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COLLEGE
OF NURSING

**“Sexual Orientation and Gender Identity
Data Collection: Attitudes, Beliefs, and
Perceived Barriers among Inpatient
Registered Nurses and Medical
Providers on Progressive Care Units”**

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DNP Scholarly Project

Sexual Orientation and Gender Identification Data Collection: Attitudes, Beliefs, and Perceived
Barriers Among Inpatient Registered Nurses and Medical Providers on Progressive Care Units

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Abstract

As the United States healthcare system continues to evolve and more Americans receive health insurance coverage, trends in diseases and care delivery to meet these trends are expected to shift. As this evolution takes place the ability to track trends to address the anticipated needs will need to develop at a faster pace. One such area is how healthcare providers engage the Lesbian, Gay, Bisexual, Transgender (LGBT) community and how these interactions can improve care, perceived healthcare quality, and address health disparities. Currently most electronic health record (EHR) programs do not have the ability to track the sexual orientation or gender identification (SOGI) of its patients. This creates a potential barrier when using patient data to address perceived health disparities in an underserved population. The University of New Mexico Hospitals are building a SOGI platform into their EHR but leaving the choice to ask patients SOGI questions up to the individual nurse or healthcare providers; those identified as doctors, nurse practitioners, and physicians assistants. The aim of this study is to assess perceived barriers facing nurses and inpatient providers and to identify if there is a difference between the groups willingness to collect and enter this data into the EHR.

Keywords: Lesbian, Gay, Bisexual, Transgender, LGBT healthcare, Sexual Orientation, Gender Identification, SOGI, Electronic Health Record, EHR

Chapter I

INTRODUCTION

On March 23, 2010, the Affordable Care Act (ACA) went into effect. In addition to providing insurance to over 20 million Americans the ACA created measures to address health disparities in underserved populations. (U.S. Department of Health and Human Services [HHS], 2016). One specific population the ACA classifies as an underserved group is the Lesbian, Gay, Bisexual, and Transgender (LGBT) community.

We know the LGBT community faces health disparities at alarming rates. The LGBT population face higher rates of substance abuse, sexual and physical violence, mental health issues and suicide attempts, cardiovascular disease, deaths from cancer, and sexually transmitted infections (STI) (Kates, Ranji, Beamesderfer, Salganicoff, & Dawson, 2016). The Center for Disease Control and Prevention (CDC) (2016) advises, “gay, bisexual, and other men who have sex with men make up an estimated 2% of the population but over 55% of people living with HIV...”. Looking at racial groups, the numbers are even more staggering. In men who identify as gay or bisexual, one in two African Americans, one in four Hispanics, and one in eleven Caucasians will be diagnosed with HIV (CDC, 2016). On top of increased health disparities over 8% of lesbian, gay, and bisexual individuals and 25% of transgendered individuals have faced discrimination when attempting to utilize healthcare services (Baker, 2016).

These health disparities trends are alarming, presenting a call to action for healthcare organizations. Additionally, the ACA provides funding to improve the care for the LGBT community and provides additional protections and non-discrimination laws that protect LGBT patients when they are accessing healthcare. Healthcare organizations have a duty to respond to

changes not only in the laws that govern how they practice but to meet the demands of how all Americans access healthcare, through innovative measures.

Problem Statement

To date only two of the major healthcare organizations in the Albuquerque, New Mexico have started to collect SOGI information on their patients. Without collecting Sexual Orientation and Gender Identity (SOGI) information there is virtually no way to identify a patient that identifies as Lesbian, Gay, Bisexual, or Transgender (LGBT) or to collect data to identify any healthcare trends or inequalities that the LGBT population in Albuquerque face. Concrete plans on what to do with this data or how to ensure that staff are adequately prepared to collect this information in a sensitive manner have not been made public.

An academic medical center has formed a SOGI taskforce to look at how best to start collecting the data to allow identification of trends, if any, in the LGBT patient population they serve. This group will also look at how to address these trends and how to protect the data they do collect. The rollout of SOGI questions has started as a paper survey that frontline unlicensed staff members such as patient care techs, unit clerks, or intake clerks will give to patients (M. Salaz, personal communication, November 8, 2016). Functionality to add this documentation in the EHR will largely target licensed staff members, primarily registered nurses and medical providers, doctors, nurse practitioners, and physicians assistants. One of the confounding aspects of this rollout is that staff members will be educated about SOGI but asking SOGI questions will be voluntary. Without a sufficient quantity of quality SOGI data, this information will not allow us to better assist the LGBT population in improving their health and healthcare experience.

Objectives

The primary purpose of this study is to assess the readiness and willingness of inpatient nurses and medical providers, including doctors, nurse practitioners, and physician's assistants on progressive care units to engage patients in asking SOGI information questions. Data from completed surveys may answer the following research questions:

1. Are there any differences between nurses and providers in their belief about the importance of providing culturally competent LGBT care?
2. Do nurses and providers feel prepared to provide culturally competent care to the LGBT population?
3. Does providing training to nurses and providers improve their perception of the ability to engage the LGBT population when collecting SOGI data and does time impact this perception?
4. Are nurses and providers aware of the importance of asking SOGI questions?
5. Are nurses and providers aware of how SOGI data collection can impact the care of the LGBT patient?
6. Are nurses and providers prepared to engage the LGBT community in discussions on SOGI in the inpatient setting?

Chapter II

LITERATURE REVIEW

Although there has been positive movement toward better care for the LGBT population, there is more work that needs to be done. Innovative changes and interventions are needed to better address and respond to the needs of the LGBT population. Despite the increased adoption of EHR's that facilitates health informatics looking at health trends, the LGBT population still face health disparities. Rates of chronic conditions, malignant cancers, substance abuse, eating disorders, sexually transmitted infections (STI), and HIV are all conditions that the LGBT suffer in higher rates than the heterosexual community (Donald & Ehrenfeld, 2015). Collecting SOGI information could be the starting point to being able to collect data to quantify these disparities and for healthcare systems to respond accordingly.

In 2009, the American Recovery and Reinvestment Act enabled the United States Government to incentivize the adoption, implementation, upgrade, and meaningful use of EHR's (HealthIT, 2014). Meaningful use is defined as the application of an EHR to improve patient outcomes, engage patients in their own care, improve care coordination, improve privacy and security of health information, creates transparency and increases reliability in data on healthcare systems. It was rolled out in three stages; stage one occurred in 2011-2012 and focused on the data itself. In stage two, clinical processes and improvement occurred in 2014. The final stage is still in process but focuses on improving outcomes. It should go without saying that this could all change based on federal healthcare laws, however, this major academic medical center in the southwest plans to implement collecting SOGI information regardless.

Meaningful use has shown to be an important aspect to improving healthcare. Rappaport, et al. (2016), found that meaningful use would likely need an automated approach for

implementation to be successful. This is important to note because the authors identify gaps in not only implementation of meaningful use, but also the infrastructure that would enable it to be successful. Furthermore, if the system as a whole has barriers, implementing an intervention to address one specific patient subpopulation will most likely also face barriers.

The process to include SOGI into EHR's is not a standard process and is not yet federally mandated. The federal government provides incentives for organizations that do include SOGI in their EHR. Beginning in 2018 in order to meet the Certified Electronic Health Record Technology requirements for the incentives, EHR's will have to include SOGI (HHS.gov, 2015).

Research shows components of care have improved when utilizing EHR's. For instance, Duffy, Yiu, Molokhia, Walker, and Perkins (2010) found that by simply adding electronic prescription ability into an EHR in a family medicine practice, provider and patient satisfaction increased. And for many healthcare institutions, patient satisfaction drives reimbursement rates. The study found that prescription related questions increased. The authors did not mention if their analysis indicated it was because there was less interaction with providers regarding the initial prescription of the medication or if EHR's were catching more medication related issues.

Donna Manca (2015) also stated that EHR's are thought to be a tool that can be used to improve outcomes, which was the general consensus of the medical communities studied. Around 65% of those studied, felt that EHR's improved outcomes and that communication and patient/provider relationships do improve as a result. EHR's also maintain continuity between staff members so confusion about plans of care or past care decrease. Furthermore, more consistent scheduling and patient tracking have been shown to improve access to care. All of these are important to improving outcomes. However, this study also mentioned the lack of adequate data to support the claim that these are all achievable through EHR's. Manca (2015)

ended by mentioning that because of the increased usage of EHR's the healthcare system is at a tipping point and we should start to see more data coming out to indicate if EHR's really do improve care.

Despite the importance placed on collecting data to improve outcomes and the drive for meaningful use, the Institute of Medicine (IOM) still advises that it is extremely difficult to obtain enough quality data from such a small population such as the LGBT population (2011). The IOM continues, theorizing that there are gaps in research about how to improve the care of the LGBT population and that the greatest threat to research surrounding the improvement of the healthcare of the LGBT population is the lack of sufficient population-based data.

Both the American Nurses Association (ANA) and the American College of Physicians (ACP) support improving care for the LGBT community. The ANA's Code of Ethics did not specifically mention the LGBT population but in provisions two and three the nurse is tasked with providing care, advocating for, and protecting the rights of all of their patients (Willand-Brown, Lachman, & O'Connor Swanson, 2015). On the other hand, the ACP specifically wrote a position paper on the care of the LGBT population. In their position paper, statement number seven supports data collection and analyzation of this data to reduce disparities in the LGBT population (Daniel & Butkus, 2015).

There may be a gap in the actual healthcare that the LGBT population receives and the ability of healthcare organizations to appropriately respond to these disparities. Research shows promise in the meaningful use realm and in implementing SOGI questions into EHR's. By utilizing the full power of the EHR, healthcare organizations may be able to identify barriers in the care they deliver and in turn provide healthcare professionals and patients the information and tools needed to overcome these barriers. These are important points to discuss so LGBT

patients can be cared for by healthcare organizations in a more culturally appropriate and competent manner.

Theoretical Model

The COM-B system defines a behavior as a response to three different constructs; capability, motivation, opportunity (Appendix A). These three constructs can influence each other and the exhibited behavior. Taking this framework as the hub, Michie, van Stralen, and West (2011) developed a newer model surrounding the three constructs and created a behavior wheel (Appendix B). The inner most level breaks each of the three original constructs into more detailed areas of concerns. Surrounding the constructs are interventions to address behavior issues arising from each construct. And finally, the outer most circle provides a policy direction to support the identified intervention.

This model lends itself to this study because survey statements can be codified to fit into each of the constructs. Survey statements that discuss training and preparedness can be associated with the opportunity construct. While survey statements covering the concepts of culturally competent care fall under the motivation construct. The remaining construct of capability can be used to codify the survey statements that talk about asking SOGI questions and charting these answers in the EHR.

The model allows researchers to create an intervention and policy, if needed, should a behavior that creates a barrier be identified. Identifying behaviors enables the development of interventions and policies that addresses these identified behavioral barriers. This may allow any healthcare organization that is implementing SOGI questions into their EHR to address these barriers and it may allow them to more fully engage their LGBT patients with more meaningful interactions.

