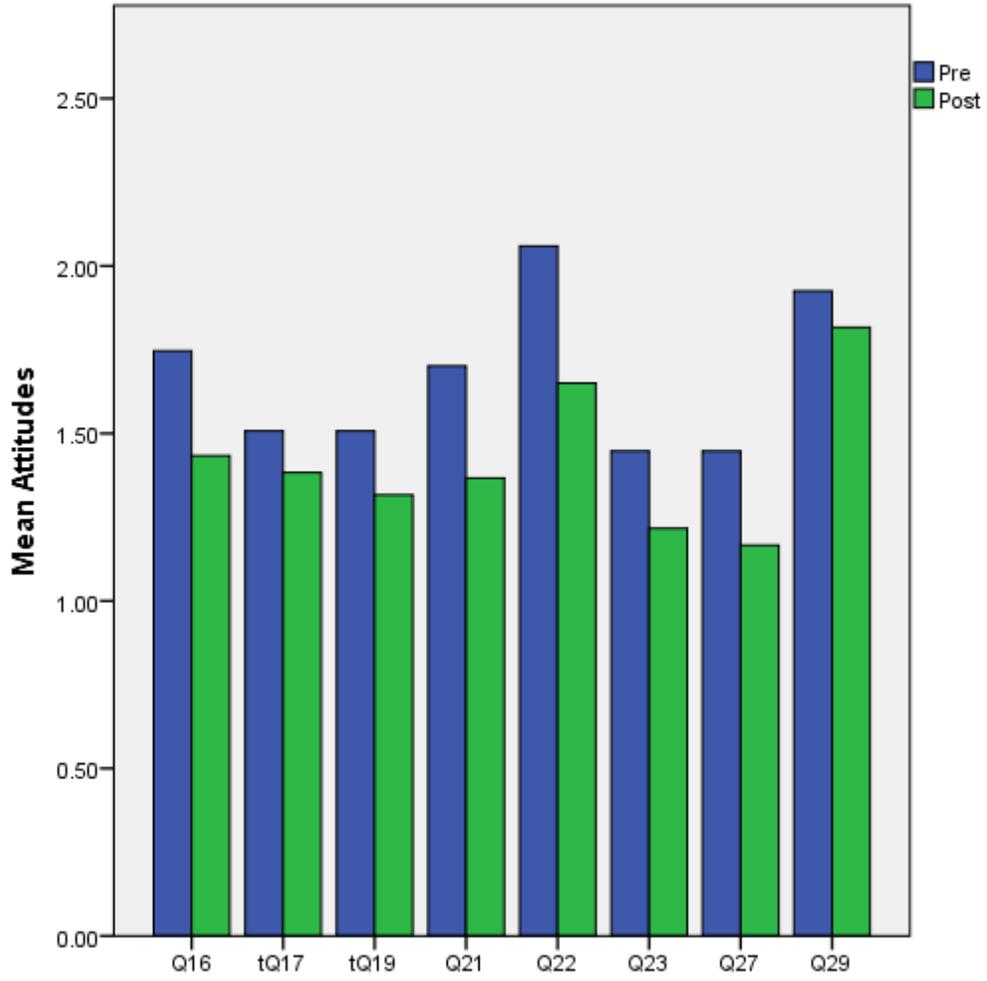
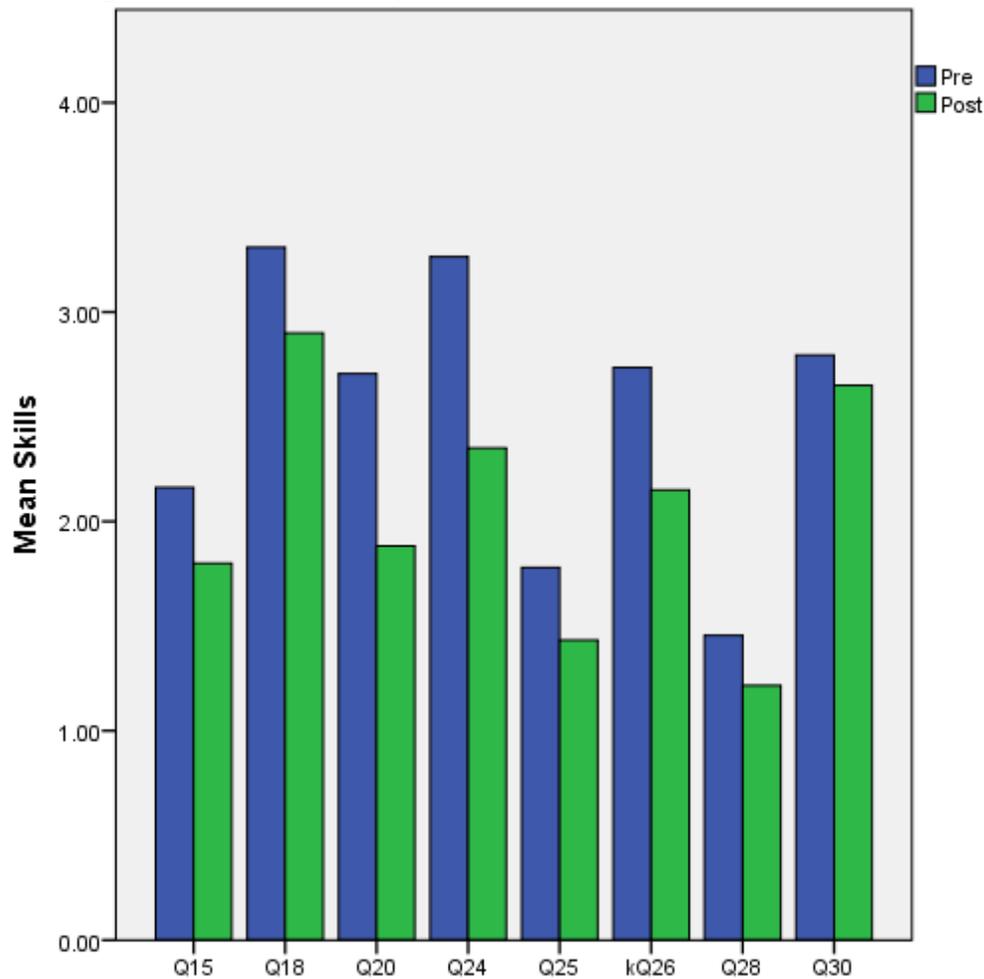


Figure 4.7 Skills Bar Graph



Reliability

Because the pretest and post-test tool was created using a compilation of items from the literature and original questions written by the project manager, it was necessary to compute the reliability of tool. Reliability is a measure of the internal consistency of a scale and its stability over time (Cronk, 2016). Individual items in a subscale should lead to results that are consistent with the subscale as a whole (Field, 2005). Reliability was determined through statistical testing of the three subscales: knowledge, attitudes, and skills, using Cronbach's Alpha. The Cronbach's Alpha of the pretest knowledge subscale was found to be .52 and the post-test alpha was .59. Deleting the item concerning marriage rights would have increased the reliability of the pretest to .63 however, on the post-test the reliability would have been increased to .60 if

the item about pap smears for lesbian patients had been deleted. The pretest attitudes subscale had a Cronbach's Alpha of .71 and a post-test alpha of .68. Deleting any individual items for the pretest would have decreased the reliability of the attitudes subscale below optimal levels, however deleting the item about standing up against homophobic attitudes would have increased the reliability to an optimal level of .70. The pretest skills subscale had a Cronbach's Alpha of .59 and a post-test alpha of .76. Deleting the item asking about altering an interview would have increased the reliability to .61 on the pretest, but deleting any of the items assessing skills on the post-test would have decreased the reliability of this subscale below optimal levels.

Suggestions for Improvement

The nursing students and the LGBT group members were given the opportunity to provide suggestions for improving the intervention in the future. The nursing students who responded to this item all gave positive feedback, stating that the intervention was beneficial, enjoyable, and informative. Their suggestions were to improve instructions given before each intervention, especially the role-play activity which might have benefited from a demonstration before hand or better prompts guiding the activity. They also felt that more education on LGBT terminology would have been helpful. Many students desired the opportunity to interact with more than one alliance member during the role-play activity. Students disagreed about the time frame of the project, with some students indicating that increasing the time allotted for the role-play activity would be helpful, while others wanted the intervention to be more condensed. Students wanted to know more about the LGBT members, asking for more personal stories during the panel discussion and more activities involving the LGBT members, such as a meet and greet.

The LGBT group members all provided feedback for this item. Their response to the intervention was positive as demonstrated by their statements that the nursing students were respectful, accepting, and nice and that the experience was enjoyable and that they felt comfortable. Several members thought that the nursing students were awkward. The LGBT

group members were in disagreement about how to improve the role-play activity, with some suggesting a more open-ended approach and others stating that the instructions and topics that the students were supposed to address were too vague. The LGBT students also found that the nursing students needed more instruction on terminology and that the importance of pronoun usage should be stressed. Additional topics that they suggested the nursing students learn were LGBT social situations, support systems, and risk factors, what questions are appropriate to ask, what discrimination looks like in health care, and safe zone training. The LGBT group offered suggestions on organization of the intervention as well, stating that more group members should be involved if possible and more time should be spent in the role-play activity. They suggested smaller group sizes, more days devoted to the activity, or seating the nursing students around the room and having LGBT group members rotate among them.

Significance

The results of the statistical analysis answers the PICOT question: Does a multi-faceted educational intervention including a lecture, panel discussion, and role-playing activity each lasting 50 minutes, improve the cultural competence, particularly the knowledge, attitudes, and skills, of undergraduate nursing students regarding LGBT individuals compared to their cultural competence before this intervention over a one-week time frame? The paired t tests for the subscales of knowledge, attitudes, and skills, comparing the pretest scores of undergraduate nursing students before the intervention, and post-test scores of these nursing students after the three tiered intervention, showed statistical significance for all three of these measures of cultural competence. Therefore the multi-faceted educational intervention of a lecture, panel discussion, and role-playing activity each lasting 50 minutes over the course of a one-week period did improve the cultural competence, particularly the knowledge, attitudes, and skills of undergraduate nursing students in regards to LGBT individuals compared to their cultural competence before the intervention. The level of measurement for the pre-test and post-test subscales was interval level. Because the same group of students was tested before and after

the intervention, a paired *t* test was appropriate, as this measures interval level data of a single group.

CHAPTER 5

DISCUSSION

This Evidence-Based Practice Project examined the impact of a multi-method educational approach to improving the LGBT cultural competence of senior nursing students through a PowerPoint lecture, panel discussion, and role-play activity, measuring the students' knowledge of LGBT health issues, attitudes towards individuals identifying as LGBT and skills in working with LGBT patients. The purpose of Chapter five is to provide an evaluation of the findings described in Chapter four, as well as the theoretical and EBP frameworks utilized for the project. Strengths and limitations of the EBP project will be reported and implications for future utilization of the project will be discussed, highlighting the applications to practice, theory, research and education.

