ORIGINAL RESEARCH

Collaborative practices and Lesbian, Gay, Bisexual, Transgender, Queer or Questioning, Intersex, and Asexual and/or Ally (LGBTQIA+) care in clinical nursing education

Carlene A. Byfield[1], Franca Ferrari-Bridgers[*2]

[1]*Department of Nursing, Queensborough Community College, Queens, NY, USA*
[2]*Department of Communication, Theatre and Media Production, Queensborough Community College, Queens, NY, USA*

ABSTRACT

Collaborative practices are used by inter-professional healthcare teams to solve complex health problems. Nursing programs, however, rarely offer students collaborative practice experiences in their curricula due to content saturation. In this study, we demonstrate how collaborative practices can be successfully embedded into existing undergraduate clinical courses through innovative pedagogy to solve health problems. "Students Working in Interdisciplinary Groups" (SWIG) was the pedagogical practice used to facilitate a collaborative practice between nursing and communication students. The complex health problem regarded the education gap between healthcare workers and the delivery of care to patients identified as LGBTQIA+. The students' collaboration resulted in the creation of an educational video to instruct future nurses in LGBTQIA+ delivery of care. We assessed the effectiveness of the collaborative experience and the impact of the educational video on students. The positive assessment outcomes confirm the importance of integrating collaborative practices into nursing courses to foster students' professional development.

Key Words: Interdisciplinary groups, Collaborative practices, LGBTQIA+ care, Interprofessional and teamwork, Nursing students, SWIG pedagogy

1. INTRODUCTION

Educational nursing institutions are challenged with the task of transforming curricula to prepare nurses to implement best practices for optimal patient outcome and cost mitigation in healthcare.[1–3] Curricula transformation is highly significant because of the aging population, increasing prevalence of chronic diseases and change in health care financing imposed by the Affordable Care Act (The Affordable Care Act, also known as the Obamacare, is a comprehensive health care reform law enacted in March 2010 that guarantees affordable health insurance to millions of uninsured American citizens and resident aliens.). Healthcare professionals require current specialized knowledge and skills to provide efficient and continuous responses to patients' individual needs. Although the need for curricula transformation is well documented, more pedagogical research is needed on the development of effective strategies for curricular changes.

In the literature several studies have shown positive pedagogical outcomes when implementing strategies for curricular

Correspondence: Franca Ferrari-Bridgers; Email: fferrari@qcc.cuny.edu; Address: Department of Communication, Theatre and Media Production, Queensborough Community College, Queens, NY, USA. Note. The order of the authors is purely alphabetical and both authors contributed equally to the article.

changes. For instance, it has been reported that patient safety and students' professional development improved after the implementation of the conceptual approach to the curriculum. The conceptual approach is concept-based and is designed to close the gap between what students learn in the classroom and what is practiced at bedside. The conceptual approach is student-centered and promotes critical thinking, synthesis, and transferability of knowledge across multiple contexts. It is considered a curricular changing strategy that can help to reduce content saturation while preparing nursing students to function in a complex and constantly changing health care system.[4]

The Oregon clinical educational model is another example of a curricular changing strategy to prepare nursing students to meet the always increasing healthcare demands. The model includes five elements: case-based, concept-based, intervention skill-based, targeted individual patient care and integrative clinical experience. Each element is gradually introduced through scaffolded hands-on assignments combined with students' reflections that promote critical thinking and transferability of knowledge skills. The goal of the model is to prepare future nurses to meet diverse population needs while delivering safe and effective patient care.[5]

Another strategy for curricular changes focuses on investigating the effectiveness of faculty development programs that aim to recruit and retain faculty. Shortage of nurse faculty, inadequacy of faculty training, reliance on part-time faculty lacking adequate teaching proficiency are all major factors in redesigning adequate faculty development programs that prioritize improving students' experience in the classroom and student-faculty relation by effectively training nurses to become educators.[6]

Finally, a more recent growing body of research has demonstrated that implementing Interprofessional Education and collaborative practice experiences in the course work, not only positively affects learning outcomes, but it also offers nursing students the opportunity to gain collaborative practice experiences before entering the workforce. The use of collaborative practices as strategies to improve the curriculum stems from the consideration that interprofessional collaboration and coordination of care are key components of optimal patient outcome and that patient success is heavily dependent on the appropriate coordination of care.[7]

In the health care setting collaborative practices include the provision of health care to patients by multiple caregivers on the interdisciplinary team.[7] Collaborative practices have been noted for their positive impacts on health professionals and health outcomes, because they lead to enhanced healthcare delivery and decrease its overall cost.[8–10] Studies re-

ported that collaborative experiences are valuable for the preparation of students for the workforce, although implementation into the curriculum is in its initial stages. Opportunities for collaborative practices may allow students to see the impact of collaboration on patient safety and overall patient outcomes.[11, 12]

Collaborative practices are used by inter-professional health care teams to solve complex health problems and are defined as what occurs when practitioners from two or more professions share a learning experience that enables effective collaboration and the improvement of health outcomes.[13] Among these practices, inter-professional communication and teamwork are two collaborative practices that can help teams solve complex healthcare problems.[14–16] In contrast, absence of communication and teamwork results in the compromise of patient safety and unwarranted health outcomes.[17]

Efficacy in the delivery of health care depends on an alignment of nurses' knowledge, skills, and attitudes with current healthcare demands. However, the continuous emergence of new healthcare trends creates significant challenges for nursing faculty.[18, 19] Associate degree nursing programs are continuously modifying their curricula to meet the demand for nurses who are equipped to care for increasingly sick patients in a rapidly changing healthcare industry.[20] As a result, educators who teach in associate degree nursing programs are challenged with the issue of content saturation.