For instance, a healthcare institution may identify that staff are not asking SOGI questions because they lack the capability to do so. Restrictions could be in place that prevent them from doing so. Creating a policy that mandates an intervention such as EHR capability or policies regarding protecting patient information when collecting SOGI, could impact the collection of SOGI data. Making these changes based on targeted interventions for capability, motivation, or opportunity can help influence the behaviors needed for changes in a healthcare organization. These specific interventions, supported by policies, guidelines, and other measures, targeting a behavior that creates a roadblock are crucial to the care of the LGBT patient. Using this theoretical model to address the attitudes, beliefs, and perceived barriers with their associated behavioral drivers would create the opportunity to provide the tools and resources needed to enable the healthcare worker to positively engage the LGBT patient.

Chapter III

METHODS

The proposed study was rolled out in one phase followed by a data analysis and conclusion phase. The study was projected to begin in May 2017 and projected to end by January 2018. A survey was sent out utilizing REDcap to all inpatient adult progressive care nurses and all medicine providers, including interns, residents, attending physicians, nurse practitioners, and physician assistants. These groups were chosen because a portion of their care is discharge and follow-up care, which can include setting up a primary care provider to manage disease processes and other psychosocial issues related to their medical care. Surgical and pediatric providers, as well as intensive care, emergency room, operating room, outpatient, or other specialty nurses were not considered for this study. A power analysis using G*Power 3.1 was run with a medium effect size of 0.5, a confidence interval of 0.05, a level of power of 80%, and allocation ratio assumption of 1:1. G*Power indicated that a sample size of each group would need to be at least 64 respondents for a total N=128. Weekly reminders were sent out via REDcap to study subjects who had not completed the survey to ensure a large enough sample population was collected. In addition, paper versions were made available on each unit and were picked up weekly. The paper versions were destroyed once the data was entered into REDcap

In the data analysis phase of the study, group data were analyzed for trends identified in each group and then compared against each other to see if there were differences. Demographic data was collected to further look at trends. The goal was to see if one group performs better than the other and if so what did they do that could be taught to the other group. Additionally, barriers within each group, if any, were identified.

Timeline

1. Defend study proposal by March 28, 2017
2. Obtain authorization from hospital leadership to perform study, May 2017
3. Working with the IT department at the hospital to obtain email lists to enter into REDcap, May/June 2017
4. Obtain IRB by May 30, 2017
5. During IRB approval process, perform cognitive debriefing to ensure survey questions capture the intent of the question.
6. Once IRB approval is obtained, attend unit and medical team staff meetings when available and post reminders in break rooms, bathrooms, and other unit locations.
7. Complete all data collection by November 30, 2017.
8. Complete data analysis by January 31, 2018.
9. Complete write up of results and discussions by February 28, 2018
10. Edit and finalize write up and discussion, followed by a presentation of the findings by April 30, 2018.

Settings and Resources

Study Location. The survey took place via electronic methods wherever the study group had Internet access, but the study area would be covering the adult progressive care units at an academic medical center.

Study Population. The study population only included adult progressive care unit nurses and medicine providers. Inclusion criteria were: 18 years of age or older, licensed to practice their respective profession, read and write in English, and have e-mail access. Exclusion criteria: Unlicensed staff, those that lacked the ability to read and write in English, intensive care unit

nurses, pediatric unit nurses, specialty unit nurses such as emergency room, interventional radiology, operating room, outpatient nurses, surgical providers, or specialty providers such as ear, nose, & throat, palliative/hospice, radiologists, and those without access to e-mail.

Sources of Data. Data for this study came from the survey that was sent out via REDcap and available in paper form on each unit. The Information Technology Department at the study hospital provided supporting data in the form of study participant e-mail addresses. The survey consisted of three parts: an explanation of the survey and consent (Appendix C), a demographic survey (Appendix D), and the survey regarding SOGI information (Appendix E). The demographic section of the survey asked for age, gender identification, race/ethnicity, sexual orientation, level of education, position, and clinical experience; this demographic section preceded the study survey. The study survey asked if the respondent had received any LGBT/SOGI cultural competence education. This was a yes/no question and if the respondent has taken the training a follow up question asked the time since they took the training. Eight questions were asked on a seven-point Likert scale; scoring was 1-strongly disagree, 2-disagree, 3-slightly disagree 4-neither disagree/agree, 5-slightly agree, 6-agree, and 7-strongly agree. The final question was open ended and not scored. The potential range for this survey was based on the scores for each of the questions. One question was scored one or two as a yes or no question, the timeframe question was scored one to five, and eight questions ranged from one to seven on a Likert scale, with a total possible range from 8 – $8 \times 7 = 56$. Lower scores indicated a stronger disagreement with the survey question and a higher score indicated a stronger agreement with the survey question. The questions asked about LGBT cultural education, LGBT cultural competency, attitudes and beliefs about the LGBT population, the importance of SOGI

information, and the likelihood of asking SOGI questions. A separate tenth question was open ended to elicit further information the study may not have already captured in the survey itself.

Data Analysis. Analysis of the data was processed to see if there are any differences between nurses and providers perceptions of culturally appropriate care for the LGBT patient.

Descriptive statistics were used to describe the sample population as well as each subpopulation, i.e. nurses and providers. When appropriate, univariate statistics such as frequencies, range, mean, median, mode, and standard deviation, were calculated.

Inferential statistics: Inferential statistics were utilized to answer the research questions for this scholarly project. Data were examined to see if it met statistical assumptions of normality, homogeneity, linearity, and independence to identify if parametric tests could be used on the data or if the nonparametric equivalents measures would need to be used. Presented here are the research questions and the proposed data analysis plan.

1. Are there any differences between nurses and providers in their belief about the importance of providing culturally competent LGBT care?
 - a. If the assumptions for parametric statistics are met, a t-test will be performed.
If the assumption are not met then the nonparametric equivalent of a t-test, the Mann-Whitney U, will be used.
2. Do nurses and providers feel prepared to provide culturally competent care to the LGBT population?
 - a. If the assumptions for parametric statistics are met, a t-test will be performed.
If the assumption are not met then the nonparametric equivalent of a t-test, the Mann-Whitney U, will be used.

3. Does providing training to nurses and providers improve the perception of the ability to engage the LGBT population when collecting SOGI data and does time impact this perception?
 - a. If the assumptions for parametric statistics are met, a one-way ANOVA will be used to look at the differences in more than two groups. If the assumptions are not met then the nonparametric equivalent of a one-way ANOVA, the Kruskal-Wallis test, will be used.
 - b. Pearson r correlations will be used to look at any possible relationships if the data distributions meet the requirements for this parametric statistical analysis. Otherwise, Spearman's Rho, the nonparametric equivalent will be used.
4. Are nurses and providers aware of the importance of asking SOGI questions?
 - a. If the assumptions are met, a t-test will be performed. If the assumptions are not met then the nonparametric equivalent of a t-test, the Mann-Whitney U, will be explored.
5. Are nurses and providers aware of how SOGI data collection can impact the care of the LGBT patient?
 - a. If the assumptions are met, a t-test will be performed. If the assumptions are not met then the nonparametric equivalent of a t-test, the Mann-Whitney U, will be explored.
6. Are nurses and providers prepared to engage the LGBT community in discussions on SOGI in the inpatient setting?

- a. If the assumptions are met, a t-test will be performed. If the assumptions are not met then the nonparametric equivalent of a t-test, the Mann-Whitney U, will be explored.

If enough qualitative data is collected, analysis will begin by organizing the data into a group that answers or provides further information about topics discussed in the survey and a group that provides topics not addressed by the survey. Coding responses into themes and finding overarching topics will allow for better organization and more in-depth analysis of the data. Comparing the findings of the coding and themes against current literature complete the process.

Data Management. Surveys were de-identified via REDcap so each response cannot be traced back to any specific study participant. Surveys were created and stored in REDcap. Completed surveys were only accessible to the primary and co-investigators.

Human Subject Protection. Surveys were sent out electronically and responses were blindly received so there was no way to identify persons who have or have not completed the survey. Working relationships between nurses and providers were not be impacted because specific individuals will not be able to be identified as participating in the survey. Each survey should have taken fewer than 10 minutes to complete, so only a minimal time commitment was required by each of the study participants. No harm more than everyday life will be associated or tied to participating in the study. Participants could choose to quit the survey at any time and they could choose not to answer any questions they did not wish to answer. REDcap had the ability to send reminder emails to those individuals that had not completed the survey. These reminders were e-mailed every ten days until the end of the study. Study investigators did not have access to see who completed the survey and who had not completed the survey.

Budget. There was no proposed budget for this study. All tools utilized for data collection and analysis were provided free of charge through the study hospital or were previously purchased for other uses by the investigators. Study participants were volunteers and were not compensated for their participation.

Chapter IV

RESULTS

On September 29, 2017 an electronic survey was sent out via REDcap to 751 nurses and providers; 408 RN, 87 APRN/PA, and 256 MD/DO. Every ten days after the initial survey request was sent out, a reminder email was sent to those on the mailing list who had not completed the survey. This occurred five times for a total of 60 days that the survey was open and available to take, closing on December 2, 2017.

Descriptive Statistics

After analyzing the 326 returned responses, 47 responses were eliminated due to practice area not being studied by survey, survey respondent declining consent to participate in survey, or incompleteness of survey for a total of 279 completed surveys which represents an overall 37% response rate.

Data were then exported from REDcap into IBM SPSS Statistics V.25. Descriptive statistics were first run on the study data to identify current healthcare worker job title, age, sexual orientation, gender identity, race/ethnicity, and years of experience.

Healthcare worker position. The response rate for RNs was 48% (196/408) and accounted for 70% (196/279) of the study population. The response rate for APRNs and PAs was lumped together based on the healthcare institution classifying both groups as midlevel providers and was 25% (22/87). However, APRNs accounted for 5% (14/279) of the study population and PAs were 3% (8/279). The response rate for MD/DO was 24% (61/256) with a study population response rate of 22% (61/279). See Table 1.

Table 1

Current Healthcare Worker Position (N=279)

Healthcare Worker Position	n	%
RN	196	70.3
NP	14	5.0
PA	8	2.9
MD/DO	61	21.9
Total	279	100.0

Age. The largest age group represented in the study responses was the 25-34 age group with a 38% response rate. The second largest group that responded identified themselves as being in the 35-44 age group with a response rate of 32% (88/279). These two groups accounted for over 2/3 of the study population. See Table 2.

Table 2

Age (N=278)

Age Range	n	%
18-24	11	3.9
25-34	105	37.6
35-44	88	31.5
45-54	38	13.6
>54	36	12.9
Total	278	99.6
Missing	1	0.4
Total	279	100.0

Sexual orientation. Eighty-four percent self-identified as heterosexual. Additionally, 41 total respondents or 15% of the study sample self-identified as members of the LGBT community and four did not answer this question. See Table 3.