Explanation of Findings

The findings of this EBP project provide an answer to the PICOT question: does a multi-faceted educational intervention including a lecture, panel discussion, and role-playing activity each lasting 50 minutes, improve the cultural competence, particularly the knowledge, attitudes, and skills, of undergraduate nursing students regarding LGBT individuals compared to their cultural competence before this intervention over a one-week time frame? Nursing students were assessed for their knowledge of LGBT health issues, their attitudes towards individuals identifying as LGBT and their skills in working with this population before and after the three-part intervention. Statistically significant improvement was found in all three of these areas of cultural competence, revealing that this multi-method approach is a successful means of improving the knowledge, attitudes, and skills of nursing students in regards to LGBT health care.

Knowledge

Significant improvement in nursing students' knowledge of LGBT related health issues was demonstrated ($p = .000$) for the overall knowledge subscale and correlations between the

intervention and improvement on specific knowledge questions was demonstrated for items concerning LGBT terminology, biology, and access to care. Knowledge is a common strategy for measuring cultural competence, although it cannot be the only component assessed, as knowledge alone does not dictate appropriate action or necessarily reflect personal views. However, improvement in knowledge through strategies such as the PowerPoint lecture utilized in this project is well documented and the results of this project are consistent with the outcomes described in the literature. Strong and Folse (2015) documented significant improvement in nursing student knowledge concerning the care of LGBT patients. Sanchez et al. (2006) studied the effect of exposure to LGBT patients on the knowledge, attitudes, and skills of medical students. It was found that students with more exposure to LGBT patients had greater knowledge of LGBT health concerns than students with less exposure. Kelley et al. (2008) found significant increase in the knowledge of medical students concerning LGBT health following a multi-method intervention including a syllabus of relevant terminology, panel discussion, and small group work on case studies. The statistically significant improvement of the nursing students' knowledge demonstrated in the EBP project further supports the current evidence suggesting that educational interventions seeking to improve cultural competence are successful in increasing knowledge of LGBT health care.

Attitudes

Nursing students' overall attitudes towards LGBT patients significantly improved following the intervention ($p = .000$) and individual items assessing attitudes identified statistically significant improvement in positive attitudes on items concerning the view that homosexuality is a phase ($p = .008$), that it is important to know about patients' sexual orientations, practices, and gender identities ($p = .001$), the attitude that LGBT individuals are emotionally or psychologically ill ($p = .009$), and feelings that LGBT individuals deserve the same rights as others ($p = .005$). Improvement in attitudes is consistent with findings in the literature. Strong and Folse (2015) reported significant improvement in the attitudes of nursing

students towards LGBT patients following a PowerPoint lecture. Sanchez et al. (2006) found that students with more exposure to LGBT patients were found to have more positive attitudes towards this population than students with less exposure. Kelley et al. (2008) found that a multi-method intervention improved the attitudes of medical students towards people identifying as LGBT. The statistically significant improvement in nursing students' attitudes identified in the EBP project supports the best practice evidence identified in the literature that cultural competence education will improve this aspect of LGBT cultural competence.

Skills

Statistically significant improvement in overall skills in working with the LGBT population was demonstrated by the nursing students post intervention ($p = .000$). Analysis of individual skills items revealed significant improvement in skills such as appropriately asking about a patient's significant other ($p = .004$), assuming heterosexuality of patients ($p = .019$), adapting interviews to the specific concerns of LGBT patients ($p = .000$), asking patients about gender identity and sexual orientation ($p = .000$), being unsure what to do or say when meeting an openly LGBT individual ($p = .009$), and avoiding asking about sexual behavior ($p = .003$). These findings are consistent with the literature. The cultural competence component of skills has been shown to be improved by educational strategies found in the literature, particularly those involving interaction between students and a cultural group. Sales et al. (2012) found that simulation and lecture improved cultural skills of pharmacy students. Sanchez et al. (2006) discovered that the greater the exposure to LGBT patients, the higher the skills possessed by medical students in caring for these patients. The statistically significant findings of the EBP project provide further supportive evidence to the existing literature that cultural competence education including an interactive component improves students' skills in cultural competence.

Reliability

The tool used to measure the outcomes of cultural competence in the nursing students was created by the principle investigator combining original items and items found in the

literature (Kelley et al., 2008; Riddle, 1994; Frazer et al. 2011; Worthington et al. 2005, Margolies & McDavid, 2014) therefore analysis of the reliability of this tool was necessary. The tool was divided into three separate subscales, so that reliability was calculated for each: knowledge, attitudes, and skills. Reliability was confirmed for the attitudes subscale pretest (Cronbach's alpha .71), and for the skills subscale post-test (alpha .76), however, the knowledge subscale for both pretest and post-test (alpha .52, alpha .59), the attitudes post-test subscale (alpha .68) and skills pretest subscale (.59) were less reliable.

Research found in the literature did not measure reliability for the knowledge subscales, citing the fact that this category assesses many different concepts (Kelley et al., 2008). Strong and Folsie reported suboptimal reliability of a knowledge questionnaire concerning LGBT health (2014). Therefore, it may be inappropriate to expect reliability for the knowledge subscale of the tool utilized in this project. Because sample size affects the calculation of reliability, it is possible that a larger sample may have produced more definitive results in terms of the reliability of each of the subscales included in this tool.

Content validity of the tool was confirmed three separate times: by the LGBT group members, a medical anthropologist, and the Associate Director of a university center for sexual health promotion.

Secondary findings

Review of the suggestions for future improvement of the project showed an overwhelmingly positive reaction to the intervention from both nursing students and LGBT group members. Both groups expressed a desire for an even greater opportunity for interaction. However, both groups also stated that the nursing students needed additional instruction on LGBT terminology and guidance on improving interaction techniques. It is not surprising that the nursing students had not fully mastered these areas, although the results demonstrated that improvement was made in these areas. These suggestions perfectly demonstrate the concept of cultural competence: it can be improved, but it is never fully realized. The intervention

succeeded in improving the students' LGBT cultural competence, but continued education and interactions with the LGBT population are required to advance this improvement.

Evaluation of Applicability of Theoretical and EBP Frameworks

The EBP project was built on both a theoretical framework, which informed the practice change, and an EBP framework, which guided the EBP process. These frameworks maintained the consistency of the project throughout each stage.

Theoretical Framework

The Purnell Model for Cultural Competence was created for undergraduate students across healthcare disciplines, such as the undergraduate nursing students making up the sample population of the EBP project (Purnell, 2005). The goal of the framework is to help students assess cultures and advance towards cultural competence. The model depicts a circle with concentric rings representing global society, community, family, and person. Pie-shaped wedges intersecting the rings outline 12 cultural domains: overview/heritage, communication, family roles and organization, workforce issues, biocultural ecology, high-risk behaviors, nutrition, pregnancy, death rituals, spirituality, health-care practices, and health-care practitioners. A central black circle represents unknown aspects of culture, and a jagged line under the diagram serves as a reminder of that cultural competence is non-linear in nature (Appendix A).

This model served as an excellent way of organizing the intervention, ensuring that these key components of culture were addressed. Its specific bent towards the priorities of health care providers streamlined the vastness of possible concepts related to cultural to include those topics that would best serve these students in improving their cultural competence to become better providers for LGBT patients. The PowerPoint lecture in particular followed this framework closely. The phenomena depicted by each ring were used as slide headings and each of the 12 cultural domains was addressed within the context of these headings. Therefore LGBT health was examined on the global scale, where criminality and protection laws were

identified throughout the world. On the community scale, national, state, and nursing perspectives on LGBT health were discussed such as the Affordable care act, the state's law on religious freedom and discrimination, and the ANA nursing code of ethic, as well as how to improve community safety for LGBT individuals. Family issues were discussed including reactions to "coming out," definitions of family, homelessness, family planning, and LGBT-specific barriers encountered in aging, illness, and death. LGBT health topics on the individual scale included biological variations of intersex individuals, spirituality, economics and education, nutrition, high-risk behaviors such as alcohol and drug use, morbidity and mortality topics like HIV/AIDs, cancer, suicide, and violence, and issues specific to the transgender individual. The healthcare practices of LGBT patients and the practices of health care providers were described including a discussion on improving communication and quality of care and highlighted the most important health topics which should be discussed with each patient identifying as lesbian, gay, bisexual, or transgender. This wide range of topics allowed the nursing students to gain a broad understanding of the multitude of issues impacting the health of LGBT patients and how culturally competent providers might improve the health of these individuals.

The topics identified in the model also served as springboards for the panel discussion, allowing the students to hear first-hand experiences of university students and faculty identifying as LGBT relating to what was discussed in the PowerPoint lecture. They were also used as an outline for the role-play activity, assisting the students in practicing communication skills such as alternative pronoun use, addressing patient of confidentiality concerns, and discussing top health issues.

The strengths of utilizing this model for the EBP project were rooted in the comprehensive range of aspects of culture included in the model affecting LGBT health. Nursing care differs from other health care professions in its focus on holistic care and this model revealed the many ways in which LGBT health care disparities must be addressed. This

correlates with the nursing metaparadigm, which focuses on health, person, community, and environment. Previous LGBT education for these students simply included the top health issues of LGBT patients such as high suicide, sexually transmitted infection, and drug use rates, whereas this model delves into environmental factors such as global and local policy, education and communication, workplace issues, homelessness, violence and discrimination, and the many other factors compounding health disparities. This provided an opportunity for students to grasp the barriers faced by this population which in turn outlines the areas in which these students can make a difference as they enter the work force. The simple diagram with the concentric circles and pie wedges is clear and easy to follow despite the many cultural components included within it and can be utilized as a tool for students as they seek to improve their competence with many other cultures as well. Finally, the inclusion of health-care practitioners as an aspect of culture allows the students to view their own role in LGBT health and reflect on the health care providers contribution to disparities. The author of this model recognizes that cultural competence is a process, not a fixed outcome, which aligns with the findings in the literature which state that educational interventions can improve students' cultural competence but that they will never reach a state of absolute cultural competence.

The limitations of this model for use in this project centered on time constraints. It was over-ambitious to attempt to address each aspect of culture depicted in the diagram in one 30-minute PowerPoint presentation. Although the notes section of the slides provided more detail than the presenter was able to give in the allotted time, depending on the students to read these sections in preparation for the panel discussion and role-play activities was not adequate. One of the most repeated suggestions of the LGBT group members on improvement of the intervention was that the nursing students did not seem familiar with the topics such as pronoun use and LGBT terminology despite their inclusion in the presentation and required further instruction in these areas. More presentation time would have allowed for in-depth discussion of these topics and providing this material on handouts in addition to the lecture might improve the

intervention. It was clear from the results of the pretest and post-test scores on items assessing knowledge that although knowledge on the whole improved, there remained confusion on the complex topics of biological differences in intersex individuals. This area would have benefited from more lecture time as well.