One way to circumvent content saturation while preparing nurses for emerging healthcare trends is integrating creative and flexible teaching pedagogies that enable collaborative practice experiences among students. Inter-professional communication and teamwork can be integrated into the nursing curriculum through High Impact Practices (HIPs), which are pedagogical learning practices that promote deep learning through active student engagement. HIPs are credited for enhancing students' grades, increasing student engagement, and decreasing absences among students who are vulnerable to these challenges.[21] Deeper learning occurs while students develop greater appreciation for diversity when HIPs are implemented in curricula.[22, 23] Nurses are at the forefront of practice and are expected to be change agents. After graduation and licensure, nurses are expected to function effectively as part of a collaborative team delivering care to patients.[24] HIPs facilitate the preparation of competent and efficient nurses in new healthcare trends while satisfying national healthcare demands.

In this article we report the results of an Institutional Review Board (IRB)-approved study, whose objective is to illustrate how innovative and experiential pedagogical practices can facilitate the integration of collaborative practice experiences

into the nursing curriculum. More precisely the study focuses on two collaborative practices, interprofessional communication and teamwork, and it demonstrates how they can be successfully embedded through HIP pedagogy into existing undergraduate clinical courses to solve complex health problems while circumventing content saturation. Firstly, after defining the objectives of the present study, we introduce the complex health problem that students addressed, and the HIP used to design the assignments that established a collaborative practice experience among nursing and interpersonal communication students. Secondly, we describe the students' artifacts and their assessments. Finally, we discuss the importance of using innovative pedagogical practices in nursing program to foster students' professional development prior to entering the workforce.

2. THE STUDY

Two considerations were made while setting the objectives for this study: 1) the relatively small amount of education nursing students receive on LGBTQIA+ delivery of care and; 2) the selection of an effective pedagogy that would enable students to experience the collaborative practices of interprofessional communication and teamwork before entering the workforce. LGBTQIA+ health education and delivery of care is the complex health problem students are asked to address in this study. As documented in the next section, access to proper care for patients identifying as LGBTQIA+ is too often hindered by healthcare professionals' biases and/or lack of education on LGBTQIA+ issues and lack of proper interpersonal communication skills. Therefore, increasing students' awareness and knowledge of the topic while improving their interpersonal communication skills when interacting with patients identifying as LGBTQIA+ is the first objective of this study.

As indicate in the aforementioned literature, it is important for nursing students to engage in collaborative practice experiences before entering the workforce. Research has suggested that most of the graduate nurses enter the workplace uncapable to meet entry level expectation for clinical practice.[4] The question of how implementing collaborative practices in a clinical course while teaching extracurricular content led to a search for effective pedagogical strategies that could combine and satisfy both objectives. The second objective of this study is to illustrate how collaborative practice experiences can be embedded into a course through the implementation of High Impact Practices (HIPs) to solve a complex health problem.

As explained in detail in the next sections, the HIP practice used in this study is "Students Working in Interdisciplinary Group" (SWIG). SWIG not only fosters interprofessional

communication and teamwork among students, but also requires the creation of a multi-media artifact that demonstrates students' understanding and solution of the complex health problem. At the end of the collaborative practice experience students' deliverable was the creation of a viable educational tool for incorporating LGBTQIA+ health education into the nursing curriculum to be used to train future nursing students. The effectiveness of the students' collaborative experience and the impact of the artifacts on first year nursing students were both assessed. The positive outcome of the assessments confirms the literature findings about the educational benefits of integrating collaborative practices in clinical courses.

2.1 The complex health problem

We chose the education gap between healthcare workers and the delivery of care to patients identified as lesbian, gay, bisexual, transgender, queer or questioning, intersex, and asexual and/or ally (LGBTQIA+) as our complex problem. The choice of including LGBTQIA+ health in the nursing curricula through a HIP was based on the overwhelming knowledge of health disparities among people identifying as LGBTQIA+. People who identify as LGBTQIA+ are greatly affected by high rates of suicide, obesity, homelessness, HIV, and other STDs.[25, 26] These health disparities have been detrimental to the mental and physical health of LGBTQIA+ members and have also created significant financial burdens on the healthcare system. Approximately 1.8 million LGBTQIA+ adults have Medicaid coverage.[27] Given the magnitude of this problem, many leading healthcare organizations, such as Healthy People 2020 and the Institute of Medicine have acknowledged LGBTQIA+ health as a national priority.[28] Health disparities among people who identify as LGBTQIA+ have been attributed to the shortage of culturally appropriate and knowledgeable healthcare professionals.[29] However, nursing programs do not often provide education on the needs, barriers, and factors that cause health disparities for people identifying as LGBTQIA+.[30, 31] Nurses are entering practice with little or no education on the delivery of care to these patients, which may result in unprofessional nurse-patient interactions and communication conflicts.[32–34] Moreover, nursing educators are not adequately prepared to teach content on LGBTQIA+ health disparities.[34]