Table 3

Sexual Orientation (N=275)

Sexual Orientation	n	%
Heterosexual or Straight	234	83.9
Gay or Lesbian	23	8.2
Bisexual	18	6.5
Total	275	98.6
Missing	4	1.4
Total	279	100.0

Gender identity. The responses for the two-part gender identity question were the same, indicating that none of the respondents self-identified as being transgender; Seventy percent of the study population were born female and identify as female. See Table 4.

Table 4

Gender Identity (Two-part question – Sex Assigned at Birth and Current Identity) (N=279)

Sex Assigned at Birth	n	%
Female	195	69.9
Male	84	30.1
Total	279	100.0
Current Identity	n	%
Female	195	69.9
Male	84	30.1
Total	279	100.0

Race/Ethnicity. Fifty-seven percent of respondents identified as being white/Anglo; the second largest group were Hispanic/Latino (29%). See Table 5.

Table 5

Race/Ethnicity (N=273)

Race/Ethnicity	n	%
American Indian or Alaska Native	10	3.6
Asian	15	5.4
Black or African American	5	1.8
Hispanic or Latino	82	29.4
Native Hawaiian or Pacific Islander	1	0.4
White or Anglo	160	57.3
Total	273	97.8
Missing	6	2.2
Total	279	100.0

Years of experience. The largest group represented in the survey population were those that have had less than three years of experience (35.5%). The remaining two thirds of the respondents were almost evenly spread out amongst the remaining groups. See Table 6.

Table 6

Years of Experience (N=279)

Years of Experience	n	%
0-3 years	99	35.5
4-7 years	58	20.8
8-11 years	50	17.9
12-15 years	18	6.5
>15 years	54	19.4
Total	279	100.0

Synthesis of tables. Based on the data in these tables, one could say that the most likely sample respondent would be a white heterosexual female RN between the ages of 25-34 with less than four years of experience.

Statistical Analysis of Research Questions

IBM SPSS Statistics V.25 was used to analyze the data once it had been exported from REDcap and the descriptive statistics were processed. Tests of normality indicated that this assumption had been violated in the data because the distribution of the independent variable for each study group was not normal. Due to this violation, parametric statistics were not used for the analysis; instead non-parametric tests used to analyze the data in relation to the research questions. These violations of normality occurred in the analyzed data for every one of the research questions in this study.

Importance of culturally competent care. The first research question asked: “Are there any differences between nurses and providers in their belief about the importance of providing culturally competent LGBT care?” This survey question attempted to see if nurses and providers understood that providing culturally competent care to the LGBT was important. This was tied to the survey statement, “I feel that providing culturally competent care to the LGBT patient is important and can impact patient outcomes”. (Appendix E)

Univariate data analysis of the study sample for this research question indicated a data distribution that did not meet normal distribution requirements because response groups ranged from .4 to 54.5 percent. Over 90% of the study sample either slightly agreed, agreed, or strongly agreed to the survey statement, “I feel that providing culturally competent care to the LGBT patient is important and can impact patient outcomes”. See Table 7.

Table 7

Culturally Competent Care (N=278)

Culturally Competent Care	n	%
Strongly disagree	14	5.0
Disagree	3	1.1
Slightly disagree	1	0.4
Equally disagree/agree	8	2.9
Slightly agree	8	2.9
Agree	92	33.0
Strongly agree	152	54.5
Total	278	99.6
Missing	1	0.4
Total	279	100.0

RNs compared with providers. The responses were broken down into either RNs or providers. Nurse practitioners, physician assistants, and physicians were grouped together as providers. The responses still indicated an overall agreement to the study statement with 88.8% of RNs and 94% of providers answering either slightly agree, agree, or strongly agree to the statement, “I feel providing culturally competent care to the LGBT patient is important and can impact patient outcomes”. See Table 8.

Table 8

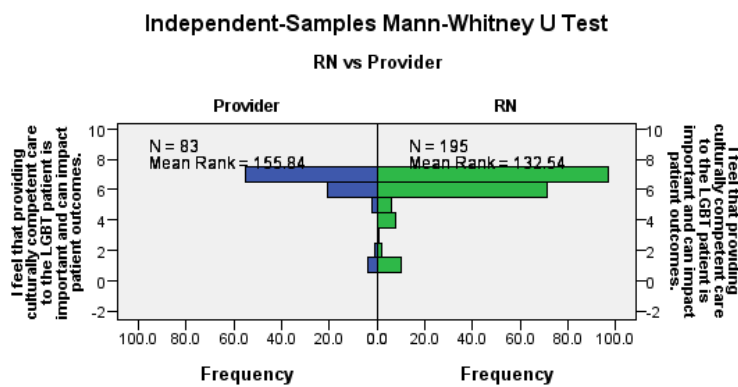
Culturally Competent Care – RN vs Provider (N=278)

Culturally Competent Care – RN vs Provider		n	%
RN	Strongly disagree	10	5.1
	Disagree	2	1.0
	Slightly disagree	1	0.5
	Equally disagree/agree	8	4.1
	Slightly agree	6	3.1
	Agree	71	36.2
	Strongly agree	97	49.5
	Total Answered	195	99.5
	Missing	1	0.5
	Total	196	100.0
Provider	Strongly disagree	4	4.8
	Disagree	1	1.2
	Slightly agree	2	2.4
	Agree	21	25.3
	Strongly agree	55	66.3
	Total	83	100.0

Response data did not meet the assumption of normality for a t-test, so the non-parametric equivalent, the Mann-Whitney U (M-W U), was used to test whether or not there were any statistically significant differences between the means of these two different groups. The three critical assumptions of the M-W U test were met; the independent variable was dichotomous, and the dependent variable was measured as ordinal level data, the data were randomly selected, and last, the distribution of the study data of each group was similar. Findings from the M-W U test indicate there is a statistical difference between nurses ($M=132.54, n=195$) and providers ($M=155.84, n=83$) in their perceptions about providing culturally competent LGBT care, $U=9449, z=2.47, p=0.013, r=.15$. See Figure 1.

Figure 1

Mann-Whitney U Test – Culturally Competent Care – RN vs Provider (N=278)



Total N	278
Mann-Whitney U	9,449.000
Wilcoxon W	12,935.000
Test Statistic	9,449.000
Standard Error	548.719
Standardized Test Statistic	2.472
Asymptotic Sig. (2-sided test)	.013

Based on the statistically significant difference between RNs and providers, the answer to the research question: “Are there any differences between nurses and providers in their belief about the importance of providing culturally competent LGBT care?”, is yes, there are differences between these two groups. As a group, providers are more likely to believe in the importance of providing culturally competent LGBT care than RNs.

Preparedness to provide culturally competent LGBT care. The second research question asked: “Do nurses and providers feel prepared to provide culturally competent care to the LGBT population?” This survey question attempted to see if nurses and providers felt prepared to provide culturally competent care to the LGBT population. This was tied to three survey statements; “Experiences during my degree program provided me with the knowledge to appropriately assess and address the medical and social needs of my LGBT patients”, “My hospital or medical institution provides me with the resources and training needed to provide culturally competent care to the LGBT community”, and “I feel comfortable discussing cultural and lifestyle issues that may impact the medical needs of my patients who are members of the LGBT community”. (See Appendix E)

Survey statement 4: Degree preparedness. Univariate data analysis of the study sample for this research question and the fourth survey statement, “Experiences during my degree program provided me with the knowledge to appropriately assess and address the medical and social needs of my LGBT patients”, indicated that a data distribution that did not meet normal distribution requirements among the seven possible response groups ranged from 4.7 to 26.2 percent. Only 38% of the study sample slightly agreed, agreed, or strongly agreed while over 47% disagreed with the survey statement, “Experiences during my degree program provided me

with the knowledge to appropriately assess and address the medical and social needs of my LGBT patients”. See Table 9.

Table 9

Degree Program Preparedness (N=277)

Degree Program Preparedness	n	%
Strongly disagree	25	9.0
Disagree	73	26.2
Slightly disagree	38	13.6
Equally disagree/agree	35	12.5
Slightly agree	55	19.7
Agree	38	13.6
Strongly agree	13	4.7
Total	277	99.3
Missing	2	0.7
Total	279	100.0

RNs compared to providers. The responses were broken down into either RNs or providers. Nurse practitioners, physician assistants, and physicians were grouped together as providers. The responses indicated disagreement to the study statement with almost 50% of RNs and 47% of providers answering either slightly disagree, disagree, or strongly disagree to the statement, “Experiences during my degree program provided me with the knowledge to appropriately assess and address the medical and social needs of my LGBT patients”. See Table 10.

Table 10

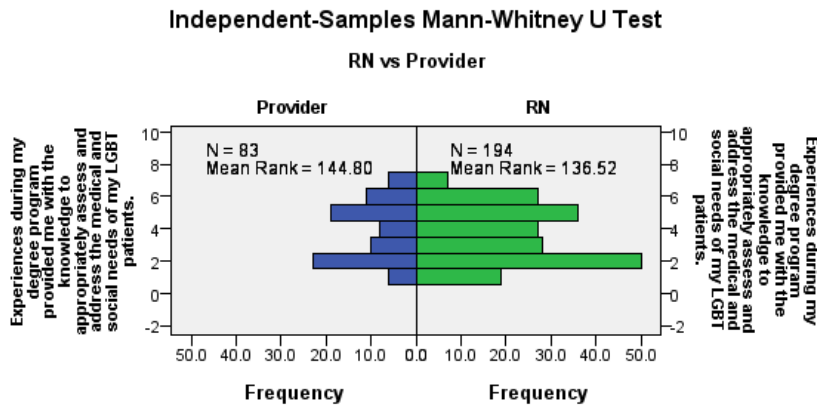
Degree Program Preparedness – RN vs Provider (N=278)

Degree Program Preparedness – RN vs Provider		n	%
RN	Strongly disagree	19	9.7
	Disagree	50	25.5
	Slightly disagree	28	14.3
	Equally disagree/agree	27	13.8
	Slightly agree	36	18.4
	Agree	27	13.8
	Strongly agree	7	3.6
	Total Answered	194	99.0
	Missing	2	1.0
	Total	196	100.0
Provider	Strongly disagree	6	7.2
	Disagree	23	27.7
	Slightly disagree	10	12.0
	Equally disagree/agree	8	9.6
	Slightly agree	19	22.9
	Agree	11	13.3
	Strongly agree	6	7.2
	Total	83	100.0

Response data did not meet the assumption of normality for a t-test, so the non-parametric equivalent, the Mann-Whitney U (M-W U), was used to test whether or not there were any statistically significant differences between the means of these two different groups. The three critical assumption of the M-W U test were met; the independent variable was dichotomous, and the dependent variable was measured as ordinal level data, the data were randomly selected, and last, the distribution of the study data of each group was similar. Findings from the M-W U test indicate there is not a statistical difference between nurses ($M=136.52$, $n=194$) and providers ($M=144.8$, $n=83$) in their perceptions about being adequately prepared by their degree programs to provide culturally competent care to the LGBT patient, $U=8532.5$, $z=.802$, $p=0.422$, $r=.05$. See Figure 2.