EBP Framework

The model for Evidence-Based Practice Change is a six-step progression guiding nurses through the EBP process. Each of these steps was utilized in the EBP project, as the progression fit completely with the EBP project expectations and design. This framework was an excellent fit for the project, ensuring that proper preliminary actions were completed so that the subsequent phases would be successful. For example, beginning the project by assessing for the need for a practice change is a vital component for being able to recruit stakeholders to support a change in practice. This first step of the model involved performing a needs assessment, identifying that the nursing program and the university at large lacked adequate curricular LGBT-related content, and provided the groundwork for implementing a practice change. Step two of the model involves locating the best evidence, which was accomplished through a systematic review of the literature, and step three requires critical analysis of the best evidence. These steps ensured that the change in practice was supported by the top evidence available. Designing the practice change based on the work of the proceeding steps was the process of step four. Indeed, by utilizing the strategies supported by the literature to guide the practice change, statistically significant improvement in all three of the measured areas of cultural competence was accomplished. Step five encompasses implementation, evaluation of the process, outcomes, and costs, as well as development of conclusions and recommendations, while step six continues to advance the project through integration and maintenance of the change. The successful implementation of each part of the multi-method intervention, the significant positive outcomes, and the low financial burden of the project

cemented the importance and feasibility of the practice change and inspired the site facilitator to continue the practice change with future students.

Strengths of the model was the logical and intuitive progression of the six steps depicted in a clear diagram, the strong correlation with the requirements outlined for the EBP project, and the applicability to the university setting. Limitations of the model where that it did not include analysis of whether the proposed change was a priority to the site, if the change was appropriate, and identification of barriers to the change. Therefore modifications were made to incorporate these necessary actions. The needs assessment performed in step one identified the lack of priority given to LGBT content and formed the basis of garnering support from stakeholders for the practice change. Inclusion of the site facilitator as a part of the team of stakeholders ensured that the implementation of the practice change would be appropriate to the classroom setting and the time allotted. Finally, chapter three of the project included an evaluation of barriers to the change and were incorporated into the model's design process of step four.

During implementation of the project, alterations were made to the design of the practice change to accommodate unexpected changes in the sample size of the nursing students and the number of participating LGBT group members. The panel discussion originally included five LGBT group members and actually consisted of four. The small groups for the role-play activity called for three nursing students, yet some groups had four members instead. Each LGBT group member was originally supposed to work with two groups of nursing students but some only needed to work with one group based on the proportion of number of nursing students and number of LGBT members. Despite these changes, the activities were successful, which supports the design of the intervention as it was flexible enough to accommodate inevitable fluctuations in attendance.

Feedback from the nursing students and LGBT group members for improvement of the project in the future included requests that the students have more contact with several LGBT

group members rather than one during the role-play activity and for more time to be devoted to personal accounts from the panelists during the panel discussion. Such increased involvement from LGBT group members would require more intense recruitment strategies and more class time devoted to this project in the future and would alter step four's design stage. Such changes might diminish the feasibility of the project, determined in step three, but could potentially increase the benefit of the practice change.

Strengths and Limitations of the EBP Project

Comprehensive assessment of the strengths and limitations of the EBP project as a whole reveal areas which should be utilized in maintenance of the practice change and replicated in future incarnations of the project, as well as aspects which may need to be altered to improve the process.

Strengths

The EBP project demonstrates strengths at each step of the process. Addressing LGBT health disparities by improving the cultural competence of health care providers is a national priority, demonstrating the relevance of this topic for nursing education. The needs assessment ascertained the lack of sufficient curricular inclusion of LGBT-related material, consistent with the findings in the literature which stated that nursing programs across the country are lacking in this regard. This supported the practice change. The thorough systematic review and analysis ensured that the best evidence available guided the practice change. Close work with the site facilitator assisted in the creation of an implementation design that would be feasible within the constraints of the course schedule. The multi-method intervention of a PowerPoint lecture, panel discussion, and role-play activity was supported by the literature and informed by the Purnell Model for Cultural Competence. The questionnaire assessed the three most commonly measured aspects of cultural competence in health care providers: knowledge, attitudes, and skills, and was tested and confirmed for content validity three separate times: by the LGBT group leaders, a cultural anthropologist, and the Associate Director of a university for sexual

health promotion. Implementation of the practice change was successful, with all three tiers completed within the allotted time frame and only minimal adjustments required based on changes in nursing student and LGBT group member attendance. Statistical analysis was performed using SPSS22 and revealed statistically significant improvement in all three measured areas of cultural competence. The statistically significant outcomes of the project and the response rates of 89.7% on the pretest and 78.2% on the post-test indicated that the sample size was sufficient with only nine fewer students who completed the post-test compared to the pretest for an attrition rate of 11.5%. Suggestions for future improvement showed positive reactions from both nursing students and LGBT group members and that the nursing students desired even more interaction with LGBT group members. The successful implementation of the project and positive outcomes influenced the site facilitator to decide to maintain the practice change in the future.

Limitations

The systematic literature search revealed a dearth of high-level studies utilizing randomized control trial design. Although four level I studies were utilized in this project, including meta-analyses, a systematic review, and a clinical guideline, these were not based exclusively on randomized control trials. Therefore the foundation guiding the practice change is based on research utilizing less scientific research strategies. Because the topic of LGBT cultural competence in health care providers is a priority in top health agencies, it is anticipated that this topic will gain momentum in research and a greater number of high-level studies will be available to guide future changes in practice.

Although the site facilitator was generous in the time she allotted for implementation of the practice change, three full consecutive class periods devoted to the topic of LGBT health care, even more time would have been ideal for ensuring better understanding of each cultural concept outlined by the Purnell model and allowing for increased interactions between LGBT group members and the nursing students. However, statistical analysis demonstrated that this

the time allotted for this practice change and the implementation design was sufficient to improve the nursing students' LGBT cultural competence in knowledge, attitudes, and skills. Therefore, although increased time may have caused even more improvement, it is not necessary for positive outcomes.

The evaluation of the students' attitudes and skills was based on self-assessment which can introduce bias. The students could have answered more positively for attitudes questions if they felt that those answers would be more socially acceptable. The project manager attempted to control for this by stressing that the questionnaires would be confidential and reported in aggregate, that the professor, the project manager, and other classmates would not know what each individual student had responded, and highlighting the importance of answering each item honestly for the integrity of the data. There was also a potential for bias if the students had an inaccurate perception, either over or underrating their achievement in skills. Future studies should focus on observing student interactions with LGBT patients to determine skill level.

A final limitation of the project was that there was no standard assessment tool for LGBT cultural competence, so the principle investigator created a tool utilizing original items and items found in the literature. Although validity of the tool was confirmed and the attitudes subscale was determined to be reliable, two of the three subscales were not found to be reliable based on statistical analysis. However, a larger sample size might be required to accurately demonstrate the reliability of these subscales of the tool.

Implications for the Future

The ultimate goal of the EBP project is to initiate a practice change that will be integrated and maintained beyond the bounds of the project. Future implications of the EBP project are identified as they affect practice, theory, research, and education.

Practice

The sample identified for this project was senior nursing students in a baccalaureate program. These students have experience in nursing practice through their clinical work and are

poised to become health care providers. The implication of this project on their future practice is that it has significantly improved their knowledge of LGBT health issues, it has significantly improved their attitudes towards people identifying as LGBT, and it has significantly improved their skills in working with LGBT patients. These students will contribute their LGBT cultural competence to the next generation of nurses, helping to meet the call for more culturally competent health care providers. They will be equipped with the knowledge that LGBT patients face unique barriers, they will have practice in communicating effectively with these patients, and addressing their top risk factors. They will be better able to identify discriminatory practices in their places of employment, and they demonstrate an increased desire and ability to change their own behavior in this regard. Maintenance of the practice change at the implementation site and adoption by other programs will contribute to a growing population of health care providers with superior LGBT cultural competence.

Theory

This EBP project supports the Purnell Model for Cultural Competence as a valuable framework for LGBT cultural competence education of nursing students and the model for Evidence-Based Practice Change as an appropriate and practical means of progressing through the EBP process. No model specific for LGBT cultural competence currently exists, and models such as the Purnell Model for Cultural Competence emphasize that all cultures can be understood using the same model. However, this complex and growing field of study may warrant a model particular to LGBT cultural competence education which would help educators address unique aspects of this culture in a holistic way while potentially avoiding the pitfalls related to time constraints of attempting to address every aspect of a broader, more comprehensive, cultural competence model such as the one utilized in this project.

Research

The implications for research of this EBP project are that it contributes to the relatively small body of literature addressing the topic of the cultural competence of health care providers

related to LGBT health. To the knowledge of the principle investigator, it is the only study demonstrating statistically significant improvement in nursing student cultural competence skills in working with individuals identifying as LGBT. It also supports the findings of existing studies that cultural competence education improves the knowledge and attitude components of cultural competence. The tool created for this project demonstrates validity and reliability in terms of the attitudes subscale. It may be utilized in future studies with a larger sample size to refute or confirm reliability of the knowledge and skills subscales. The statistically significant findings of this project show that the intervention supported by the literature was indeed effective, warranting further replication to confirm findings and to expand the intervention to diverse sample populations to determine generalizability.

Education

The EBP project confirms the efficacy of a multi-method approach to improving LGBT cultural competence in nursing students. Therefore, it is appropriate for other nursing programs to adopt this practice change in educating their students. The intervention is feasible and appropriate for the classroom setting. Although some programs may not be able to devote three 50-minute class periods to replicate this exact intervention, or may have different needs than those of the site of this project, the literature supports the use of many different educational strategies, allowing for flexibility in the exact interventions chosen. It is recommended by the literature, and supported by this project that cultural competence education include formal educational strategies such as lectures, assignments, or case studies, contact with members of a cultural group such as panel discussion, guest presentations, or field trips, and interactive experiences such as role-play activities, clinical experiences, or cultural emersion. There are many more suggested strategies provided in the literature that fit into these three categories that can be expected to have a similarly positive effect on the cultural competence of nursing students. Education of health care providers is the first step towards addressing the health

disparities suffered by the LGBT population. By incorporating LGBT content such as that utilized in this project, future health care providers will be better equipped to eliminate these disparities.

Conclusion

The EBP project sought to address the PICOT question: does a multi-faceted educational intervention including a lecture, panel discussion, and role-playing activity each lasting 50 minutes, improve the cultural competence, particularly the knowledge, attitudes, and skills, of undergraduate nursing students regarding LGBT individuals compared to their cultural competence before this intervention over a one-week time frame? Findings indicate statistically significant improvement in all three areas: knowledge, attitudes, and skills, from pretest to post-test. The intervention was successfully implemented, confirming that it was appropriate for the classroom setting with the undergraduate nursing population. Suggestions for improvement submitted by the LGBT group members and nursing students revealed that more opportunity for interaction and more time devoted to this topic were desired from both groups, and both groups expressed that the experience was positive and educational.