2.2 The SWIG pedagogy

This study presents an example of a collaborative practice experience between nursing and interpersonal communication students. "Students Working in Interdisciplinary Group" (SWIG) was the HIP used to establish a collaborative practice experience among interdisciplinary students and to incorporate LGBTQIA+ health education into the nursing curricu-

lum. SWIG is a HIP that falls in the category of what the Association of American Colleges and Universities (AACU) defined as Collaborative Assignments and Projects, whose main goals are "learning to work and solve problems in the company of others and sharpening one's own understanding by listening seriously to the insights of others, especially those with different backgrounds and life experiences"(p.10).[21] The SWIG pedagogy promotes collaborative learning among students from two or more disciplines by facilitating teamwork, interpersonal and interprofessional communication. SWIG moves the class from teacher-centered to student-centered by asking students to find solutions to a complex problem from an interdisciplinary perspective through the creation of a multimedia artifact that reflects the students' collaboration.[35, 36]

The SWIG pedagogy was implemented through the creation of a collaborative assignment. The SWIG collaborative assignment was designed with the intention of incorporating and meeting six of the nursing program's eight core course competencies: (1) professionalism, (2) safety, (3) patient-centered care; (4) teamwork and collaboration, (5) evidence-based solutions and (6) quality improvement. These competencies were adapted from Quality and Safety Education for Nurses, an initiative that focuses on education, practice, and scholarship to improve the quality and safety of health systems.[37] QSEN is an evidence-based guide that provides current and best practices for nursing educators to promote high-quality patient care.[38]

The nursing core course competencies were used as a structure to guide students in finding evidence-based solutions for LGBTQIA+ healthcare disparities from a patient care perspective. The collaboration between nursing education (nursing competencies) and clinical practice (finding evidence-based solutions) supports the development of competencies such as the delivery of patient-centered care.[39] Students also used a variety of databases to acquire evidence-based solutions for LGBTQIA+ health disparities.

SWIG promoted teamwork and collaboration via both face-to-face and asynchronous digital communication. During the project, students met face to face, but conducted most communication asynchronously through 'Wikis'. Wikis are online publications that allow users to collaboratively edit, revise, and manage content directly using a web browser. Students used Wikis to communicate, solve workflow problems and project logistics. Students were asked to set guidelines for meetings that promoted professionalism among the team.

Finally, the product of this interdisciplinary collaboration was the creation of an educational training video that would be used with first-semester nursing students to promote qual-ity improvement and safety in the delivery of health care to people identifying as LGBTQIA+. The video's purpose was to fill the practice/knowledge gap reported in the literature regarding healthcare professionals and LGBTQIA+ health care. The educational video exposed the health disparities that are negatively affecting the LGBTQIA+ community and provided strategies to address their healthcare needs by promoting professionalism and patient-centered care practices.

2.3 The SWIG assignments

The project was built on a collaborative assignment between nursing and interpersonal communication students. Interpersonal communication students shared their competence on how to solve dyadic communication conflicts. Nursing students integrated communication conflict resolution strategies into their health competence to improve their communication skills while interacting with patients.

The first part of the project was conducted by the interpersonal communication students who completed a three-part assignment. Students watched two videos that portrayed biased and unprofessional interactions between healthcare providers and patients identifying as LGBTQIA+ once their sexual orientation was disclosed to medical staff.[40, 41] Students were also asked to read two peer-reviewed articles that analyzed patterns of communication between patients who identify as LGBTQIA+ and healthcare providers.[32, 42] The readings and videos provided the students with background knowledge on proper medical-ethical behaviors and scholarly intakes on the LGBTQIA+ patient-nurse conflictual communication interactions.

Students selected and analyzed one of the patient-nurse conflictual communication interactions presented in the videos. Then, they read a chapter on conflict theory and conflict management practices.[43] Considering the readings, students analyzed the communication conflict styles present in the interaction of their choice and identified the roots of the conflict. Additionally, they applied conflict management practices to solve the communication conflict by finding a solution that provided a mutual understanding of the roles (providing and receiving care) and the needs (acceptance of each other's differences) of both parties involved in the conflict. Finally, based on their conflict analyses, students created dialogues between the patients identifying as LGBTQIA+ and healthcare providers. These dialogues were modelled after the testimonies of patients presented in the two videos. In the first part of the dialogue, a conflictual communication between a patient who identifies as LGBTQIA+ and a healthcare provider was presented. In the second part of the dialogue, students described how the conflict could have been resolved with both parties reaching a win-win problem

resolution.

The second part of the project was conducted by the nursing students. First, they visited HealthyPeople.gov to review the 2020 LGBTQIA+ health overview, objectives, goals, interventions, and resources. Nursing students also visited the CDC and the National LGBT Health Education Center webpages that provided them education on the scope of the problem and recommendations for best practices for delivering care to patients identifying as LGBTQIA+. In addition, nursing students reviewed transcultural nursing practices from Brunner and Suddarth's textbook, Medical Surgical Nursing.[44] Students read the chapter on cultural awareness, sensitivity, cultural assessment, and cross-cultural communication, which served as a resource for students to learn about personal biases, therapeutic communication, and the nurse's professional role in the nurse-patient interaction. The chapter also provided guidance on active listening and using respectful language. Second, nursing students visited the Health and Human Services (HHS) website to view their e-learning training program, Culturally Competent Nursing Care: A Cornerstone of Caring. The HHS's e-learning program provided students with insight into how to structure an educational training video to deliver culturally and linguistically competent care. Nursing students reviewed the core competencies for the nursing curriculum and used them as a framework for writing the script of the video.