Figure 2

Mann-Whitney U Test – Degree Preparedness – RN vs. Provider (N=277)



Total N	277
Mann-Whitney U	8,532.500
Wilcoxon W	12,018.500
Test Statistic	8,532.500
Standard Error	600.246
Standardized Test Statistic	.802
Asymptotic Sig. (2-sided test)	.422

When answering the second research question, “ Do nurses and providers feel prepared to provide culturally competent care to the LGBT population?” with the fourth survey statement, “Experiences during my degree program provided me with the knowledge to appropriately assess and address the medical and social needs of my LGBT patients”, nearly half of the combined RN/provider group (48.8%) felt they were not prepared by their respective degree program compared to the combined RN/provider group (38%) who felt they were prepared by their respective degree program. However, no statistical difference was observed between RNs and providers when the groups were compared separately.

Survey statement 5: Hospital training preparedness. Univariate data analysis of the study sample for this research question and the fifth survey statement, “My hospital or medical institution provides me with the resources and training needed to provide culturally competent care to the LGBT community”, indicated that a data distribution that did not meet normal distribution requirements given response groups ranged from 2.5 to 26.9 percent. Almost 57% of the study sample slightly agreed, agreed, or strongly agreed to the survey statement, “My hospital or medical institution provides me with the resources and training needed to provide culturally competent care to the LGBT community”. See Table 11.

Table 11

Hospital Training Preparedness (N=279)

Hospital Training Preparedness	n	%
Strongly disagree	7	2.5
Disagree	41	14.7
Slightly disagree	28	10.0
Equally disagree/agree	45	16.1
Slightly agree	61	21.9
Agree	75	26.9
Strongly agree	22	7.9
Total	279	100.0

RNs compared with providers. The responses were broken down into either RNs or providers. Nurse practitioners, physician assistants, and physicians were grouped together as providers. The responses indicated an agreement to the study statement with over 58% of RNs and 54% of providers answering either slightly agree, agree, or strongly agree to the statement, “My hospital or medical institution provides me with the resources and training needed to provide culturally competent care to the LGBT community”. See Table 12.

Table 12

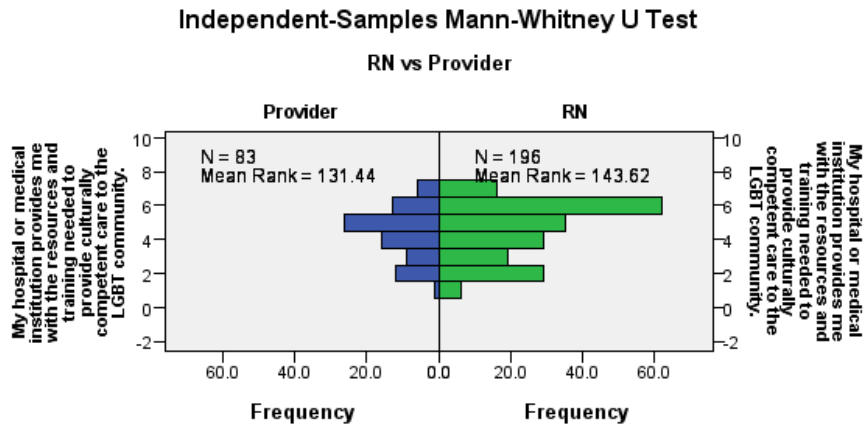
Hospital Training Preparedness – RN vs Provider (N=279)

Hospital Training Preparedness – RN vs Provider		n	%
RN	Strongly disagree	6	3.1
	Disagree	29	14.8
	Slightly disagree	19	9.7
	Equally disagree/agree	29	14.8
	Slightly agree	35	17.9
	Agree	62	31.6
	Strongly agree	16	8.2
	Total	196	100.0
Provider	Strongly disagree	1	1.2
	Disagree	12	14.5
	Slightly disagree	9	10.8
	Equally disagree/agree	16	19.3
	Slightly agree	26	31.3
	Agree	13	15.7
	Strongly agree	6	7.2
	Total	83	100.0

Response data did not meet the assumption of normality for a t-test, so the non-parametric equivalent, the Mann-Whitney U (M-W U), was used to test whether or not there were any statistically significant differences between the means of these two different groups. The three critical assumption of the M-W U test were met; the independent variable was dichotomous, and the dependent variable was measured as ordinal level data, the data were randomly selected, and last, the distribution of the study data of each group was similar. Findings from the M-W U test indicate there is not a statistical difference between nurses ($M=143.62$, $n=196$) and providers ($M=131.44$, $n=83$) in their perceptions about being adequately prepared by the training provided by their hospital to provide culturally competent care to the LGBT patient $U=7423.5$, $z=-1.176$, $p=0.240$, $r=.07$. See Figure 3.

Figure 3

Mann-Whitney U Test – Hospital Training Preparedness – RN vs. Provider (N=279)



Total N	279
Mann-Whitney U	7,423.500
Wilcoxon W	10,909.500
Test Statistic	7,423.500
Standard Error	604.051
Standardized Test Statistic	-1.176
Asymptotic Sig. (2-sided test)	.240

When answering the second research question, “Do nurses and providers feel prepared to provide culturally competent care to the LGBT population?” with the fifth survey statement, “My hospital or medical institution provides me with the resources and training needed to provide culturally competent care to the LGBT community”, over half of the combined RN/provider group (56.7%) felt they were prepared by their hospital or medical institution compared to the combined RN/provider group (27.2%) who felt they were not prepared by their

hospital or degree program. However, no statistical difference was observed between RNs and providers when the groups were compared separately.

Survey statement 6: Comfort discussing LGBT cultural and lifestyle issues. Univariate data analysis of the study sample for this research question and the sixth survey statement, “I feel comfortable discussing cultural and lifestyle issues that may impact medical needs with my patients who are members of the LGBT community”, indicated that the data distribution did not meet normal distribution requirements given groups ranged from .7 to 50.5 percent. Over 84% of the study sample either slightly agreed, agreed, or strongly agreed to the survey statement, “I feel comfortable discussing cultural and lifestyle issues that may impact medical needs with my patients who are members of the LGBT community”. See Table 13.

Table 13

Comfort Discussing Cultural and Lifestyle Issues (N=279)

Comfort Discussing Cultural and Lifestyle Issues	n	%
Strongly disagree	2	0.7
Disagree	5	1.8
Slightly disagree	17	6.1
Equally disagree/agree	19	6.8
Slightly agree	43	15.4
Agree	141	50.5
Strongly agree	52	18.6
Total	279	100.0

RNs compared to providers. The responses were broken down into either RNs or providers. Nurse practitioners, physician assistants, and physicians were grouped together as providers. The responses indicated an agreement to the study statement with over 82% of RNs and 90% of providers answering either slightly agree, agree, or strongly agree to the statement, “I

feel comfortable discussing cultural and lifestyle issues that may impact medical needs with my patients who are members of the LGBT community?”. See Table 14.

Table 14

Comfort Discussing Cultural and Lifestyle Issues – RN vs Provider (N=279)

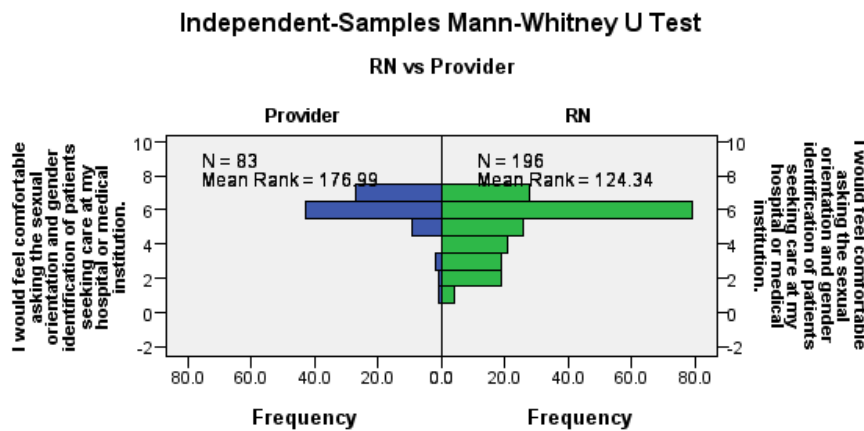
Comfort Discussing Cultural and Lifestyle Issues - RN vs Provider		n	%
RN	Strongly disagree	2	1.0
	Disagree	4	2.0
	Slightly disagree	14	7.1
	Equally disagree/agree	15	7.7
	Slightly agree	25	12.8
	Agree	107	54.6
	Strongly agree	29	14.8
	Total	196	100.0
Provider	Disagree	1	1.2
	Slightly disagree	3	3.6
	Equally disagree/agree	4	4.8
	Slightly agree	18	21.7
	Agree	34	41.0
	Strongly agree	23	27.7
	Total	83	100.0

Response data did not meet the assumption of normality for a t-test, so the non-parametric equivalent, the Mann-Whitney U (M-W U), was used to test whether or not there were any statistically significant differences between the means of these two different groups. The three critical assumption of the M-W U test were met; the independent variable was dichotomous and the dependent variable was measured as ordinal level data, the data were randomly selected, and last, the distribution of the study data of each group was similar. Findings from the M-W U test indicate there is a statistical difference between nurses ($M=124.34, n=196$) and providers ($M=176.99, n=83$) in their perceptions about being adequately prepared by the

training provided by their hospital to provide culturally competent care to the LGBT patient $U=11204$, $z=5.236$, $p=.000$, $r=.31$. See Figure 4.

Figure 4

Mann-Whitney U Test – Comfort Discussing Cultural and Lifestyle Issues – RN vs. Provider
(N=279)



Total N	279
Mann-Whitney U	11,204.000
Wilcoxon W	14,690.000
Test Statistic	11,204.000
Standard Error	586.285
Standardized Test Statistic	5.236
Asymptotic Sig. (2-sided test)	.000

When answering the second research question, “ Do nurses and providers feel prepared to provide culturally competent care to the LGBT population?” with the sixth survey statement, “I feel comfortable discussing cultural and lifestyle issues that may impact medical needs with my patients who are members of the LGBT community”, both RNs (82.2) and providers (90.4) felt

they were prepared to provide culturally competent care. However, there was a statistically significant difference that showed providers felt more prepared than RNs.

Impact of training on LGBT patient engagement perception. The third research question asked: “Does providing training to nurses and providers improve the perception of the ability to engage the LGBT population when collecting SOGI data and does time impact this perception?” This survey question attempted to see if nurses and doctors had any training regarding the LGBT community and if this training had any impact on their perception of being prepared to engage the LGBT patient when discussing SOGI. This question was analyzed using three different survey statements; “Have you received any training regarding sexual orientation, gender identity, or care specific to the Lesbian, Gay, Bisexual, and Transgender (LGBT) community?”, “If so, how many weeks ago did you take it?”, and “I would feel comfortable asking the sexual orientation and gender identification of patients seeking care at my hospital or medical institution”. (See Appendix E)

The first survey statement, “Have you received any training regarding sexual orientation, gender identity, or care specific to the Lesbian, Gay, Bisexual, and Transgender (LGBT) community?” was analyzed using descriptive statistics only.