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BIOGRAPHICAL MATERIAL

Ms. Orgel earned a Bachelor of Science in Nursing from Valparaiso University through the Accelerated Nursing Program, and graduated Magna Cum Lauda in 2014. She was awarded the College of Nursing and Health Professions' Blumel Award based upon her determination, perseverance, sense of humor, desire to elevate the standards of nursing, and a concern for human worth, regardless of race, creed, or culture. She also holds a Bachelor of Arts in Anthropology from Indiana University, where she graduated in 2009 and was inducted as a member of Phi Beta Kappa. Ms. Orgel is currently attending Valparaiso University to earn a Doctorate in Nursing Practice and will graduate in May, 2017. She has worked as a Registered Nurse in pediatric home health, as a substitute school nurse, and as a health assessment tutor for international students at Valparaiso University. She is a member of The American Association of Nurse Practitioners (AANP) and the Midwest Nursing Research Society (MNRS). Ms. Orgel will have an Integrative Review paper published in the *Association of Black Nursing Faculty (ABNF) Journal* focused on improving nursing students' cultural competence in working with lesbian, gay, bisexual, and transgender (LGBT) patients. She was chosen to provide a poster presentation based upon her work at the MNRS annual conference in April, 2017. Ms. Orgel has been interested in cultural competence throughout her education as it bridges the disciplines of nursing and anthropology. She became focused on the topic of increasing cultural competence in order to improve LGBT health disparities as this is a national priority in healthcare.

ACRONYM LIST

AACN: American Association of Colleges of Nursing

AIDS: Acquired Immunodeficiency Syndrome

ANOVA: Analysis of Variance

APA: American Psychological Association

EBP: Evidence-Based Practice

CDC: Centers for Disease Control

GLBT: Gay, Lesbian, Bisexual, Transgender

HEI: Healthcare Equality Index

HIV: Human Immunodeficiency Virus

HPV: Human Papillomavirus

HRC: Human Rights Campaign

IOM: Institute of Medicine

IRB: Institutional Review Board

JBI: Joanna Briggs Institute

LGB: Lesbian, Gay, Bisexual

LGBT: Lesbian, Gay, Bisexual, Transgender

LGBTQ: Lesbian, Gay, Bisexual, Transgender, Queer/Questioning

PICOT: Population, Intervention, Comparison, Outcome, Time

RCT: Randomized Controlled Trial

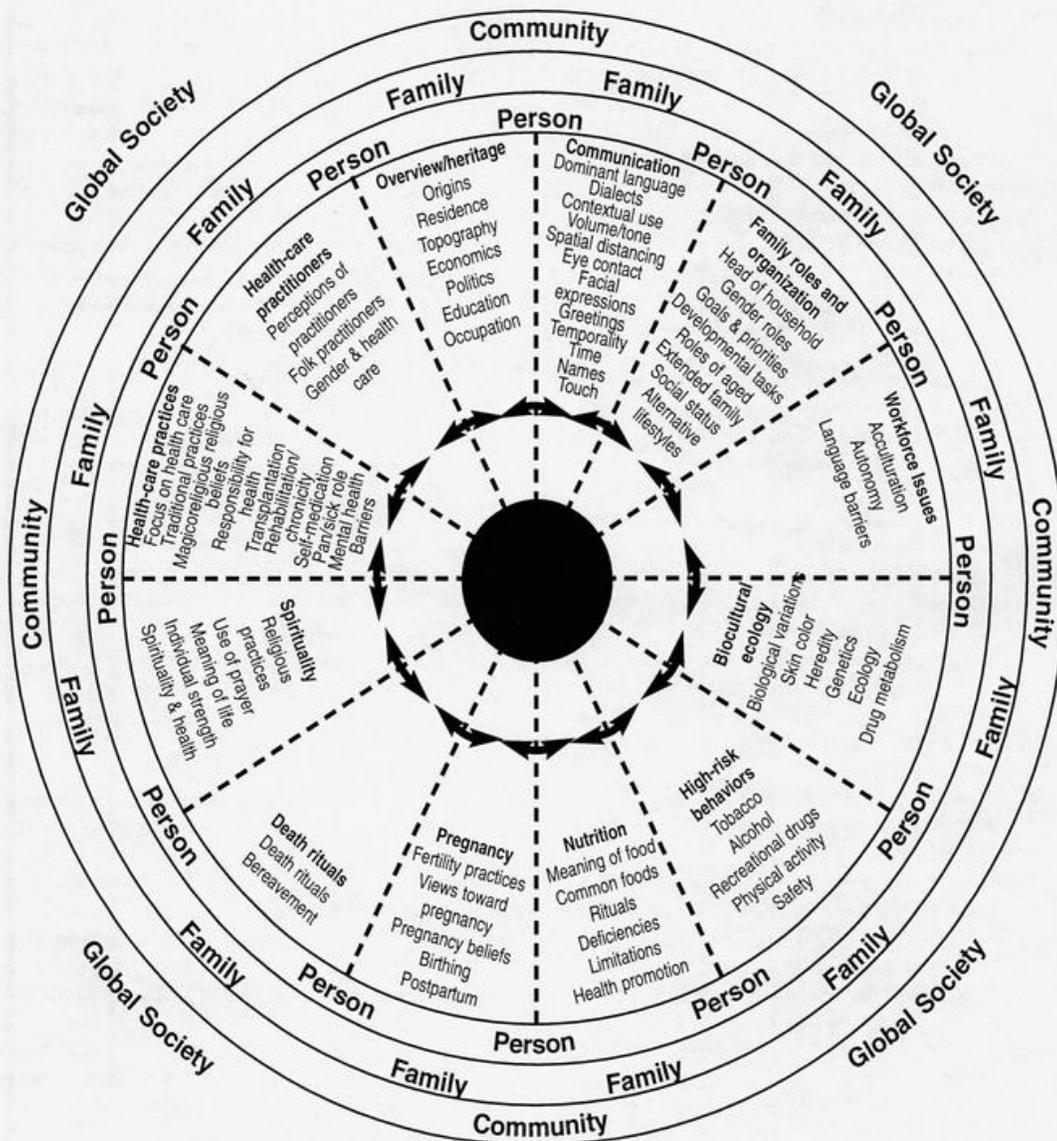
SPSS: Statistical Package for the Social Sciences

STI: Sexually Transmitted Infection

Appendix A

The Purnell Model for Cultural Competence

Figure 1 - The Purnell Model for Cultural Competence



Unconsciously Incompetent - Consciously incompetent - Consciously competent - Unconsciously competent

Primary characteristics of culture: age, generation, nationality, race, color, gender, religion

Secondary characteristics of culture: educational status, socioeconomic status, occupation, military status, political beliefs, urban versus rural residence, enclave identity, marital status, parental status, physical characteristics, sexual orientation, gender issues, and reason for migration (sojourner, immigrant, undocumented status)

T

Appendix B

Summary of Appraised Literature

Citation	Purpose	Design	Sample	Intervention	Instrument	Results	Level/ Quality	Findings/ Recommendations
AACN (2008). Toolkit of resources for cultural competence education for baccalaureate nurses. <i>American Association of Colleges of Nursing</i> . Retrieved from: http://www.aacn.nche.edu/education-resources/toolkit.pdf	To provide resources and examples to facilitate implementation of cultural competencies in baccalaureate nursing education.	Guideline "toolkit"	None	Interventions recommended: cultural self-assessment, oral presentation, guest presentations, case studies, journal articles, videos, fieldtrips, alternative healers, religious calendars, role play, critique health care materials, care plan development, diversity events, simulated living experiences, journaling, immersion, cultural assessment, community activity participation, case presentations	None	None	Level I/ Quality B	There are many teaching/learning activities found to be effective in developing culturally competent care. The suggested activities can help educators choose an appropriate strategy for their setting
Bartos, S. E., Berger, I., Hegarty, P. (2014). Interventions to reduce sexual prejudice: A study-space analysis and meta-analytic review. <i>Journal of Sex Research</i> 51(4), 363-382. doi: 10.1080/00224499.2013.871625	Review the effectiveness of interventions designed to reduce prejudice of lesbians, gay, and bisexual people	Study-space analysis and Meta-analytic review	159 studies, both published and unpublished, across disciplines, countries, and languages.	14 interventions classified: education, intergroup contact, contact plus education, norms or experience, inducing emotions, priming techniques, awareness or suppression, accountability, entertainment, cooperative learning, manipulation of categories, comparison of approaches.	Instruments used by the included studies not discussed.	Effect sizes were determined for each study using Cohen's <i>d</i> based on post test scores and benchmarks of small= $d < .30$ small, medium= $d < .5$, and large= $d > .5$. Education studies: medium effect size, $d = 0.46$ size of the effect as $SE = 0.07$. Contact studies: medium effect with $d = 0.36$ and $SE = 0.05$. Contact plus education studies: medium effect, $d = 0.41$ and $SE = 0.06$. No evidence of publication	Level I/ Quality A	Education, contact with LGB people, and a combination of education and contact were shown to be the best methods having a moderate effect on prejudice. These interventions had a positive effect on attitude, knowledge, and emotions.

						bias or heterogeneity in any group		
Beach, M. C., Price, E. G., Gary, T. L., Robinson, K. A., Gozu, A., Palacio, A., Smarth, C., Jenckes, M. W., Feuerstein, C., Bass, E.B., Powe, N. R., & Cooper, L. A. (2005). Cultural competency: A systematic review of health care provider education interventions. <i>Med Care</i> 43(4), 356-373.	To identify which cultural competence intervention strategies have been shown to improve cultural competence and determine what the costs of these strategies are	Systematic review	34 articles of pretest/post-test, randomized control trial, and controlled clinical trial designs	Interventions identified in the studies: media, group discussions, case scenarios, clinical experiences, interviews with members of another culture, cultural immersion or experiences, drill/practice exercises, community health activities, lectures, demonstration/role modeling, home visits, written assignments, field trips, and presentations	The authors developed their own method of evaluating the strength of evidence for each of 5 outcomes: knowledge, attitudes, skills, patient outcomes, and cost of training. graded A-D based on quality (study design, objective assessment), quantity of studies supporting the outcome, and consistency between studies showing similar results. Knowledge had grade A, skills grade B, attitudes grade B, patient satisfaction grade B, patient adherence grade D, cost grade D	Instruments used by the included studies: Multicultural Assessment Questionnaire (MAQ), Cultural Self-Efficacy Scale (CSES), Cancer Attitude Inventory (CAI), Pittsburgh Attitude Survey (PAS), Measure of Epistemological Reflection (MER), Transcultural Self-Efficacy Tool (TCSET), Ethnic Competency Skills Assessment (ECSA), Michigan Longitudinal Study Scales(MLSS), Barrett-Lennard Relationship Inventory (B.L RI), Counselor Effectiveness Scale (CES), and the Counselor Rating Form (CRF)	Level I/ Quality A	There is excellent evidence showing that cultural competence training improves knowledge, good evidence that it improves attitudes, skills, and patient satisfaction, and poor evidence that it impacts patient adherence, poor evidence for identifying the cost of training.
Brennan, A. M. W., Barnsteiner, J., De Leon Siantz, M.L, Cotter, V. T., Everett, J. (2012). Lesbian, gay, bisexual, transgendered, or intersexed content for nursing curricula. <i>Journal of Professional Nursing</i> 28(2), 96-104. doi: 10.1016/j.prof.nurs.2011.11.004	"...reviews LGBTI literature to address the attitudes, knowledge, and skills needed to address curricular gaps and provide content suggestions for inclusion in nursing curricula."	Literature review	43 resources referenced	Interventions recommended: panels of LGBTI individuals, group projects, individual papers, group exercises, literature/films, music, case studies, simulation exercises, role playing, clinical experiences.	None	None	Level VII/ Quality A	A panel of LGBTI individuals can be invited to talk about health care experiences which can create sensitivity and empathy for the concerns of this population with students. Activities to clarify personal beliefs and confront heterosexism in their own lives can increase awareness. Case studies can address assessment and health promotion. Simulation to improve sensitivity to barriers and health concerns. Roll playing can help identify risk behaviors. Clinical experiences should include assignment to LGBT individuals to discuss what he/she wants from health care systems