Finally, nursing students reviewed the dialogues written by the interpersonal communication students and used the dialogues to create short two-part skits. Part one of the skit depicted communication conflicts and displays of unprofessional verbal and non-verbal communication of healthcare providers towards patients identifying as LGBTQIA+. Part two of the skit proposed communication conflict resolutions and examples of professionalism and best patient care practices. The creation of the skits promoted a continuous dialogue between both disciplines that led to the creation of the LGBTQIA+ educational training video.

Once the project ended, both nursing and interpersonal communication students completed a post-reflection assignment in which they identified the unethical behaviors of the healthcare providers and how such behaviors led to unsafe, unethical, and unprofessional interactions with patients identifying as LGBTQIA+. Students also devised a plan of action with recommendations for healthcare providers on how to assess the needs of these patients without biases.

2.4 Students' artifact

After students researched the topic, two major issues were identified to be at the root of the LGBTQIA+ health care disparity: the lack of proper LGBTQIA+ health education in nursing programs and nurses' poor interpersonal communication skills while interacting with patients. We asked students to apply their acquired knowledge on the topic to create an educational video to instruct future nursing students on LGBTQIA+ health care disparity and patient-nurse interpersonal communication skills.

Nursing students and interpersonal communication students participated in creating, scripting, and filming the educational video on LGBTQIA+ healthcare disparities and needs. The video also addressed basic sexual orientation, gender identity assessment and proper nursing interventions. The video began with an introduction of students' roles and its training purpose, followed by an overview of LGBTQIA+ health disparities with evidence-based statistics, the national interventional initiatives including Healthy People 2020, and the meaning of the LGBTQIA+ acronym with a description of each associated term. The overview was followed by short two-part skits. The first part of the skit depicted a conflictual communication between a patient identifying as LGBTQIA+ and a healthcare provider, who displayed unprofessional behaviors. The second part of the skit provided a resolution to the conflict displaying professional behaviors and communication between the nurse and the patient.

Students received a 2-hour acting training session before the filming was implemented. This session was conducted with an acting coach who is a member of the LGBTQIA+ community. The video was filmed at the college's Nursing Simulation Hospital during a single 4-hour timeframe. The LGBTQIA+ Educational Training Video was approved by the Nursing Department to be used to train future first-year nursing students. A synopsis of the content of the video can be found in Appendix A.

3. ASSESSMENTS

We selected two different assessments to measure the effectiveness of the pedagogical intervention on students. Firstly, we assessed the efficacy of the SWIG collaborative practice experience by asking students to answer a series of reflection questions geared to evaluate student learning. Secondly, we performed a quantitative analysis of the effectiveness of the educational artifact created during the collaborative practice on first year nursing students who viewed the training video.

3.1 Reflection questions assessment

An assessment built on a series of written response reflection questions was used to measure students' learning in the collaborative practice. Such questions were designed with the intention of capturing students' learning of LGBTQIA+ health disparities, their understanding of the importance of

communication skills while delivering care, and their experience while participating in a collaborative practice.

After having reviewed students' reflections, the following four themes emerged: (1) the hardships LGBTQIA+ patients encounter in the healthcare system; (2) the importance of healthcare providers receiving formal education to become sensitive to the needs of LGBTQIA+ patients; (3) the benefits of a collaborative practice pedagogy; and (4) the impact of the project on nursing students' professional development.

Results

Seven students completed their reflection questions, four nursing and three interpersonal communication students. The analysis considered words and/or phrases in seven students' reflections that addressed the four themes and showed students' understanding of each theme. Samples of students' reflections for each theme are reported in Table 1.

In theme 1, reflections showed how students gained deep understanding of the challenges that patients identifying as LGBTQIA+ encounter when seeking medical attention. Words and phrases that indicated unfair judgments, discrimination, biases, and lack of awareness and education were considered. Students' answers showed a deep understanding of the need to train nurses working with patients who identify as LGBTQIA+. Students identified how healthcare professionals' biases and/or lack of education on LGBTQIA+ issues hinder access to proper care for patients identifying as LGBTQIA+.

In theme 2, students from both disciplines stated the importance of nurses receiving formal education on LGBTQIA+ healthcare issues to gain sensitivity on meeting their healthcare needs. Words and phrases that suggested a need for nurses to receive proper education on communicating and delivering care to patients who identify as LGBTQIA+ were considered indicators of students' understanding of this theme. In their reflections, students highlighted that communication and sensitivity are the keys for providing proper care to patients identifying as LGBTQIA+. Students concluded that healthcare professionals should receive training on properly communicating with patients who identify as LGBTQIA+ to provide bias- and prejudice-free care for this sector of the population.