Received training. The first survey statement, “Have you received any training regarding sexual orientation, gender identity, or care specific to the Lesbian, Gay, Bisexual, and Transgender (LGBT) community?” was analyzed first using descriptive statistics because the data were nominal level data. Over 50% of the study sample advised they had received training specific to SOGI or care regarding the LGBT population. See Table 15.

Table 15

Received Training (N=277)

Received Training	n	%
No	127	45.5
Yes	150	53.8
Total	277	99.3
Missing	2	0.7
Total	279	100.0

RNs compared with provider. The responses were then separated by RN vs provider. Less than half of the RNs who participated in the survey said they had received any training regarding SOGI or the care regarding the LGBT population while over 80% of providers said they had taken such training. See Table 16.

Table 16

Received Training – RN vs Provider (N=277)

RN vs Provider		n	%
RN	No	114	58.2
	Yes	80	40.8
	Total	194	99.0
	Missing	2	1.0
	Total	196	100.0
Provider	No	13	15.7
	Yes	70	84.3
	Total	83	100.0

Comfort asking SOGI questions. Univariate data analysis of the study sample for this research question and the eight survey statement, “I would feel comfortable asking the sexual orientation and gender identity of patients seeking care at my hospital or medical institution”, indicated that a data distribution that did not meet normal distribution requirements given

response groups ranged from 1.8 to 43.7 percent. Over 75 percent of the study sample slightly agreed, agreed, or strongly agreed to the survey statement, “I would feel comfortable asking the sexual orientation and gender identity of patients seeking care at my hospital or medical institution”. See Table 17.

Table 17

Comfort Asking SOGI Questions (N=279)

Comfort Asking SOGI Questions	n	%
Strongly disagree	5	1.8
Disagree	20	7.2
Slightly Disagree	21	7.5
Equally disagree/agree	21	7.5
Slightly agree	35	12.5
Agree	122	43.7
Strongly agree	55	19.7
Total	279	100.0

RNs compared with providers by training status. The responses were then separated by RN vs provider based on training status. Almost 2/3 of RNs without training, 70.1% of RNs who had received training, 76.9 of providers without training, and 98.5% of providers who had received training either slightly agreed, agreed, or strongly agreed to the survey statement. See Table 18.

Table 18

Comfort Asking SOGI Questions – RN vs Provider (N=277)

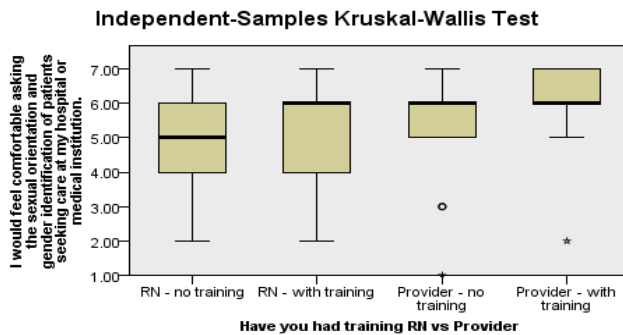
RN vs Provider – Training Status		Frequency	Percent
RN - No Training	Strongly disagree	1	0.9
	Disagree	14	12.3
	Slightly disagree	11	9.6
	Equally disagree/agree	13	11.4
	Slightly agree	19	16.7
	Agree	41	36.0
	Strongly agree	15	13.2
	Total	114	100.0
RN - Training	Strongly disagree	3	3.8
	Disagree	5	6.3
	Slightly disagree	8	10.0
	Equally disagree/agree	8	10.0
	Slightly agree	7	8.8
	Agree	37	46.3
	Strongly agree	12	15.0
	Total	80	100.0
Provider - No Training	Strongly disagree	1	7.7
	Slightly disagree	2	15.4
	Slightly agree	1	7.7
	Agree	7	53.8
	Strongly agree	2	15.4
	Total	13	100.0
Provider - Training	Disagree	1	1.4
	Slightly agree	8	11.4
	Agree	36	51.4
	Strongly agree	25	35.7
	Total	70	100.0

Response data did not meet the assumption of normality for a One-Way ANOVA, so the non-parametric equivalent, the Kruskal-Wallis test (K-W), was used to test whether or not there were any statistically significant differences between the means of these four different groups. The five critical assumptions of the K-W test were met; the data was collected from a randomly selected set of observations, the dependent variable was at least ordinal level, the independent variable was nominal with more than two groups, there was an independence of observations within and between each groups with no repeated measures or multiple response categories, and the shape of the distributions of the dependent variable in each group was similar. Findings

from the K-W test indicate there was a statistically significant difference in the comfort level of RNs vs providers when asking SOGI questions depending on if they had received training or not across the four groups (Gp1, n=114: RN without training, Gp2, n=80: RN with training, Gp3, n=13: Provider with no training, Gp4, n=70: Provider with training), $\chi^2(2, n=279) = 33.42$, $p=.000$. See Figure 5.

Figure 5

Kruskal-Wallis Test – RN without training vs RN with training vs Provider without vs Provider with training (N=277)



Total N	277
Test Statistic	33.418
Degrees of Freedom	3
Asymptotic Sig. (2-sided test)	.000

1. The test statistic is adjusted for ties.

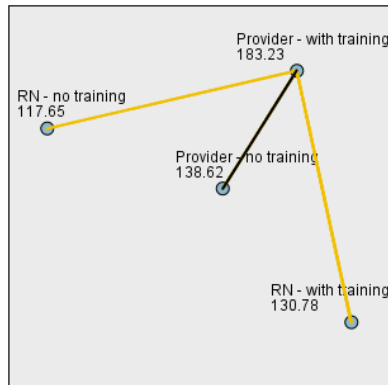
The K-W test indicated there was a statistical significance between at least two of the groups. Post hoc analysis comparing the pairwise data from the K-W test showed there was a statistical difference between RNs without training ($M=117.65$, $n=114$) and providers who had training ($M=183.23$, $n=70$) in their perceived comfort level asking SOGI questions of LGBT

patients under their care, $H=-65.575$, $z=-5.664$, $p=.000$, $r=.42$. There was also a statistically significant difference between RNs with training ($M=130.78$, $n=80$), and Providers with training ($M=183.23$, $n=70$) in their perceived comfort level asking SOGI questions of LGBT patients under their care, $H=-52.447$, $z=-4.203$, $p=.000$, $r=.34$. All pairwise comparisons were adjusted for multiple pairwise comparisons using the Bonferroni correction. See Figure 6.

Figure 6

Kruskal-Wallis Test Pairwise Comparison

Pairwise Comparisons of Have you had training RN vs Provider



Each node shows the sample average rank of Have you had training RN vs Provider.

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
RN - no training-RN - with training	-13.128	11.121	-1.180	.238	1.000
RN - no training-Provider - no training	-20.962	22.321	-.939	.348	1.000
RN - no training-Provider - with training	-65.575	11.578	-5.664	.000	.000
RN - with training-Provider - no training	-7.834	22.801	-.344	.731	1.000
RN - with training-Provider - with training	-52.447	12.479	-4.203	.000	.000
Provider - no training-Provider - with training	-44.613	23.028	-1.937	.053	.316

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05. Significance values have been adjusted by the Bonferroni correction for multiple tests.

When answering the third research question, “Does providing training to nurses and providers improve the perception of the ability to engage the LGBT population when collecting SOGI data and does time impact this perception?” with the eighth survey statement, “I would

feel comfortable asking the sexual orientation and gender identification of patients seeking care at my hospital or medical institution” both RNs (82.2%) and providers (90.4%) felt they were prepared to provide culturally competent care. However, there was a statistically significant difference that showed providers with training felt more prepared than RNs regardless of training status. There were no other statistically significant differences between the other remaining pairwise comparisons.

Time since training. The second survey statement, “If so, how many weeks ago did you take it?” was analyzed using descriptive statistics first because the data were nominal level data. Over 4/5 of the study respondents who noted that they had received training had taken it more than eight weeks before taking the study survey. See Table 19.

Table 19

Weeks Since Training (N=150)

Week Since Training	n	%
Less than a week to one week ago	10	6.7
Two to three weeks ago	9	6.0
Four to five weeks ago	4	2.7
Six to seven weeks ago	3	2.0
Eight or more	124	82.6
Total	150	53.8

RNs compared with providers. The responses were then separated by RN vs provider. More than 80% of providers who had reported to having received training had taken that training more than eight weeks before they took the study survey and 80% of RNs advised they had received training more than eight weeks before they took the study survey. See Table 20.

Table 20

Weeks Since Training – RN vs Provider (N=150)

Weeks Since Training - RN vs Provider		n	%
RN	Less than a week to one week ago	3	3.8
	Two to three weeks ago	8	10.0
	Four to five weeks ago	3	3.8
	Six to seven weeks ago	2	2.4
	Eight or more	64	80.0
	Total	80	100.0
Provider	Less than a week to one week ago	7	10.0
	Two to three weeks ago	1	1.4
	Four to five weeks ago	1	1.4
	Six to seven weeks ago	1	1.4
	Eight or more	60	85.6
	Total	70	100.0

When answering the third research question, “Does providing training to nurses and providers improve the perception of the ability to engage the LGBT population when collecting SOGI data and does time impact this perception?” by looking at a correlation between the second survey statement, “If so, how many weeks ago did you take it?” and the eighth survey statement, “I would feel comfortable asking the sexual orientation and gender identification of patients seeking care at my hospital or medical institution” the response data violated the first assumption for the Pearson r correlations test because the two variables, time since training and RN vs Provider perceived comfort level after taking training, were not both continuous variables. The data also violated the assumption of having a monotonic relationship of the Spearman’s Rho test because one variable did not increase or decrease in any relation compared to the other variable. Due to these violations, correlation between time since training and its impact on perceived comfort level in asking SOGI questions was not analyzed.

Importance of SOGI data collection. The fourth research question asked: “Are nurses and providers aware of the importance of asking SOGI questions?” This survey question attempted to see if RNs and providers felt that asking SOGI questions were important to the perceived quality of care of the LGBT patient. The survey statement that is tied to this question stated, “I think asking sexual orientation and gender identity is important to the healthcare experience of the LGBT community and improves perceived quality”. (See Appendix E)

Univariate data analysis of the study sample for this research question indicated that a data distribution that did not meet normal distribution requirements given response groups ranged from 2.5 to 47.3 percent. Over 82% of the study sample either slightly agreed, agreed, or strongly agreed to the survey statement, “I think asking sexual orientation and gender identity is important to the healthcare experience of the LGBT community and improves perceived quality”. See Table 21.