<p>Carabez, R., Pellegrini, M., Mankovitz, A., Eliason, M., Ciano, M., & Scott, M. (2015). "Never in all my years...": Nurses' education about LGBT health. <i>Journal of Professional Nursing</i> 31(4), 323-329. doi:10.1016/j.profnurs.2015.01.003</p>	<p>"...Reports on education/training of practicing nurses and explores some of the reasons for nurses reporting feelings of discomfort with LGBT patient care."</p>	<p>Mixed method: needs assessment of key informants with highly structured interviews and additional qualitative analysis</p>	<p>268 nurses in the San Francisco Bay Area. Majority had 10 or more years experience, majority worked in hospital setting. Full spectrum of nursing positions represented.</p>	<p>Interventions recommended: invite expert guest speakers to class for discussions, host panel discussions with LGBT patients, utilize interactive experiences in providing LGBT care, provide website and online film links related to LGBT topics, have clinical rotation discussions on dealing with discomfort, use case studies, training modules, readings, webinars. Institutional recommendations also provided.</p>	<p>16 scripted items based on the categories of training and comfort levels in the Health Equality Index (HEI)</p>	<p>80% of participants had no training working with LGBT patients. 30% reported discomfort.</p>	<p>Level VI/ Quality B</p>	<p>Nurses often do not receive training or education on LGBT health issues, feel uncomfortable working with LGBT patients, or do not know the health needs of these patients. There is a need for integrating LGBT education into nursing school, continuing education, cultural diversity training, and institutional orientation.</p>
<p>Gallagher, R. W., & Polanin, J. R. (2015). A meta-analysis of educational interventions designed to enhance cultural competence in professional nurses and nursing students. <i>Nursing Education Today</i> 35(2), 333-340. doi: 10.1016/j.nedt.2014.10.021</p>	<p>"...synthesize educational interventions designed to increase cultural competence in professional nurses and nursing students."</p>	<p>Systematic review and meta-analysis</p>	<p>25 studies: implemented an intervention to increase cult. Comp in nurses/nursing students. Designs: within-group, pretest/posttest/ or treatment-control design</p>	<p>Interventions identified in the studies: Lecture, discussion, journaling, reflections, role play, simulation, immersion, multimedia</p>	<p>Studies used a variation of the Inventory for Assessing the Process of Cultural Competence among Healthcare Professionals(IAPPC), Transcultural Self-Efficacy Tool (TSET), the Cultural Self-Efficacy Scale (CSES), the Caffery Cultural Competence Healthcare Scale (CCCHS) or a measure created by the authors</p>	<p>Analysis of pretest/post-test designs: effect size of .45 and $p < .01$. statistically significant positive improvement in cultural comp. Analysis of treatment-control designs: effect size=0.38, $p=0.08$, effect sizes were modified by type of measure (Qb=21.26, $p < .001$), type of participant (Qb=3.91, $p=.05$), funding (Qb=4.60, $p < .03$), and date of publication (B=-.07, $p=.03$). Positive improvement in cultural competence but not statistically significant</p>	<p>Level I/ Quality B</p>	<p>Authors stress that cultural competence training leads to improved awareness and patient benefits. Regardless of program design, setting, participants, intervention, or measurement strategy, cultural competence education of the methods described in this review have been shown to improve cultural competence.</p>
<p>Kelley, L., Chou, C. L., Dibble, S. L., & Robertson, P. A. (2008). A critical intervention in lesbian, gay,</p>	<p>"...describe the effects of a curriculum designed to illuminate LGBT health care</p>	<p>Quasi-experimental one group pre-test/post-test</p>	<p>75 students (52% of those enrolled in the course). Voluntary, lottery ticket compensation.</p>	<p>3 parts, 2 hr time block: 1. syllabus with basic LGBT term definitions and health issues. 2. 1 hr patient discussion panel: older gay man, middle-aged</p>	<p>Survey: given pre and post intervention assessing knowledge, attitudes, and beliefs. 16 statements based on Index of Attitudes toward homosexuals using Likert scale</p>	<p>Response rate: 52% 25% (4 questions) showed statistically significant improvement between pre and post-tests: knowledge question on access to care effect size of 0.59, $p < .001$,</p>	<p>Level III/ Quality A</p>	<p>Intervention showed improved knowledge and attitudes, statistically significant change in 4 of the 16 survey questions. Students wanted more time for the intervention and opportunity skill exercises such as role playing.</p>

<p>bisexual, and transgender health: Knowledge and attitude outcomes among second-year medical students. <i>Teaching and Learning in Medicine: An International Journal</i> 20(3), 248-253. doi: 10.1080/10401330802199567</p>	<p>disparities and to facilitate dialogue between medical students and members of the LGBT communities”</p>			<p>lesbian, young transgender man. Each gave short presentation then interactive question/answer session. 3. 1 hr small group work on 3 written case studies led by LGBT faculty physicians and residents.</p>	<p>strongly agree-strongly disagree, initially piloted with confirmed content validity. Multiple concepts measured so not appropriate to assess for reliability.</p>	<p>knowledge question on monogamy effect size of 0.38, $p < .001$, attitudes question on sexual history effect size of 0.42, $p < .001$, attitudes question on treating patients effect size of 0.33, $p < .001$. No statistically significant changes in experience questions.</p>		
<p>Lim, F. A., Brown, D. V., & Jones, H. (2013). Lesbian, gay, bisexual, and transgender health: Fundamentals for nursing education. <i>Journal of Nursing Education</i> 52(4), 198-203. doi: 10.3928/01484834-20130311-02</p>	<p>“...explores the national climate around LGBT individuals and their related health needs”</p>	<p>Expert opinion</p>	<p>None</p>	<p>Interventions recommended: simulation, case studies, clinical affiliations, independent study, elective courses, course development. Support strategies: academic advising, diverse faculty, LGBT interest groups, interprofessional education</p>	<p>None</p>	<p>None</p>	<p>Level VII/ Quality A</p>	<p>Provide students with diverse clinical placements, access to LGBT interest groups, course outcomes and care plans that promote LGBT cultural competence “Program design must facilitate the interface between LGBT individuals and nursing students in real times and at all levels.”</p>
<p>Lim, F. A., Brown, D. V. Jr., & Justin Kim, S. M. (2014). Addressing health care disparities in the lesbian, gay, bisexual, and transgender population: A</p>	<p>“...explores LGBT health issues and health care disparities, and offers recommendations for best practice based on current</p>	<p>Literature Review</p>	<p>None</p>	<p>Interventions in the literature: Simulation, films, explicit school policy statement ensuring curricula foster excellence in LGBT care are some cited examples.</p>	<p>None</p>	<p>None</p>	<p>Level VII/ Quality A</p>	<p>“infuse” the curriculum with LGBT content, form clinical partnerships with agencies that serve LGBT community to give students opportunity to interact with people from sexually diverse groups. Nursing student negative attitudes could be from lack of experience with LGBT population. Recommended instruments: The Healthcare Equality Index for health care facilities to assess how well it</p>

<p>review of best practices. <i>American Journal of Nursing</i> 144(6), 24-34. doi: 10.1097/01.NAJ.0000450423.89759.36.</p>	<p>evidence and standards of care”</p>							<p>meets essential components for LGBT care. Joint Commission Field Guide standards</p>
<p>Long, T. B. (2012). Overview of teaching strategies for cultural competence in nursing students. <i>Journal of Cultural Diversity</i> 19(3), 102-108.</p>	<p>Reviews the most common cultural competence teaching methods currently being used by nurse educators</p>	<p>Literature Review</p>	<p>No disclosure of exact number of studies reviewed, only a sample given in table of teaching strategies.</p>	<p>Interventions in the literature: lecture: group discussions: student written reports, clinical experiences, simulation, guest lecturers, mentoring and consultation, educational partnerships, lived immersion/study abroad</p>	<p>None</p>	<p>None</p>	<p>Level VII/ Quality B</p>	<p>All interventions to teach cultural competence show positive outcomes, no single method is best and none cause students to become culturally competent. “The use of clinical experiences, standardized patients, and immersion experiences have produced the most favorable results which increase student awareness, knowledge, and confidence working with ethnically diverse patients. “...coordinating guest lecturers from the community could be a positive outreach experience” Educational sessions where community members teach health care providers by describing their unique ethnic lived experiences creates a rich background of understanding different cultures...”</p>
<p>Margolies, L., Joo, R., & McDavid, J. (2014). Best practices in creating and delivering LGBTQ cultural competency trainings for health and social service agencies. <i>National LGBT Cancer</i></p>	<p>“...a guide for those who plan to create and deliver LGBTQ cultural competency training to health and human service providers.”</p>	<p>Expert Opinion: Manual</p>	<p>24 cultural competence training curricula across 60 organizations and individuals</p>	<p>Interventions recommended: lecture with PPT slides, guest speakers/panel discussion, media, interactive participation, print materials and learning aids, web-based learning</p>	<p>Sample survey items provided in the appendix by the authors. No discussion of their reliability, validity, or if they were based on other instruments or research.</p> <p>Kirkpatrick Model (Pyramid) of Evaluation to evaluate the training, evaluation planning chart based on the model,</p>	<p>None</p>	<p>VII/ Quality A</p>	<p>Recommendations and examples for LGBT cultural competence training including: how to set goals and objectives, preparing for training, core topics, training methods, evaluation of training.</p>