In theme 3, words and/or phrases indicating patient-provider communication, teamwork, collaboration, and patient advocacy were considered indicators of students' understanding of the theme. Interpersonal communication students' reflections showed that students plan to advocate actively for the rights of patients identifying as LGBTQIA+ and other minorities who are subject to discrimination by healthcare

workers because of their status. Students also showed how the project helped them become mindful of ways to address members of the LGBTQIA+ community, such as using chosen pronouns to show respect and understanding. Similarly, nursing students reflected on how the lessons learned during the interprofessional collaboration enhanced their knowledge of teamwork, collaboration, and communication skills. Students also reported changes in attitude regarding communication of information to guide the plan of care for patients identifying as LGBTQIA+ as a beneficial result of the project.

Finally, in theme 4, nursing students reflected on their professional responsibilities in caring for patients who identify as LGBTQIA+ and the importance of mindful awareness of professionalism during patient interactions. Words and/or phrases indicating communication, mindfulness, awareness, and proper delivery of care were used as indicators to measure students' understanding of professionalism and prejudice-free care. Therapeutic communication, patient-centered care, quality improvement, and patient safety were some of the competencies identified in the nursing students' reflections. From these reflections, one can infer that the students were enabled to meet the competencies for the nursing course through the project.

3.2 Quantitative assessment

A quantitative approach was used to assess the perceived effectiveness of the collaborative students' artifact on first-year nursing students. The quantitative assessment tested the educational effectiveness of the training video on first-year nursing students (n = 35) through a pre- and post-Likert scale survey, administered to students before and after viewing the training video. The 14-question survey aimed to measure changes in the nursing students' awareness of LGBTQIA+ healthcare practices. The scale's values ranged from strongly agree to strongly disagree. Questions 1, 2, 3, 4, 5, 9, and 11 were taken from the LGBTQIA+ Cultural Competency Self-reflection Questionnaire, which was originally developed and validated by a team of researchers at Columbia University. The survey was designed for the E-LINC research program at Columbia University. Permission was granted for use of the survey. However, the original language of Questions 1, 9, and 11 was slightly modified to adapt the survey to our student population. Questions 6, 7, 8, 10, 12, 13, and 14 were created appositely by the current researchers to measure students' knowledge and awareness of the LGBTQIA+ health and communication challenges presented in the video. The survey was re-evaluated for validity by 3 doctorate prepared experts. (see Table 2).

Table 1. Students' reflections for each theme

Nursing Students (NS)	Communication Students (CS)
Theme 1: The Hardship LGBTQIA+ Patients Face in the Healthcare System	
NS1 People in the LGBTQIA+ community are often judged because of their sexual orientation. They do not get the treatment that they deserve because some health care professionals are either against them or maybe do not have enough knowledge regarding how to care for LGBTQIA+ patients. **NS2** Some challenges the LGBTQIA+ population face includes improper guidance from health care professionals due to lack of knowledge by the health care professionals. **NS3** Healthcare workers put their opinions first which causes the LGBTQIA+ patients to feel that they are not welcomed, respected, and not being treated equally at health care facilities.	**CS1** The project helped me to gain a better understanding of the hardships LGBTQIA+ patients face in the healthcare system by helping me learn about the importance of nurses providing prejudice- free care to patients as well as addressing patients using pronouns that are not gender specific. I did not understand this before, and now I do. **CS2** Sometimes the medical workers are not aware of how to address an LGBTQIA+ patient, but that should not be an excuse to discriminate or offend any people. […] It is every medical worker's duty to help their patients to feel comfortable with respect and understanding, not biases or judgements.
Theme 2: The Importance for Healthcare Providers to Receive a Formal Education on how to Become Sensitive to the Needs of the LGBTQIA+ Patients	
NS1 Having the proper education and training for health care professionals will result in great delivery of care. Communicating with the patient and being sensitive for what they feel, are very important to break the barrier between LGBTQIA+ patients and health care professionals. **NS2** Without training health care workers can make mistake on how to approach an LGBTQIA+ patient. Health care workers may use phrases that will offend the patient. Training on LGBTQIA+ health delivery will make a difference. **NS3** If healthcare workers do not educate themselves on how to properly take care of LGBTQIA+ patients, they are putting the patient at risk for faulty care.	**CS1** This project helped me gain a better understanding of the importance of health care providers to receive a formal education training on how to become sensitive to the needs of LGBTQIA+ patients. Lack of sensitivity to the LGBTQIA+ health needs leads to a lack of respect and to the mistreatment of this part of the population **CS2** The project helped me to gain a better understanding of the hardships LGBTQIA+ patients face in the healthcare system by helping me learn about the importance of nurses providing prejudice- free care to patients as well as addressing patients using pronouns that are not gender specific. I did not understand this before, and now I do.
Theme 3: Benefits of a Collaborative Practice Pedagogy	
NS1 The experiences I had collaborating with the Interpersonal communication students enhanced my knowledge and understanding of teamwork and collaboration in the clinical area. **NS2** Collaborating with the Interpersonal Communication students was a good tool to practice what as nurses we will face in the real world when we start our career. The collaboration has helped me to feel comfortable communicating with the collaborative team in the clinical setting. **NS3** In addition to strong foundations, this collaboration has increased my readiness to communicate and collaborate with other healthcare disciplines.	**CS2** I will use what learnt to improve my communication skills and advocating for a gender-neutral language while interacting with members of the LGBTQIA+ community. I will also be mindful of what I say to people and encourage others to be mindful about that they are saying as well, especially in a working environment. **CS3** I will use what learnt from this project to help raise awareness on the necessary work the healthcare field must do to make the LGBTQIA+ community feel comfortable while disclosing to their provider their health issues.
Theme 4: Professional Development	
Nursing Students (NS)	
NS1 Things that I will be mindful of include but are not limited to: using gender neutral language when addressing patients because you do not know how they would like to be identified; asking open ended questions allowing patients to tell what their needs are and providing feedback after listening; and the most important of all, be respectful. **NS2** I will be mindful of my gestures, actions and words when taking care of all patients including patients from the LGBTQIA+ community. **NS3** Being a part of this project will be helpful in my profession because if I am not sure of how to treat a LGBTQIA+ patient, I now know that it is ok to seek help. I will do my best to ensure that LGBTQIA+ patients feel welcome and not to be afraid to seek the care they need. **NS4** After having my experiences in the dialogue and project I feel like a more well- rounded person. If I feel like if a patient has a different culture, preference, or religion than my own, it is my duty as a professional to understand that everyone is different and to maintain a professional demeanor. **NS5** Through this project I have been educated on the appropriate steps to take care of transgender patients by first addressing the patient's gender without assumption. This is a very important step to establish a trusting relationship.	