Table 21

Importance of SOGI Data Collection (N=279)

Importance of SOGI Data Collection	n	%
Strongly disagree	7	2.5
Disagree	10	3.6
Slightly Disagree	9	3.2
Equally disagree/agree	24	8.6
Slightly agree	25	9.0
Agree	132	47.3
Strongly agree	72	25.8
Total	279	100.0

RNs compared with providers. The responses were then separated by RN vs provider. RNs (76.6%) and providers (94.9%) slightly agreed, agreed, or strongly agreed to the survey statement. See Table 21.

Table 21

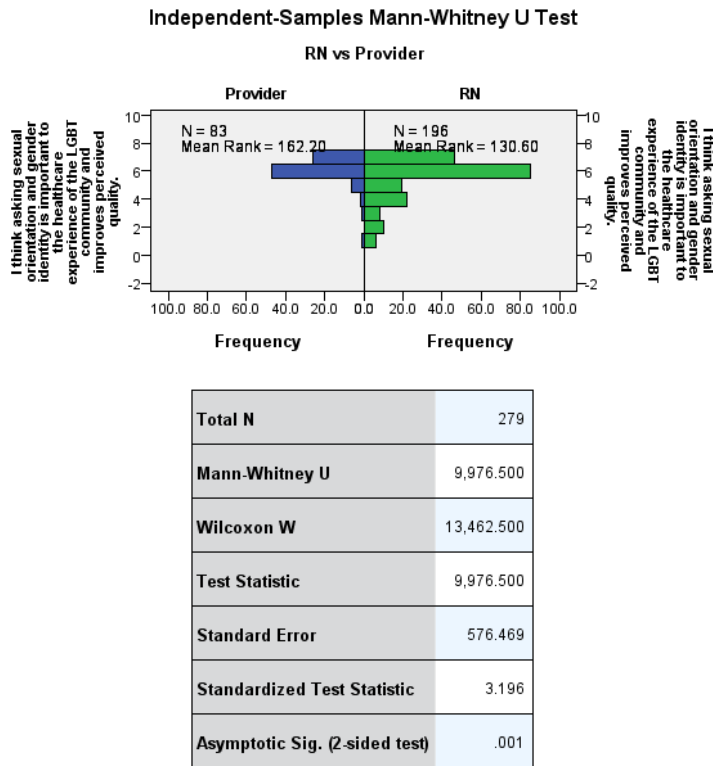
Importance of SOGI Data Collection – RN vs Provider (N=279)

Importance of SOGI Data Collection – RN vs Provider		n	%
RN	Strongly disagree	6	3.1
	Disagree	10	5.1
	Slightly Disagree	8	4.1
	Equally disagree/agree	22	11.2
	Slightly agree	19	9.7
	Agree	85	43.4
	Strongly agree	46	23.5
	Total	196	100.0
Provider	Strongly disagree	1	1.2
	Slightly Disagree	1	1.2
	Equally disagree/agree	2	2.4
	Slightly agree	6	7.2
	Agree	47	56.6
	Strongly agree	26	31.3
	Total	83	100.0

Response data did not meet the assumption of normality for a t-test, so the non-parametric equivalent, the Mann-Whitney U (M-W U), was used to test whether or not there were any statistically significant differences between the means of these two different groups. The three critical assumption of the M-W U test were met; the independent variable was dichotomous, and the dependent variable was measured as ordinal level data, the data were randomly selected, and last, the distribution of the study data of each group was similar. Findings from the M-W U test indicate there is a statistical significant difference between nurses ($M=130.6, n=196$) and providers ($M=162.2, n=83$) in their perceptions about being adequately prepared by the training provided by their hospital to provide culturally competent care to the LGBT patient $U=9976.5, z=3.196, p=.001, r=.19$. See Figure 6.

Figure 6

Mann-Whitney U – Importance of Asking SOGI Questions – RN vs Provider (N=279)



When answering the fourth research question, “Are nurses and providers aware of the importance of asking SOGI questions?” with the seventh survey statement, “I think asking sexual orientation and gender identity is important to the healthcare experience of the LGBT community and improves perceived quality” both RNs (76.6%) and providers (95.1%) felt that asking SOGI question was important to the healthcare experience of the LGBT patient. However, there was a statistically significant difference showing more providers felt asking SOGI questions could impact the perceived quality of care the LGBT patient received when compared to nurses.

Impact of SOGI Data Collection. The fifth research question asked: Are nurses and providers aware of how SOGI data collection can impact the care of the LGBT patient? This

survey question attempted to see if RNs and providers felt that asking SOGI questions could impact the health disparities that the LGBT faces. To answer this question, the results from the tenth survey statement, “Ensuring my hospital or medical institution has proper sexual orientation and gender identification for my patients can help identify health disparities in the LGBT community”, were analyzed.

Univariate data analysis of the study sample for this research question indicated that a data distribution that did not meet normal distribution requirements given responses among the seven groups of possible responses ranged from 1.1 to 50.9 percent. Total responses of the study sample to either slightly agreed, agreed, or strongly agreed to the survey statement, “Ensuring my hospital or medical institution has proper sexual orientation and gender identification for my patients can help identify health disparities in the LGBT community” was 88.2%. See Table 22.

Table 22

Impact of SOGI Data Collection (N=279)

Impact of SOGI Data Collection	n	%
Strongly disagree	3	1.1
Disagree	7	2.5
Slightly Disagree	6	2.2
Equally disagree/agree	17	6.1
Slightly agree	19	6.8
Agree	142	50.9
Strongly agree	85	30.5
Total	279	100.0

RNs compared with providers. The responses were then separated by RN vs provider. RNs (84.7%) and providers (96.4%) slightly agreed, agreed, or strongly agreed to the survey statement. See Table 23.

Table 23

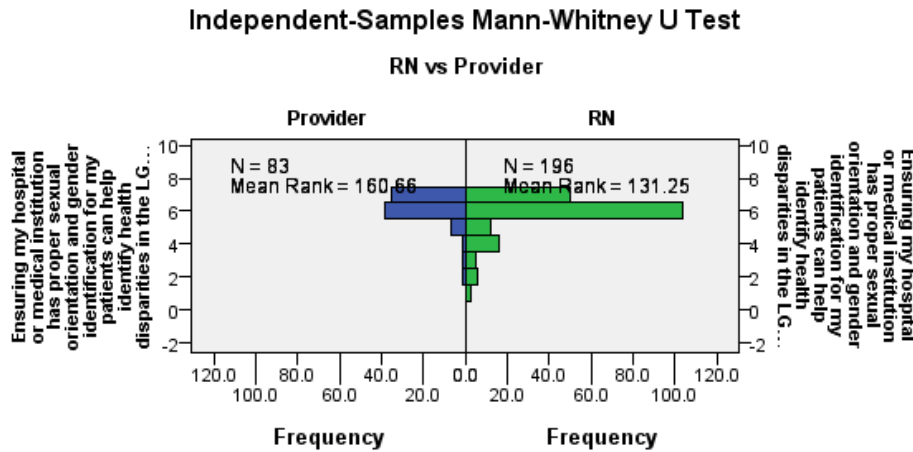
Impact of SOGI Data Collection – RN vs Provider (N=279)

Impact of SOGI Data Collection – RN vs Provider		n	%
RN	Strongly disagree	3	1.5
	Disagree	6	3.1
	Slightly Disagree	5	2.6
	Equally disagree/agree	16	8.2
	Slightly agree	12	6.1
	Agree	104	53.1
	Strongly agree	50	25.5
	Total	196	100.0
Provider	Disagree	1	1.2
	Slightly Disagree	1	1.2
	Equally disagree/agree	1	1.2
	Slightly agree	7	8.4
	Agree	38	45.8
	Strongly agree	35	42.2
	Total	83	100.0

Response data did not meet the assumption of normality for a t-test, so the non-parametric equivalent, the Mann-Whitney U (M-W U), was used to test whether or not there were any statistically significant differences between the means of these two different groups. The three critical assumption of the M-W U test were met; the independent variable was dichotomous, and the dependent variable was measured as ordinal level data, the data were randomly selected, and last, the distribution of the study data of each group was similar. Findings from the M-W U test indicate there is a statistical difference between nurses ($M=131.25, n=196$) and providers ($M=160.66, n=83$) in their perceptions about being adequately prepared by the training provided by their hospital to provide culturally competent care to the LGBT patient $U=9848.5, z=3.038, p=.002, r=.18$. See Figure 7.

Figure 7

Mann-Whitney U Test – Impact of SOGI Data Collection - RN vs Provider (N=279)



Total N	279
Mann-Whitney U	9,848.500
Wilcoxon W	13,334.500
Test Statistic	9,848.500
Standard Error	564.443
Standardized Test Statistic	3.038
Asymptotic Sig. (2-sided test)	.002

When answering the fifth research question, “Are nurses and providers aware of the importance of asking SOGI questions?” with the seventh survey statement, “Ensuring my hospital or medical institution has proper sexual orientation and gender identification for my patients can help identify health disparities in the LGBT community”, both RNs (82.7%) and providers (96.4%) agreed that asking SOGI questions could help identify health disparities in the LGBT patient population. However, there was a statistically significant difference showing that

more providers felt that asking SOGI questions could identify health disparities when compared to nurses.

Preparedness to Collect SOGI Data. The sixth research question asked: “Are nurses and providers prepared to engage the LGBT community in discussions on SOGI in the inpatient setting? This survey question attempted to see if RNs and providers felt prepared to ask SOGI data collection questions”. This question was linked to the ninth survey statement, “If medically necessary, I would ensure sexual orientation and gender identification fields were filled out on all my patients in the electronic health chart”. (See Appendix E)

Univariate data analysis of the study sample for this research question indicated that a data distribution that did not meet normal distribution requirements given response groups ranged from 0.4 to 58.1 percent. Over 90% of the study sample either slightly agreed, agreed, or strongly agreed to the survey statement, “If medically necessary, I would ensure sexual orientation and gender identification fields were filled out on all my patients in the electronic health chart”. See Table 24

Preparedness to Collect SOGI Data (N=279)

Preparedness to Collect SOGI Data	n	%
Strongly disagree	3	1.1
Disagree	1	0.4
Slightly Disagree	1	0.4
Equally disagree/agree	21	7.5
Slightly agree	24	8.6
Agree	162	58.1
Strongly agree	67	24.0
Total	279	100.0

RNs compared with providers. The responses were then separated by RN vs provider. Responses for slightly agree, agree, or strongly agree for RNs was 90.9% and for providers it was 90.3. See Table 25.

Table 25

Preparedness to Collect SOGI Data (N=279)

Preparedness to Collect SOGI Data - RN vs Provider		n	%
RN	Strongly disagree	2	1.0
	Disagree	1	0.5
	Slightly Disagree	1	0.5
	Equally disagree/agree	14	7.1
	Slightly agree	15	7.7
	Agree	116	59.2
	Strongly agree	47	24.0
	Total	196	100.0
Provider	Strongly disagree	1	1.2
	Equally disagree/agree	7	8.4
	Slightly agree	9	10.8
	Agree	46	55.4
	Strongly agree	20	24.1
	Total	83	100.0

Due to the extreme skew of the data, only descriptive statistics were used to analyze the data since only four RNs and eight providers disagreed with the survey statement, “If medically necessary, I would ensure sexual orientation and gender identification fields were filled out on all my patients in the electronic health chart”.