<p><i>Network</i>. Retrieved from: http://www.ncer-network.org/downloads/best_practices.pdf</p>					<p>appendix of examples for each level of the model.</p>			
<p>Sales, I., Jonkman, L., Connor, S., Hall, D. (2013). A comparison of educational interventions to enhance cultural competency in pharmacy students. <i>American Journal of Pharmaceutical Education</i> 77(4), 1-8. doi: 10.5688/ajpe77476</p>	<p>“to determine the degree to which 3 different educational interventions enhance cultural competency in pharmacy students”</p>	<p>Quasi-experimental Three groups, Pre and post test, no randomization</p>	<p>108 students invited, 98 completed pre and post surveys, 84 matched and used in data analysis. Students were 2nd year pharmacy students at University of Pittsburgh School of Pharmacy in the Profession of Pharmacy 4 course.</p>	<p>3 interventions: 1. simulation. 2. Case studies 3. Lecture</p>	<p>15 question Pre and Post test survey assessing 6 components of cultural competence: awareness, knowledge, skills, encounters, desire, and empathy. Questions in the survey are a combination of items previously validated in the literature (Sealy et al., 2006) and original questions developed by the authors validated by faculty with expertise in cultural competency.</p>	<p>91% response rate. Combined group analysis comparing pretest and posttest : 2 statistically significant items: a skills statement ($p<0.01$), and empathy statement ($p=0.001$), especially simulation group ($p=0.008$) and lecture group ($p=0.037$). Within group analysis: simulation group desire statement ($p=0.037$), case control group awareness questions ($p=0.041$). Lecture group skills question ($p=0.001$) and empathy question ($p=0.032$).</p>	<p>Level III/C</p>	<p>Each group had significant positive changes: simulation group improved in cultural skills and desire, case-scenario group improved in cultural awareness, lecture group improved in cultural skills and empathy. A combination of approaches is needed. 1 hr intervention may not be sufficient to enhance cultural competency. Students need improvement in cultural knowledge and encounters, which can be enriched by direct contact with people from different cultures. Invite members of different cultures to speak or participate in panel discussion. The one question that did not improve was “feel comfortable interacting with people of diverse backgrounds” need to incorporate standardized/simulated patient activities with diverse populations.</p>
<p>Sanchez, N. F., Rabatin, J., Sanchez, J. P., Hubbard, S., & Kalet, A. (2006). Medical students' ability to care for lesbian, gay, bisexual, and transgendered patients. <i>Family Medicine</i> 38(1), 21-27.</p>	<p>Assess medical students' ability to care for LGBT patients, and identify curriculum deficiencies</p>	<p>Survey/Descriptive: 64 quantitative questions emailed. 15 minute time period for completion. Assessed attitudes, knowledge, and clinical skills for health care of LGBT patients. \$5 movie ticket</p>	<p>248 of 320 (77.5%) of 3rd and 4th year medical students responded to emailed survey. Large, private, urban medical school</p>	<p>Interventions recommended: Teach and promote tolerance through discussion forums, can change negative attitudes. Observe standardized clinical encounters and case studies</p>	<p>Part 1 of survey collected demographic information Parts 2 and 3 based on validated survey of physicians and attitudes towards patients with AIDS Part 4 not validated, based on <i>Healthy People 2010: Companion Document for Lesbian, Gay, Bisexual, and Transgender (LGBT) Health</i> objectives</p>	<p>77.5% response rate Students with more encounters with LGBT people more likely to screen for same-sex sexual behaviors ($F=12.5$, $P<.001$), identify a patient's sexual orientation ($F=2.81$, $P<0.04$), screen for same-sex intimate partner ($F=5.61$, $P<.001$). had less difficulty gathering an oral history ($F=6.74$, $P<.001$) and conducting a genitourinary exam on LGBT patients ($F=6.10$, $P<.001$), higher</p>	<p>Level VI/ Quality B</p>	<p>Medical students with more clinical exposure to LGBT patients took more comprehensive health histories, had more positive attitudes about LGBT patients, and had more knowledge of LGBT health concerns than students with little or no clinical exposure. Need more knowledge on cancer risk, nutrition, HIV risk, mental health</p>

		incentive.				desire and willingness to take care of LGBT patients (F=5.53, P<.001), higher knowledge was also shown to increase with more clinical encounters with LGBT patients (F=3.75, P=0.15) and more positive attitudes ($r=.168$, P=.009)		
Strong, K. L., & Folse, V. N. (2015). Assessing undergraduate nursing students' knowledge, attitudes, and cultural competence in caring for lesbian, gay, bisexual, and transgender patients. <i>Journal of Nursing Education</i> 54(1), 45-49. doi: 10.3928/01484834-20141224-07	Examine the effectiveness of an educational intervention designed to improve knowledge and attitudes of baccalaureate nursing students regarding LGBT patient care.	Quasi-experimental pretest/post-test design	Convenience sample, 58 nursing student responses out of 88 analyzed across all 4 years of BSN program.	1 hr PPT lecture focusing on terminology, disparities, medical needs, communication skills	Survey items based on modified Attitudes Toward Lesbians and Gay Men Scale shown to be reliable Cronbach's alpha >0.95 and 2 tools developed by the authors: LGBT Healthcare Scale and LGBT knowledge scale not reliable. Paired sample <i>t</i> Tests for validity.	AATLG Scale subcategories: lesbian significance of 0.013, bisexual <0.001, and transgender <0.001. LGBT Healthcare Scale showed a mean increase from pretest to posttest, two items statistically significant (<0.001, <0.004). LGBT Knowledge Questionnaire statistical significance comparing the entire pretest and post-test, (mean score=14.67, $t=6.699$, significance < 0.001), Statistical significance also shown between pre and post-tests of 5 questions: ($t=3.856$, significance<0.001), ($t=2.005$, significance=0.044), ($t=2.430$, significance=0.018), ($t=3.035$, significance=0.004), ($t=2.403$, significance=0.020)	Level III Quality A	Statistically significant increase in positive attitudes and knowledge. Inclusion of education related to LGBT patient health care in BSN curricula to promote cultural competence and sensitivity supported.

Appendix C

Permission Requests

On Jul 22, 2016, at 6:37 PM, Hallie Orgel <hallie.orgel@valpo.edu> wrote:

Dear Margolies, Joo, and McDavid:

I am a Doctor of Nursing Practice student at Valparaiso University. I am in the process of preparing an Evidence Based Practice (EBP) project and am seeking permission to include the following material in my publication, specifically Question 1 in the Behavioral Intention Questions found on page 44 of the attached work.

Margolies, L., Joo, R., & McDavid, J. (2014). Best practices in creating and delivering LGBTQ cultural competency trainings for health and social service agencies. *National LGBT Cancer Network*. Retrieved from: http://www.cancer-network.org/downloads/best_practices.pdf

The work will be used in the following manner: item 1 from the requested work will be included in a pretest and post-test designed to measure the cultural competence of undergraduate nursing students in my EBP project, the results of which will be published. This item would be modified to reflect a 5 point Likert format from strongly agree to strongly disagree and would read: "When asking about a patient's significant other, I use the terms partner/spouse rather than boyfriend/girlfriend or husband/wife." I have not selected a title for the publication at this time, however, the project will study the effect of cultural competence education on undergraduate nursing students' knowledge, attitudes, and skills concerning LGBT healthcare. The project will be published on the password protected university website, ValpoScholar, in the summer of 2017.

Please let me know if there is a fee for using this work in this manner.

Please indicate your approval of this request by signing the email where indicated. Your signing of this email will also confirm that you own the copyright to the above-described material.

Sincerely,
Hallie Orgel, BSN, RN
hallie.orgel@valpo.edu
[219.395.6731](tel:219.395.6731)

For copyright owner use:

PERMISSION GRANTED FOR THE USE REQUESTED ABOVE:

By:liz margolies, LCSW

Title:executive director

Date:7/23/16

From: Hallie Orgel [hallie.orgel@valpo.edu]

Sent: Tuesday, July 19, 2016 11:06 AM

To: Chou, Calvin

Subject: Permission Request

I am a Doctor of Nursing Practice student at Valparaiso University. I am in the process of preparing an Evidence Based Practice (EBP) project and am seeking permission to include the following material in my publication, specifically a selection of items found in Tables 3, on page 251 of the attached work.

Kelley, L., Chou, C. L., Dibble, S. L., & Robertson, P. A. (2008). A critical intervention in lesbian, gay, bisexual, and transgender health: Knowledge and attitude outcomes among second-year medical students. *Teaching and Learning in Medicine: An International Journal*, 20(3), 248-253. doi: 10.1080/10401330802199567

The work will be used in the following manner: items from the requested work will be included in a pretest and post-test designed to measure the cultural competence of undergraduate nursing students in my EBP project, the results of which will be published. Item number 12 would be modified to take out the words "as a physician" so that the item would be relevant to the nursing students answering that item. I have not selected a title for the publication at this time, however, the project will study the effect of cultural competence education on undergraduate nursing students' knowledge, attitudes, and skills concerning LGBT healthcare. The project will be published on the password protected university website ValpoScholar in the summer of 2017.

Please let me know if there is a fee for using this work in this manner.

Please indicate your approval of this request by signing the email where indicated. Your signing of this email will also confirm that you own the copyright to the above-described material.

Sincerely,
Hallie Orgel, BSN, RN
hallie.orgel@valpo.edu
219.395.6731

For copyright owner use:

PERMISSION GRANTED FOR THE USE REQUESTED ABOVE:

By: Calvin Chou, MD, PhD

Title: Professor of Clinical Medicine, UCSF

Date: 7/19/16

Dear Dr. Purnell,

I am a Doctor of Nursing Practice student at Valparaiso University. I am in the process of preparing an Evidence Based Practice (EBP) project and am seeking permission to include the Purnell Model for Cultural Competence in my publication, specifically Figure 1 found on page 11 of the attached work.

Purnell, L.(2005). The Purnell model for cultural competence. *The Journal of Multicultural Nursing & Health*, 11(2), 7-15.

The work will be used in the following manner: to include an image from the requested work in my EBP project to be published. I have not selected a title for the publication at this time, however, the project will study the effect of cultural competence education on undergraduate nursing students' knowledge, attitudes, and skills concerning LGBT healthcare. The project will be published on a password protected university website, ValpoScholar, in the summer of 2017.

Please let me know if there is a fee for using this work in this manner.

Please indicate your approval of this request by signing the letter where indicated below and returning it to me as soon as possible using the self-addressed envelope. Your signing of this letter will also confirm that you own the copyright to the above-described material.

Sincerely,
Hallie Orgel, BSN, RN
hallie.orgel@valpo.edu
[219.395.6731](tel:219.395.6731)

For copyright owner use:

PERMISSION GRANTED FOR THE USE REQUESTED ABOVE:

You have permission to used the Purnell Model as you have indicated. here is a better picture of the model.

Larry Purnell, PhD, RN, FAAN
Professor Emeritus, University of Delaware
Adjunct Professor, Florida International University
Adjunct Professor, Excelsior College
[410-438-3826](tel:410-438-3826)

Dear Tucker Publications permission department,

I am a doctoral student at Valparaiso University requesting permission to adapt my article entitled "Improving LGBT Cultural Competence in Nursing Students: An Integrative Review" for use in my final Evidence Based Practice doctoral project. This article represents a significantly condensed version of a portion of my final project, based on previous research, which was cut down from approximately 60 pages to 15 pages, out of a project that is over 100 pages in length. This project would be deposited in a new electronic version in Valparaiso University's institutional repository, ValpoScholar.

The article is pending publication in the January/February 2017 edition of the ABNF Journal, so does not have current citation information.

Figures such as the Literature Search Summary in Table 1 and the Levels of Evidence in Table 2 are materials with copyright claimed by your company.

This request is for non-exclusive, non-commercial, one-time, single-use permission for this purpose ("educational and research") only. Copyright notice, citation of original publication data, DOI number, and/or a hotlink to your site (if desired) will be given.

Our repository, ValpoScholar, is the institutional archive, maintained at Valparaiso University for research and scholarship emanating from Valparaiso University. A single electronic version will be archived and become available for viewing by visitors to the Christopher Center Library's ValpoScholar site. For more information about the repository or its policies, please contact Jonathan Bull at [219-464-5771](tel:219-464-5771) or jon.bull@valpo.edu.