Table 2. Items' mean, SD and percentage change pre- and post-survey

Statements	Pre M	Pre SD	Post M	Post SD	% Change
1 I feel comfortable interviewing LGBTQIA+ patients.	4.14	1.12	4.63	0.60	11.7
2 If I see a person wearing a wedding ring, I assume that they are heterosexual.	2.80	1.16	1.94	1.00	-30.6
3 I do not think partners of LGBTQIA+ patients have the same rights as a spouse does to make medical decision.	1.97	1.18	1.83	1.25	-7.2
4 I am comfortable discussing sexual behavior with LGBTQIA+ patients.	4.06	1.14	4.40	0.77	8.5
5 I am aware of resources and community referrals for LGBTQIA+ patients.	3.37	1.21	4.14	0.97	22.9
6 I am aware of the challenges that LGBTQIA+ patients encounter when seeking health care.	3.97	1.12	4.86	0.36	22.3
7 I am aware of clinical best practices for LGBTQIA+ patients.	3.26	1.20	4.66	0.48	43.0
8 The suicide risk among LGBTQIA+ teens is the same as that of heterosexual teens.	3.09	1.20	2.34	1.35	-24.1
9 When caring for a transgender patient, the health care worker should use their name of choice and preferred gender pronoun.	4.63	0.60	4.86	0.36	4.9
10 All transgender patient has had sex reassignment surgery and/or cross-sex hormone therapy of some kind.	2.40	1.14	2.11	1.43	-11.9
11 I am comfortable in asking LGBTQIA+ patients about their sexual identity/orientation.	4.23	0.94	4.60	0.77	8.8
12 Effective communication requires the use of language that reflects that of the LGBTQIA+ patient.	3.83	1.10	4.66	0.59	21.6
13 LGBTQIA+ couples prefer the term partner over husband or wife.	3.49	0.89	4.03	0.98	15.6
14 All LGBTQIA+ persons have a partner/spouse.	2.31	1.11	1.86	1.17	-19.8
Overall	3.40	1.08	3.64	.86	7.1

Results

As related to the educational effectiveness of the training video on 35 first-year nursing students, Table 2 presents the mean, standard deviation, and percentage change for each of the 14 questions at the pre- and post-levels. The overall mean and standard deviation of 14 items are MPRE = 3.4, SDPRE = 1.08, MPOST = 3.64 SDPOST = .86 with a 7.1 percentage change indicating the degree of change over time between pre- and post-surveys.

Pre- and post-survey data for students' responses were found to be not normally distributed, with skewness of .95 (SE = .39) and kurtosis of 2.3 (SE = .77) at pre and with skewness of 1.3 (SE = .39) and kurtosis of 2.3 (SE = .77) at post. Given the lack of normal distribution of data, a Wilcoxon Signed-Ranks test was performed for each of the two themes and the 35 students' responses to measure significant change from pre- to post- survey. The Wilcoxon Signed-Ranks Test indicated that the median posttest ranks for all means and standard deviations of the 35 students' responses were higher than the median pretest ranks, and the change was statistically significant (Z = - 3.9, $p < .001$.). This suggested that overall students' responses significantly changed from pre to post. Cronbach alpha of the survey at posttest was al-

pha = .69, indicating a moderate reliability. Table 3 reports the median for each question at pre- and post-levels and the Wilcoxon Signed-Ranks Test values for each question.

Data showed a significant difference in students' responses from pre- to post-survey and strongly suggested that viewing the training education video had an immediate impact on Nursing students' awareness of LGBTQIA+ healthcare practices and challenges. Percentage changes of overall and individual questions clearly suggested that nursing students need to receive formal educational trainings in LGBTQIA+ healthcare issues.

4. DISCUSSION

Two were the objectives of this study: the demand for training of healthcare professionals on the topic of LGBTQIA+ delivery of care,[32–34] and the implementation of collaborative practices in the coursework through HIP pedagogy. In accordance with the many benefits of implementing collaborative practices,[7–10] the HIP, SWIG, was used as a bridge for establishing a collaborative learning experience between nursing and interpersonal communication students and as a pedagogical tool to teach best practices for LGBTQIA+ health.