When answering the sixth research question, “Are nurses and providers prepared to engage the LGBT community in discussions on SOGI in the inpatient setting?” with the ninth survey statement, “If medically necessary, I would ensure sexual orientation and gender identification fields were filled out on all my patients in the electronic health chart” was agreed

to overwhelmingly by both RNs (90.9%) and providers (90.3%). Both groups stated they would ask SOGI questions if it was medically necessary.

Additional Comments by Study Participants. The final question of the study asked: “Do you have any thoughts or concerns about SOGI and the LGBT patient population that you feel this survey has not addressed?” and left the response area open-ended. Due to the nature of the data, only descriptive statistics were used. Of the total responses, 32 RNs and 11 providers left comments. Qualitative analysis through coding was conducted and six trends were identified in the comments; Privacy, the need to know, people not statuses, technological issues, presentation of ideas, and training were the trends present in the comments. Further breakdown of the comments will be presented in the discussions section.

Chapter V

DISCUSSION

This study attempted to identify if nurses and providers not only felt prepared to engage the LGBT patient in culturally competent care but to also identify their readiness to include sexual orientation and gender identity conversations into the interactions they have with LGBT patients. By asking specific questions to gauge the healthcare workers readiness to address their attitudes, beliefs, and perceptions about providing culturally competent care, specifically to the LGBT patient, trends were identified in the study data.

Overall

Overall the study population responded that they agreed with a majority of the study statements, which is promising because before we can truly address the needs of our community and the interventions required to address the health disparities they face, we have to be able to identify them. Being comfortable enough in one's self to be able to engage the patient in a culturally competent manner is key to building the trust to gain this, often private, information.

Another noticeable trend in the data is that providers accounted for less than 2/3 of the study population but understood more about the importance of being culturally competent and what it meant to the LGBT population when compared to nurses. This trend, providers responding more favorably to the survey statements when compared to nurses was statistically significant and it was seen in multiple portions of the study including: their reported comfort in discussing cultural, lifestyle, and SOGI with LGBT patients, and understanding the importance and impact of collecting SOGI data. This is not to say that nurses do not see the importance of any of these factors when working with a patient that is a member of the LGBT community, but they did not respond as favorably as providers did.

Preparedness

One area that both groups did agree on is their perceived preparedness to provide culturally competent care. This was looked at in two different areas; their perceived preparedness from their degree program and their perceived preparedness from the training opportunities provided to them by their hospital or medical institution.

Degree Program Preparedness. Half of the surveyed RNs and just under half of the provider group felt unprepared by their degree programs to provide culturally competent care to the LGBT population. While degree programs cannot be expected to teach their students everything they need to know to be expert clinicians by the time they graduate, they should be expected to provide opportunities to build a foundation upon which real life and work experiences can grow those skills. And judging from the responses, this is not being occurring in these programs.

Hospital Training Preparedness. This was another area where both groups showed similar responses and any differences were not statistically significant. More than half of each group reported they felt that the trainings and resources provided to them by their hospital or medical institution helped prepare them for providing culturally competent care to the LGBT population.

Theoretical Model in Use. This is a perfect example of the application of the COM-B behavioral wheel in application to this study. Most of the trainings and resources offered at the hospital where the study took place are not currently required. Study participants largely felt unprepared and sought an opportunity to address this issue. Using both social and reflective aspects of their behaviors they took training or utilized resources provided to remedy this situation. The guidelines of the organization to provide culturally competent care following a

patient centered model as well as legislation and pieces of the Affordable Care Act, help support these changes. It is not clear if this model was used in this change or if the training was indeed the cause of their perceived preparedness, but the markers that indicate a change that fits this model possibly took place. One could even argue that because those who were surveyed did not feel prepared by their degree programs but possibly did feel more prepared by their hospital training programs and resources, these trainings and resources should become mandatory and supported by the administration. More research into the cause of these changes would need to be done in order to directly link the COM-B Behavior Wheel to this possible change.

SOGI Data Collection Preparedness. Both groups agreed if the functionality to enter SOGI data was present in the EHR, they would ensure those fields were filled out. That is a promising statement, however, one might caution the enthusiasm for that statement because LGBT patients still face discrimination by healthcare providers, healthcare institutions, and other related healthcare organizations (Lambda Legal, n.d.). By making preconceptions about one's own level of cultural understanding or making decisions, even when they are done with best of intentions in mind, missteps by providers and nurses can do more harm than good, especially to the LGBT patient.

Additional Comments by Study Participants

The six trends that were seen in the comments were: Privacy, the need to know, people not statuses, technological issues, presentation of ideas, and training. These comments provide additional insight to the feelings the survey participants felt when participating in this study. They also tie into the theoretical model and could potentially provide for future direction to improve the care of the LGBT patient that seeks care at the study hospital or associated clinics.

Privacy. The most often seen trend in the comments was related to privacy, both in the context of the patient's right whether to share or not share specific information with their nurses or providers and privacy of the transgender patient when being assigned a room that may or may not be a shared room. Comments coded for privacy included those like, "We can't cohort opposite gender patients", "They should always be placed in a private room, to rule out any and all issues.", and "I do believe we need a policy or practice where transgender patients are given a private room and bathroom". One might suggest comments like this are akin to the argument of separate but equal of our not so distant past.

While no current standard has been adopted, best practices by the Veterans Health Administration (Shipard, Kauth, & Brown, 2018), Mount Sinai Health System (Mount Sinai, 2015), and the Human Rights Campaign (HRC.org, 2016) advocate for assigning patients on their preference for either a private or shared room, based on availability. If the patient wishes to be in a shared room, they should be placed in a room where the other patient shares their identified gender and use the same privacy devices such as curtains and screens that would be used with patients that do not identify as transgender. But ultimately the choice should be with the patient who identifies as being transgender and with their identified gender.

The need to know. The second most identified trend seen in the open comments section was the idea that the survey participants felt that it may not be their right or need to know about a patient's sexual orientation or gender identification. Comments that were coded this way included, "I believe the practice of 'don't ask, don't tell' goes on at..." and "I agree that gender identification is important for proper healthcare but not sexual orientation". These comments are concerning because the elements of SOGI may not be what brought the patient into the inpatient setting, but they are parts of what make up the patient and could impact their participation in

their own care. According to Alpert, Cichoskikelly, and Fox (2017), knowing if a patient is a member of the LGBT community can help address the social determinants that being a member of the community can create and can help address the feelings of being marginalized.

People not statuses. Comments stating that healthcare workers should see people as people and not by race, ethnicity, sexual orientation, gender identity, or any other demographic was the third identified trend. This is the most alarming kind of comment because by treating every patient the same devalues the patient and their lived experiences. I do not think that the survey respondent means to stigmatize or mistreat any patient, but every patient and their lived experiences are different and play a role in their care. You cannot simply choose not to see or honor those experiences because they may impact the care the patient is getting and can impact their engagement in care. Typical comments in this section were similar to these, “I think all patients should be treated equally regardless” and “I don’t understand how caring for any human being with an illness should be any different, whether LGBT or just human, like race”. Each patient is unique and based on what makes each patient unique plays a part in what they need in terms of their care and how they participate in this care.

Socioeconomic factors do play into the overall treatment and continued care of the patient, they need to be addressed. To treat the 80-year-old Hispanic male the same way that one would treat the 18-year-old Native American Transgender female means that the needs of the patients are not being met. Developing interventions that target the belief systems, cultural norms, preferences, and needs helps to involve the patient in their own care and can help to build the bridge inpatient treatment and outpatient care.

Technological issues. Many of the study participants felt that addressing SOGI concerns could be made easier with technological assistance. This was primarily a trend from an

informatics perspective than actual patient care. Many people did not know that the study hospital allows patients now to have their preferred name on their patient labels or that technology to assist in patient throughput identified gender and has the ability to identify a transgender patient. Those who knew of these important changes felt that the changes had not gone far enough and requested functionality to change gender or name and to allow the clinician to choose all that apply instead of one when charting SOGI for patients. Adding the ability to have the patient's preferred carried many implications and discussing the implications of further functionality around SOGI and what it may look like needs to happen so the changes can occur sooner when needed rather than needing to make the change and having to wait for the discussion to occur, further delaying the needed changes.

Presentation of ideas. Calling LGBT patients different and not normal, "I think LGBT pts are no different with normal pts", identifying people with unknown immigration status as illegals, and using the term transsexual instead of transgender were seen when a study participant attempted to present their ideas and was another trend seen in the comments. While it is the thought of the researchers that these study participants did not mean to offend or make a misstep in their comments about caring for people in underrepresented communities, it is these kinds of comments that, if made in front of a patient could impact their care. Creating a welcoming clinical environment is paramount to long term patient engagement and comments like this could jeopardize the patient perceptions of not only the clinician making that comment but also the perception of the overall organization and the perceived quality of care.

Training. The first five coding groups lead into the last identified trend and the overarching theme of the comments. Many comments were requesting more training or more in-depth training revolving around communication. Study participants felt prepared from a

knowledge standpoint and felt comfortable asking questions but wanted more training on actual communication. How could they respectfully ask SOGI questions or how would one ask a transgender patient socioeconomic questions without offending the patient were common concerns. Having a class specific to communicating with the LGBT patient could help alleviate these concerns and was a suggestion in the comments. Communication training could also provide the outlet the study hospital needed to educate about the technological advances that have been made, changes to the constructs of treating every patient differently but equally and addressing the importance of knowing SOGI while maintaining privacy.

Limitations

The biggest limitation of this study was that the study population came from one hospital, one service line, and that it was a convenience sample. Every other service line in the hospital has and will continue to have LGBT patients and their readiness and perceptions of engaging the LGBT patient should be assessed because patients are often seen in one area of care and then transferred to another for more appropriate care. The entire nurse and provider population, including those at other hospitals, clinicals, and medical centers in the network, needs to be properly assessed and educated so they can be prepared to appropriately engage the LGBT population.

This study only captured the responses of the study sample at one point in time. As cultural issues, educational opportunities, training resources, and policies regarding SOGI or care of the LGBT patient change, the response and findings from this study may change.

Additionally, the data obtained from surveying only captures the immediate, surface level, thoughts from the study population. Deeper research or the opportunity to clarify questions or responses could also impact the data.

Finally, the study participants were self-selected which may or may not introduce bias into the study because the feelings of those who chose not to participate in the research could not be assessed by the researcher.

Implications and Conclusion

Healthcare professionals are tasked with providing the best care possible while enabling their patients to have positive outcomes. Currently most healthcare institutions cannot track if they are fulfilling this duty to their LGBT patients. The time to act is now so they can obtain a baseline health status of their LGBT patients so when EHR capability allows for tracking LGBT patients, their associated health trends and outcomes can be addressed in a culturally competent manner. The data from SOGI implementation and how an organization responds to barriers when enabling staff to collect SOGI may also pave the way forward for other organizations that are early on their SOGI implementation journey.