May we have permission to adapt this work for my final project and to deposit an electronic version of this material in our repository?

Thank you for your consideration,

Hallie Orgel, RN, BSN
hallie.orgel@valpo.edu

Dear Ms. Orgel:

Yes, you have my permission to adapt the work requested for your final project and to deposit an electronic version of this material in Valparaiso University's repository. Thank you, Sallie

Appendix D

Confidentiality Oral Script

I am Hallie Orgel, a DNP (doctorate of nursing practice) student. I am inviting you to participate in my Evidence Based Practice Project about helping nursing students to work better with LGBT patients. LGBT stands for Lesbian, Gay, Bisexual, and Transgender. I am going to give you information and allow you time to decide if you would like to participate in the project. If you do not understand any words or concepts as I explain this project, please ask me to stop and I will take time to answer your questions. If you have questions later, you can contact me or your professor.

LGBT health is considered a priority concern world wide because these patients are suffering many health disparities. Research has found that nurses are not educated on LGBT health and are not providing quality care to LGBT patients. Education on LGBT health using several educational methods has been found to improve health care providers' ability to care for LGBT patients. The reason I am doing this research is to determine if providing you with education on LGBT health will improve your LGBT cultural competence.

The research will involve three parts: a PowerPoint lecture that I will provide, a panel discussion with members the LGBT group, and a role-playing activity with the LGBT group members.

You have been chosen to participate in the project because, as senior nursing students, you have already had some cultural competence education so are familiar with the concept, you have had clinical experiences and therefore are familiar with patient assessment, and you will be graduating soon and will have the opportunity to put this education into practice in your new careers.

This project will consist of a 30-item pretest questionnaire followed by three interventions and then a post-test questionnaire. On the first day of class for this project, the intervention will consist of a PowerPoint lecture concerning LGBT health. Following this class, you will be asked to participate in your typical online discussion board that you use for the Global Health course and will brainstorm questions to ask during the panel discussion taking place on the second day of the project. The second day of the project will involve a panel discussion with LGBT group members. You will be asked to participate in the discussion. The third and final day of the project will consist of a role-playing activity with LGBT group members. You will be in groups of 3 nursing students and given 15 minutes to obtain a brief history from one LGBT group member which may include introductions and respectful use of pronouns, discussion of confidentiality and safety, individual health concerns, sex, gender, and sexual orientation, social support, and top risk factors. At this time the LGBT group members will give you feedback on your interview skills. At the completion of this activity, you will fill out the post-test, which is identical to the pretest except for one additional question about how to improve the intervention in the future.

This project will take place during your normal class time this week, today, Wednesday, and Friday. You will be required to attend and participate during all three classes, and the discussion board, but it is your decision to participate in the pretest given today and the post-test given at the end of class on Friday.

There are no anticipated risks to you whether or not you decide to participate in the project, however, if you participate in this project, you may benefit from contributing to the nursing field

of research on education for nursing students on LGBT cultural competence. Your participation will help us improve educational strategies and will benefit society in helping to produce future nurses who are better able to care for LGBT patients.

I will not be sharing the identity of those participating in this project. The information collected during this project will be kept confidential in a locked box that only I, the researcher will be able to see and then transferred to a password-protected computer. Your professor will not know who fills out the pretest and posttest.. All data will be kept for three years following the project. You will use the last three digits of your cell phone number rather than your name to fill out the pretest and the post-test so that I can match them together. I will not know your number and the numbers will not be shared with others. The results of the project will be published in aggregate form so that individual information cannot be distinguished.

You do not have to participate in this project if you do not want to, and refusing will not affect your grades or status as a student at the university in any way. You may stop participating in the project at any time by not filling out the pretest or post-test questionnaires. It is your choice and all of your rights will still be respected.

Are there any questions?

I will now pass out the pretest. When you have finished filling out the pretest, please fold it in half and pass it down to the right and your professor and I will pick them up and place them in an envelope. If you do not wish to participate in the project, simply do not fill out the pretest, fold it, and pass it down along with the rest.

Appendix E

Participation Invitations to LGBT Group

Written email to LGBT group list-serve providing information about the role play activity:

Hi, I'm Hallie Orgel, a graduate student studying to become a Nurse Practitioner. For my final project (like a dissertation) I want to improve the undergraduate nursing students' knowledge of LGBT health issues, attitudes towards LGBT patients, and skills in working with LGBT patients. Research shows that health care providers are lagging behind in being able to provide good care to LGBT patients because of things like ignorance and prejudice. The best way to accomplish improvement is through face-to-face interaction and practice working with people who identify as LGBT. I am inviting your members to come to participate in this project and help the nursing students. The class I am working with will be senior nursing students who will soon be out in the world starting their careers. I think it would be a great time for them to hear from your group and learn more about LGBT health issues.

The role-play activity will take place on: Friday, October 14th, 2:30-3:20

The role-play activity will be organized so that each LGBT group member will speak to 6 nursing students (2 groups of 3, for 15 minutes with each group), and the nursing students will ask basic questions relevant to LGBT health that they should discuss with you during a visit to a healthcare provider. These would include: Introductions/respectful use of pronouns, names, etc, confidentiality/safety, any individual health concerns you have, sex/gender/sexual orientation, social support, and a discussion of top health risks such as STDs, substance abuse, nutrition, and cancer. I would also ask that the LGBT group members give some minor feedback to the students about how they did in terms of making you feel comfortable or uncomfortable, and any suggestions on how to improve. LGBT group members are free to decline to answer any questions and may stop participating in the project at any time if they so choose. There are a lot of nursing students, so I am hoping to recruit 14 LGBT group members for this activity. Thank you very much for your consideration, I will be at the meeting next week to talk about the project and answer any questions you may have.

Written email to LGBT group members chosen by the their President and Events Coordinator to participate in the panel discussion.

Hello Discussion Panel Volunteers! Thank you so much for participating in this project and taking the time to speak to the nursing students about LGBT health. The discussion will take place at the nursing school, from 2:30-3:20 on Wednesday, October 12th. You will each be asked to talk about an individual experience that you had with health care, either positive or negative. Then there will be a question and answer session with the nursing students where they will ask you questions related to LGBT health, and where you may ask the students questions about their work as nurses caring for patients who identify as LGBT. You may decline to answer any question that you do not want to answer, and you may leave at any time. Your participation is strictly voluntary and will not affect your grades or standing at the University. No data will be collected on your responses. If you have any questions please contact me at this email address. Thank you very much again for your time and for you valuable input on this important topic. I am really looking forward to this discussion!

Appendix F

Knowledge, Attitudes, and Skills Questionnaire

Pretest

Last 3 digits of phone number: _____

1. Please circle the option that corresponds to your birth sex:
 - a. Female
 - b. Male
 - c. Intersex
 - d. Other: _____
2. Please circle the option that corresponds to your gender identity:
 - a. Female
 - b. Male
 - c. Transgender
 - d. Other: _____
3. Please circle the sexual orientation that you identify with:
 - a. Asexual
 - b. Bisexual
 - c. Heterosexual
 - d. Homosexual
 - e. Pansexual
 - f. Other: _____
4. Please circle the racial group that you identify with:
 - a. African American/Black
 - b. Asian/Pacific Islander
 - c. Caucasian/White
 - d. Latino/Hispanic
 - e. Middle Eastern/Arab
 - f. Multiracial
 - g. Native American/American Indian
 - h. Other: _____
5. Please circle the religion that you identify with
 - a. Atheism
 - b. Buddhism
 - c. Christianity
 - d. Hinduism
 - e. Islam
 - f. Judaism
 - g. Nonaffiliated
 - h. Other: _____
6. Please indicate your age: _____

Instructions: Please indicate whether you think the following statements are true or false by marking an X in the box corresponding to True or False.

Item	Prompt	True	False
7	LGBT youth are more likely to be homeless than the general public		
8	Transgender individuals are less likely to have health insurance than heterosexual or LGB individuals		

9	The term “MSM” (men who have sex with men) means the same thing as the term “gay”		
10	The US, Mexico, and Canada all recognize same sex marriage		
11	Biologically, people are either male or female		
12	Access to health care is the same for LGBT persons as for other members of the population		
13	Lesbian and bisexual women are more likely to be overweight and obese than heterosexual women		
14	Lesbian patients do not need Pap smears as frequently as heterosexual women		

Instructions: Please indicate your response to the prompts by marking an X in the box corresponding to:

1 (strongly agree), 2 (agree), 3 (neutral), 4 (disagree), 5 (strongly disagree)

Item	Prompt	Agree/Disagree				
		1	2	3	4	5
15	When asking about a patient’s significant other, I use the terms partner/spouse rather than boyfriend/girlfriend or husband/wife.					
16	Homosexuality is a phase that many people go through and most grow out of.					
17	I would prefer not to treat patients with gender identity issues					
18	When I first meet a patient or colleague, I assume they are heterosexual.					
19	Hearing about a hate crime against an LGBT person would not bother me.					
20	I alter my interview to adapt to the specific concerns of LGBT patients					
21	I would feel comfortable treating patients I know are LGBT.					
22	I feel it is important for me to know about my patients’ sexual orientation, sexual practices and gender identity					
23	LGBT people are emotionally or psychologically ill.					
24	I ask my patients about their gender identity and sexual orientation					
25	I would be unsure what to do or say if I met someone who is openly lesbian, gay, or bisexual.					
26	I avoid asking my patients questions about their sexual behavior					
27	LGBT people deserve the same rights and privileges as everybody else					
28	I am not as caring towards patients who I know are LGBT					
29	It is important for me to stand up to those who demonstrate homophobic attitudes.					

30	I have used gender-neutral pronouns with patients before				
----	--	--	--	--	--

Post-Test

Last 3 digits of phone number: _____

1. Please circle the option that corresponds to your birth sex:
 - a. Female
 - b. Male
 - c. Intersex
 - d. Other: _____
2. Please circle the option that corresponds to your gender identity:
 - a. Female
 - b. Male
 - c. Transgender
 - d. Other: _____
3. Please circle the sexual orientation that you identify with:
 - a. Asexual
 - b. Bisexual
 - c. Heterosexual
 - d. Homosexual
 - e. Pansexual
 - f. Other: _____
4. Please circle the racial group that you identify with:
 - a. African American/Black
 - b. Asian/Pacific Islander
 - c. Caucasian/White
 - d. Latino/Hispanic
 - e. Middle Eastern/Arab
 - f. Multiracial
 - g. Native American/American Indian
 - h. Other: _____
5. Please circle the religion that you identify with
 - a. Atheism
 - b. Buddhism
 - c. Christianity
 - d. Hinduism
 - e. Islam
 - f. Judaism
 - g. Nonaffiliated
 - h. Other: _____
6. Please indicate your age: _____

Instructions: Please indicate whether you think the following statements are true or false by marking an X in the box corresponding to True or False.