Table 3. Pre- and post-median and Wilcoxon signed-ranks test for students' responses

	Statements	Pre Median	Post Median	Wilcoxon Signed Ranks Pre-Post
1	I feel comfortable interviewing LGBTQIA+ patients.	5	5	$Z = -2.9, p < .004$
2	If I see a person wearing a wedding ring, I assume that they are heterosexual.	3	2	$Z = -3.7, p < .000$
3	I do not think partners of LGBTQIA+ patients have the same rights as a spouse does to make medical decision.	2	1	$Z = -.98, p <. non$ sign
4	I am comfortable discussing sexual behavior with LGBTQIA+ patients.	4	5	$Z = -1.9, p < .049$
5	I am aware of resources and community referrals for LGBTQIA+ patients.	3	4	$Z = -3.2, p < .002$
6	I am aware of the challenges that LGBTQIA+ patients encounter when seeking health care.	4	5	$Z = -3.7, p < .000$
7	I am aware of clinical best practices for LGBTQIA+ patients.	3	5	$Z = -4.6, p < .000$
8	The suicide risk among LGBTQIA+ teens is the same as that of heterosexual teens.	3	2	$Z = -3.7, p < .000$
9	When caring for a transgender patient, the health care worker should use their name of choice and preferred gender pronoun.	5	5	$Z = -1.9, p < .046$
10	All transgender patient has had sex reassignment surgery and/or cross-sex hormone therapy of some kind.	2	2	$Z = -1.3, p <. non$ sign
11	I am comfortable in asking LGBTQIA+ patients about their sexual identity/orientation.	5	5	$Z = -2.1, p < .035$
12	Effective communication requires the use of language that reflects that of the LGBTQIA+ patient.	4	5	$Z = -3.7, p < .000$
13	LGBTQIA+ couples prefer the term partner over husband or wife.	3	4	$Z = -2.9, p < .005$
14	All LGBTQIA+ persons have a partner/spouse.	2	2	$Z = -2.1, p < .034$
Overall		3.43	3.71	$Z = -3.9, p < .001$

Regarding the educational effectiveness of the collaboration, students' reflections indicated that those who participated in the project gained the following skills: (a) teamwork and communication (see reflections NS1, NS2, NS3, Table 1); (b) using gender-neutral language (see reflections NS1, NS2, Table 1 and CS2, Table 1); (c) professionalism (see reflection NS4, Table 1); (d) principles of patient safety; and (e) patient-centered-care (see reflection NS1, Table 1). According to these reflections, healthcare workers' lack of LQBTQIA+ education places patients at risk for faulty care (see reflections NS1, NS2, NS3, Table 1). These reflections are congruent with the principles of patient-centered care and suggest professional growth for nursing students.

Additionally, the nursing students' reflections validated the assumption that training healthcare professionals in LGBTQIA+ care will positively transform the unprofessional attitudes of healthcare workers who deter people identifying as LGBTQIA+ from seeking healthcare. Student reflections validated arguments regarding the positive effect that training of healthcare professionals can have on patients who identify as LGBTQIA+.[32–34] According to the reflections, students learned the importance of: (a) maintaining a professional demeanor even if a patient has a different culture, preference, or religion (see reflections NS4, SN5, Table 1); (b) exerting

efforts to alleviate fears and making patients who identify as LGBTQIA+ feel welcome while seeking care (see reflections NS3, NS5, Table 1); (c) seeking help when uncertainties arise while caring for patients who identify as LGBTQIA+ (see reflection NS3, Table 1); and (d) being respectful in asking open-ended questions, listening, and providing feedback during interactions with patients identifying as LGBTQIA+ (see reflection NS1, Table 1).

In conclusion, students' reflections showed an enhancement in their knowledge, skills, and attitudes regarding working on an interdisciplinary team and caring for patients who identify as LGBTQIA+. Knowledge and skills on how to work on a healthcare team were noted to enhance healthcare delivery and decrease the overall cost of healthcare.[11, 12] These reflections indicated students' new understanding for LGBTQIA+ health conditions and disparities and awareness of the importance of properly educating health professionals on LGBTQIA+ issues.

According to quantitative analysis, the results of the pre-post survey on first-year nursing students showed the educational impact of the training video. Looking at Question 1, pre-post data showed that students developed comfort in interviewing patients who identify as LGBTQIA+. Interviewing was conducted during patient assessment and may

continue throughout the patient care interaction. Assessment, the first step in the nursing process, allows for the identification of patient care needs, normal and abnormal physiology, and the caregiver's prioritizing and implementing appropriate interventions. In this case, the development of comfort in interviewing patients who identify as LGBTQIA+ may be translated to the delivery of professional and competent care in practice. In addition, Question 2 reflected a positive change in the awareness of the challenges that patients identifying as LGBTQIA+ encounter while seeking healthcare. This change in behavior may aid in eliminating negative experiences when seeking healthcare, as reported by patients identifying as LGBTQIA+.