Item	Prompt	True	False
7	LGBT youth are more likely to be homeless than the general public		
8	Transgender individuals are less likely to have health insurance than heterosexual or LGB individuals		

9	The term “MSM” (men who have sex with men) means the same thing as the term “gay”		
10	The US, Mexico, and Canada all recognize same sex marriage		
11	Biologically, people are either male or female		
12	Access to health care is the same for LGBT persons as for other members of the population		
13	Lesbian and bisexual women are more likely to be overweight and obese than heterosexual women		
14	Lesbian patients do not need Pap smears as frequently as heterosexual women		

Instructions: Please indicate your response to the prompts by marking an X in the box corresponding to:

1 (strongly agree), 2 (agree), 3 (neutral), 4 (disagree), 5 (strongly disagree)

Item	Prompt	Agree/Disagree				
		1	2	3	4	5
15	When asking about a patient’s significant other, I use the terms partner/spouse rather than boyfriend/girlfriend or husband/wife.					
16	Homosexuality is a phase that many people go through and most grow out of.					
17	I would prefer not to treat patients with gender identity issues					
18	When I first meet a patient or colleague, I assume they are heterosexual.					
19	Hearing about a hate crime against an LGBT person would not bother me.					
20	I alter my interview to adapt to the specific concerns of LGBT patients					
21	I would feel comfortable treating patients I know are LGBT.					
22	I feel it is important for me to know about my patients’ sexual orientation, sexual practices and gender identity					
23	LGBT people are emotionally or psychologically ill.					
24	I ask my patients about their gender identity and sexual orientation					
25	I would be unsure what to do or say if I met someone who is openly lesbian, gay, or bisexual.					
26	I avoid asking my patients questions about their sexual behavior					
27	LGBT people deserve the same rights and privileges as everybody else					
28	I am not as caring towards patients who I know are LGBT					
29	It is important for me to stand up to those who demonstrate homophobic attitudes.					

30	I have used gender-neutral pronouns with patients before					
----	--	--	--	--	--	--

31. Please comment on how this LGBT Cultural Competence intervention could be improved in the future:

Appendix G

Suggestions for Improvement Prompt

LGBT Group Members:

Please comment on how this LGBT Cultural Competence intervention could be improved in the future:

Appendix H

Discussion Board Prompt

The nursing students are required to participate in a weekly online discussion through BlackBoard as part of their normal class activities. During the week of the project implementation, the discussion prompt will prepare the students to participate in the panel discussion with the LGBT group members. Their responses will not be collected as data for the EBP project.

Discussion Prompt: List 3 questions concerning Lesbian, Gay, Bisexual, and Transgender health that you would like to have answered or addressed during the panel discussion with LGBT group members.

Appendix I

Role Play Instructions

Patient History Role-Play

Instructions:

Nursing students in groups of three will gather a patient history from an LGBT Group member. Each nursing student will take a role as either group member 1, group member 2, or group member 3, and will be responsible for gathering and discussing the information delegated to that role.

The LGBT group member is responsible for providing minor feedback on the interviewing manner and skills of the students and their effect on the comfort level of the LGBT group member.

The group has 15 minutes to complete this activity.

Group Member 1

- Introductions
- Respectful use of pronouns
- Confidentiality and safety

Group Member 2

- Any health concerns particularly important to the Alliance member
- Sex, gender, sexual orientation

Group Member 3

- Social support
- Top risk factors for LGBT patients

Appendix J

LGBT PowerPoint Presentation

Appendix 3

LGBT Health

Improving Cultural Competence

By Hallie Orgel



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Cultural Competence



*"Of all the forms of inequality, injustice in health care is the most shocking and inhumane."
— Martin Luther King Jr.*

"I treat all my patients the same"

.

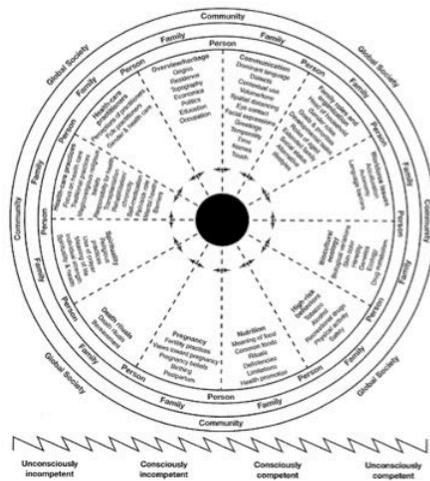
.

Intersectionality

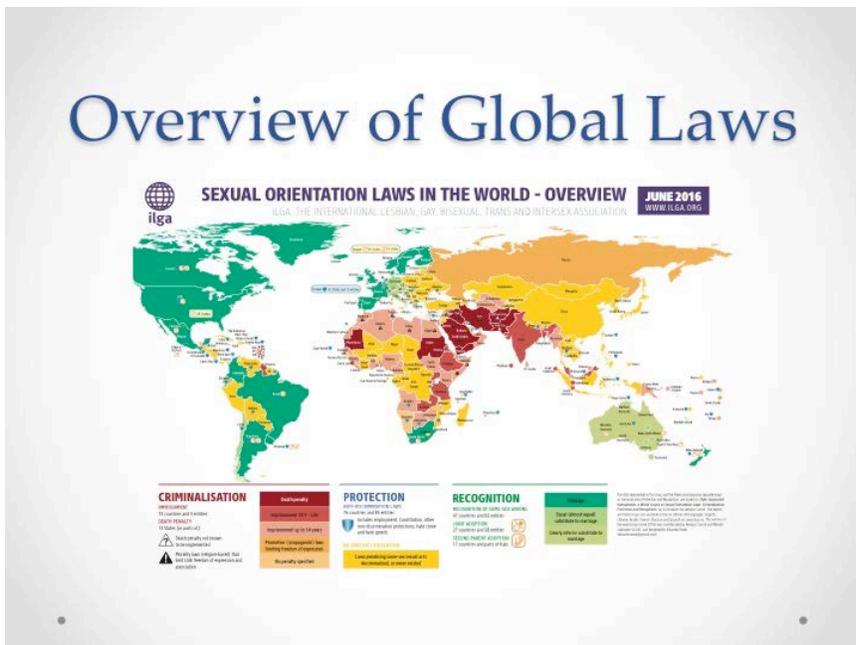
- Disparities are compounded by membership in multiple minority groups
- African American lesbians have highest rates of poverty of all same-sex couples
- Transgender people of color have unemployment rates 4 x the national average.

(Hasenbush, et al., 2016)

Purnell Model



(Purnell, 2005)



Community

Politics

- The Affordable Care Act:
 - Protects LGBT patients against discrimination based on their health or HIV status
 - Protects LGBT people from discrimination based on sex stereotyping or gender identity (HRC, 2016)
- Indiana Religious Freedom Law:
 - Amendment clarifies that this law "does not authorize a provider to refuse to offer or provide services, facilities, use of public accommodations, goods, employment, or housing to any member or members of the general public on the basis of race, color, religion, ancestry, age, national origin, disability, sex, sexual orientation, gender identity, or United States military service." (Cook, LoBianco, Eason, 2015)
- ANA Nursing Code of Ethics:
 - Obligation to advance health and human rights and reduce disparities
 - The nurse practices with compassion and respect for the inherent dignity, worth, and unique attributes of every person (ANA, 2015)

Community

- What makes for a safe community?
 - Safe schools, neighborhoods, housing
 - Access to activities and recreational facilities
 - Access to health care services
 - Availability of safe meeting places

(HealthyPeople,2020)

Family

Family

- Reaction to “coming out”
- Lack of family support of LGBT relationships
- Children
- Patient definition of family
- Aging, illness, death

(Brennan et al., 2012)

Homelessness



Person

Economics and Education

- More economic disadvantage in Midwest and South
- Lack of employment protections state by state: strongly tied to economic security
- In most regions of the US, LGBT people are more likely to have a college degree than non-LGBT counterparts.
- Midwest has the lowest rates of college completion among LGBT individuals

(Hasenbush, et al., 2016)

Communication



(HRC, 2016)

Pronouns

Pronoun Reference Sheet

She	Her	Her	Hers	Herself
He	Him	His	His	Himself
They	Them	Their	Theirs	Themselves
Ze	Zir	Zir	Zirs	Zirself
Xe	Xem	Xyr	Xyrself	Xemself
Ze	Hir	Hir	Hirs	Hirself
Per	Per	Per	Pers	Perself

(Bentley, 2015)

Biological variations

- Intersex: umbrella term for congenital anomalies of the reproductive and sexual systems
 - Turner Syndrome
 - Klinefelter Syndrome
 - XXX Females
 - XYY Males
 - Hermaphroditism
 - Congenital Adrenal Hyperplasia
 - Androgen Insensitivity Syndrome

(WHO, 2016)

High risk behaviors



Transgender

- FTM or MTF
- DSM-5
- Gender Dysphoria rather than gender identity disorder
- Non-medical interventions
- Hormonal and/or surgical interventions

(American Psychiatric Association, 2013; Fenway Health, 2015)

Nutrition



- Obesity
- Eating disorders

Morbidity/Mortality

- HIV/AIDS
- Cancer
- Suicide
- Violence

Spirituality

- Majority of LGBT people are religiously affiliated
- Less likely to be Christian
- Twice as likely to be religiously unaffiliated
- 1/3 of religious LGBT individuals have conflict between their religious beliefs and sexual orientation or gender identity
- 29% have felt unwelcome in a place of worship

(Pew Research Center, 2013; Murphy, 2015)

Health-Care Practitioners

- Knowledge
 - Lack of research
 - Lack of education
 - lack of desire to learn
- Attitudes
 - Discrimination
 - Refusal of care
 - 8% LGB individuals
 - 27% transgender Individuals
 - 20% HIV positive individuals
- Skills
 - Lack of training
 - substandard of care

Health-Care practices

- Avoidance
- Distrust
- Reluctance to disclose information
- Difficulty finding LGBT culturally competent providers
- Self-medication/coping

Top Health Issues Lesbians and Providers should talk about

1. Breast cancer
2. Depression and anxiety
3. Heart health
4. Gynecological cancer
5. Fitness: diet and exercise
6. Tobacco, alcohol, substance use
7. Intimate partner violence
8. Sexual health

(GLMA,2012)

Top Health Issues Gay Men and Providers should talk about

1. HIV-AIDS and safe sex
2. Hepatitis immunization and screening
3. Fitness: diet and exercise
4. Alcohol, tobacco, and substance use
5. Depression and anxiety
6. STIs
7. HPV

(GLMA, 2012)

Top Issues Bisexuals and Providers should talk about

1. HIV-AIDS and safe sex
2. Hepatitis immunization and screening
3. Fitness: diet and exercise
4. Alcohol, tobacco, substance use
5. Depression anxiety
6. STIs
7. Prostate, testicular, breast, cervical, and colon cancer
8. HPV

(GLMA, 2012)

Top Issues Transgender People and Providers should talk about

1. Access to health care
2. Health history
3. Hormones
4. Cardiovascular health
5. Cancer
6. STIs and safe sex
7. Alcohol and tobacco use
8. Depression
9. Fitness: diet and exercise
10. Injectable silicone

(GLMA, 2012)

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