Communication is another essential nursing competency that the pre-post survey identified as a positive change. Students developed comfort in asking about sexual orientation/identity (Questions 4, 12). Students also learned that effective communication requires the use of language that reflects how patients identify as LGBTQIA+ (Question 11). Effective communication contributes to the health, well-being, and safety of the patients. Interprofessional communication and teamwork are two practices that can create cohesivity and solve complex problems among teams.[15, 16] Through communication, trust is established. Patients are more open to sharing thoughts, feelings, fears, concerns, and health history with healthcare workers when trust is established. Transparency in a patient's health history allows healthcare workers to implement interventions that eliminate health disparities. In addition, the verbalization of thoughts, feelings, fears, and concerns informs the assessment for appropriate resources and referrals. During the assessment phase of nurse-patient interactions, life-threatening health conditions such as suicidal ideations are identified, and referrals can be made to intercept those situations.

In Questions 6 and 8 of the survey, students gained awareness of the challenges, including suicide risk, that patients identifying as LGBTQIA+ encounter. According to Question 5, students gained awareness of resources and community referrals for patients identifying as LGBTQIA+. In practice, nurses are expected to have knowledge of available patient resources and community referrals, which is a vital aspect of preventative care.

Awareness of best practices for patients identifying as LGBTQIA+ changed from the pre-post survey (Question 7). This increase in awareness is crucial for the delivery of individualized patient-centered care. Best practices are identified via research evidence, clinical experiences, and patient preferences. Evidence base solution is the use of validated interventions for the improvement of patient out-

comes. The results indicated that a large majority of students are equipped with knowledge of best practices for patients who identify as LGBTQIA+. Overall, the positive outcomes reflected in the survey results are substantial and suggest a shift toward positive patient outcomes.

In summary nursing students' reflections showed that students gained knowledge and skills with positive changes in attitudes toward LGBTQIA+ health issues. Knowledge, skills, and attitudes are key factors that the QSEN Institute (n.d.) deemed necessary for the continuous improvement of the quality and safety of healthcare systems. The value of the collaborative practice was reflected in the positive comments about the competencies gained. Students reported improved communication skills and increased comfort in working on a collaborative team. These qualities are beneficial to new nurses entering the workforce.

In addition, the training video provided transformation of the knowledge and attitudes of the surveyed first-year nursing students towards LGBTQIA+ health issues. According to the results, first-year nursing students developed comfort in interviewing and communicating with patients who identify as LGBTQIA+. The results also indicated that first-year nursing students developed increased awareness of the challenges that patients identifying as LGBTQIA+ encounter in seeking healthcare and best practices to mitigate those challenges.

Limitation of the present study

There are two main limitations regarding this study. The first limitation refers to the small sample size of the students participating in the SWIG collaborative practice (seven students) and in viewing of the training video (thirty-five students). Research guidelines recommend a minimum sample size of 50-55 subjects to obtain 80% statistical power as desired power threshold for social sciences experiments.[45, 46]

The small sample size of students 'reflections prevented us to conduct a formal qualitative analysis of the data. For this reason, we preferred focusing on interpreting and reconstructing the information we gathered from the reflections to gain a better understanding of the object of our investigation: implementing collaborative practices in the nursing curriculum to solve complex health problems. Students had the opportunity to work on a collaborative team and to see first-hand the positive effect that interprofessional collaboration can have on health outcomes. Though the sample size of the quantitative analysis was larger and the reliability moderate, the positive results need to be further confirmed by collecting more data. Given that the educational video is currently being used in the nursing program, we plan to survey more students and to report the results in a future study.

The second limitation regards the fact that our study doesn't investigate if student nurses will sustain the training provided by this project and how the education gained will be translated during actual practice. Although how the knowledge gained by students is translated to practice was not studied here, one may infer from the data analysis of both assessments that they will enter practice with a higher level of competency, which, in turn, will translate to safer and more professional patient care.

5. CONCLUSION

In conclusion this study represents an example of how pedagogical experiential practices can be designed and embedded in an existing clinical course of undergraduate degree nursing programs to meet course learning objectives and circumvent issues surrounding content saturation, while addressing complex health problems. As the data analysis reveals, the implementation of the collaborative practiced in the clinical aspect of the nursing course was beneficial for the professional development of students. Students' reflections outlined key competencies such as improved team communication and interpersonal skills that are deemed important for successful team collaboration.[15] Students stated that collaborative experience in the nursing curriculum prepared them to work on an interdisciplinary team in solving complex health problems such as LGBTQIA+ health disparities. Through the collaborative practice experience students clearly understood the importance of LGBTQIA+ health care delivery and why it is a national healthcare goal.

The survey of 35 first-year nursing students who viewed the LGBTQIA+ educational video validated its educational effectiveness. The data show that students had a positive change in attitude toward the care of patients identifying as LGBTQIA+. Such important change in attitude reflects the impact of collaborative practice experiences on patient safety and outcomes.[2, 6, 11, 12] The video is now being used in the Nursing Department as a resource for the professional development of future nurses on how to deliver efficient care to patients identifying as LGBTQIA+. The implementation of LGBTQIA+ education in the nursing curriculum was intended to mitigate the problem.[32–34] LGBTQIA+ education is lacking in the nursing curriculum and the issue is translated into practice as inadequate training of nurses leads to health disparities among patients who identify as LGBTQIA+.

To conclude, when nurses receive the proper education on LGBTQIA+delivery of care and are trained in interpersonal communication skills, LGBTQIA+ patients will be able to receive the care they deserve without the interference of biases that, not only are at the root of the nurse-patient communication conflicts, but also put patients at risk.[32–34]

CONFLICTS OF INTEREST DISCLOSURE
The authors declare that there is no conflict of interest.

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