It is the nurse leader's job to not only advocate for their fellow nurses, but also, to work towards an organization that is able to adequately address the needs of its patients. This includes ensuring that proper preparation through trainings and available resources are part of the mission of the healthcare organization.

As trends in healthcare shift more and more to a holistic approach to providing care and improving outcomes, culture must be one of the aspects that is included in this approach. Expanding our definitions of cultures could enable us to provide care to a wider range of patients, earning their trust, and positively impacting communities through targeted interventions. And in the long run improving the care of the patients that seek our help in a more cost-effective manner.

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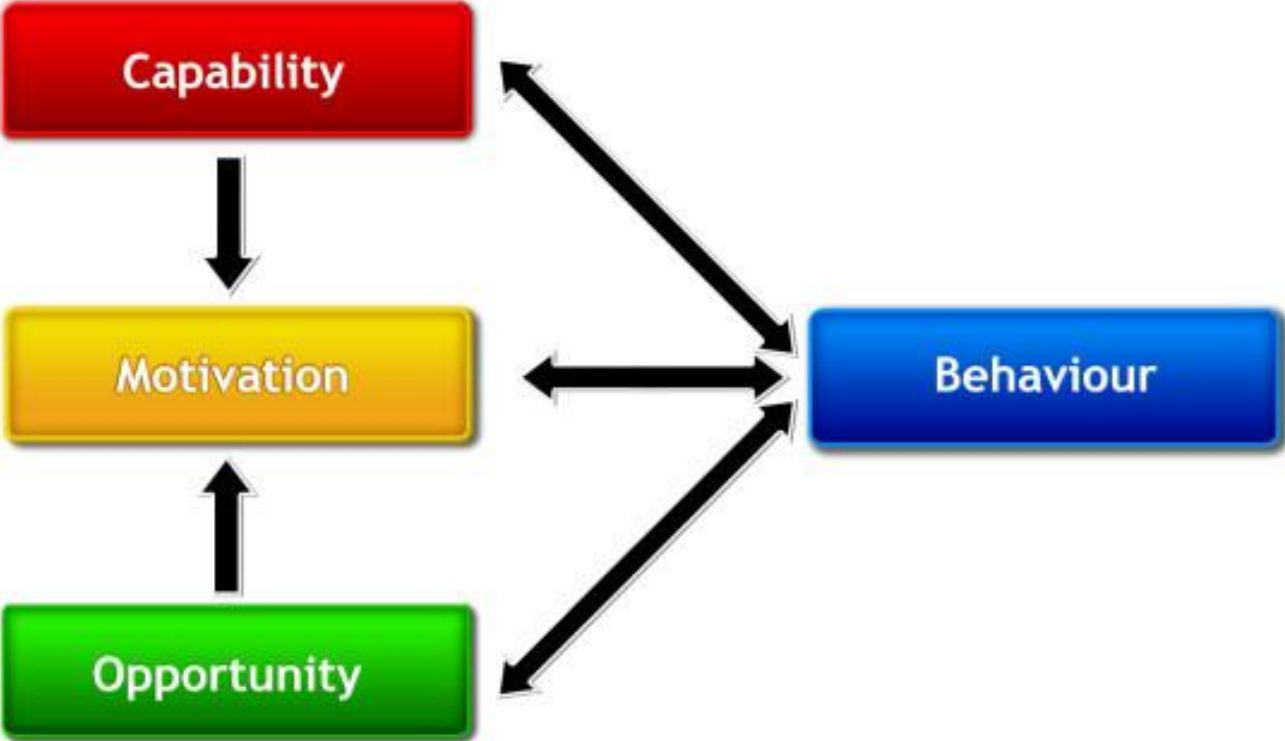
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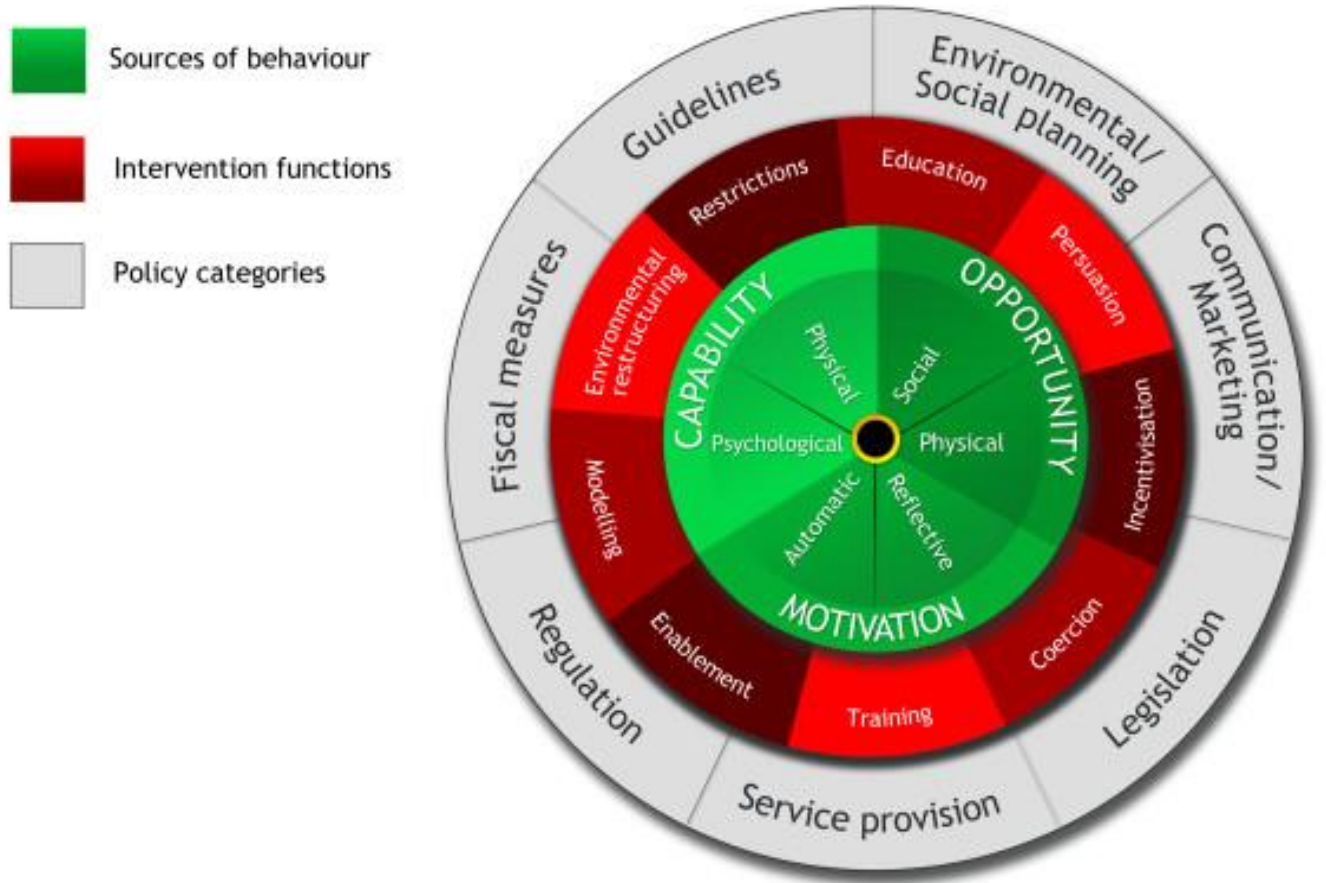
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Appendix A: Theoretical Model Diagram – COM-B Model



Appendix B: Theoretical Model Diagram – Behavior Wheel



Appendix C: Consent Form

Informed Consent Cover Letter for Anonymous Surveys

Sexual Orientation and Gender Identification Data Collection: Attitudes, Beliefs, and Perceived Barriers Among Inpatient Registered Nurses and Medical Providers on Progressive Care Units

Mr. Ryan J. Harris, DNP(c), RN from the College of Nursing, is conducting a research study. The purpose of the study is identify any barriers that nurses and medical providers face when engaging the Lesbian, Gay, Bisexual, and Transgender (LGBT) patients and if there are differences between each profession. You are being asked to participate in this study because you are either a nurse or medical provider on a progressive care unit.

Your participation will involve taking a short demographic survey followed by the study survey itself. The survey should take about five to 10 minutes to complete. Your involvement in the study is voluntary, and you may choose not to participate. There are no names or identifying information associated with this survey. A short demographic survey will be presented before the study survey. The study survey includes questions on a seven point Likert scale asking about cultural training, educational experiences, and readiness to engage the LGBT patient. You can refuse to answer any of the questions at any time. There are no known risks in this study, but some individuals may experience discomfort when answering questions. All data will be kept for 3 years secured digitally in REDcap and only available to the study investigators. Any paper surveys returned will be entered into REDcap and the paper copies will be destroyed.

The findings from this project will provide information on the potential barriers health care staff face when engaging the LGBT population and may provide information on how to remove them. The goal is to enable adequate data collection of the LGBT community so patient outcomes can be improved. If published, results will be presented in summary form only.

If you have any questions about this research project, please feel free to call Ryan J. Harris at (505) 697-9638. If you have questions regarding your legal rights as a research subject, you may call the UNMHSC Office of Human Research Protections at (505) 272-1129.

By returning this survey in the envelope provided or filling out the survey electronically through REDcap, you will be agreeing to participate in the above described research study.

Thank you for your consideration.

Sincerely,

Ryan J. Harris, DNP(c), RN
DNP-NEOL Student

HRRC#*****

Appendix D: Demographic Survey

1. How old are you?
 - a. 18-24
 - b. 25-34
 - c. 35-44
 - d. 45-54
 - e. >54
2. What gender were you assigned at birth?
 - a. Female
 - b. Male
3. How do you describe yourself?
 - a. Female
 - b. Male
 - c. Transgender
 - d. Do not identify as female, male, or transgender
4. Which Race/Ethnicity do you primarily identify as?
 - a. American Indian or Alaska Native
 - b. Asian
 - c. Black or African American
 - d. Hispanic or Latino
 - e. Native Hawaiian or Pacific Islander
 - f. White or Anglo
5. Do you consider yourself to be:
 - a. Heterosexual or straight;
 - b. Gay or Lesbian;
 - c. Bisexual; or
 - d. Different identity (open field)
6. Which degrees do you hold? (check boxes)
 - a. ADN
 - b. BSN
 - c. MSN
 - d. MPH
 - e. PhD
 - f. DNP
 - g. DO
 - h. MD
 - i. Other degree (open field)
7. What is your current position at UNMH?
 - a. RN
 - b. NP
 - c. PA
 - d. MD/DO
8. How many years of clinical experience do you have?
 - a. 0-3
 - b. 4-7
 - c. 8-11
 - d. 12-15
 - e. >15

Appendix E: SOGI Data Collection Survey

1. **Have you received any training regarding sexual orientation, gender identity, or care specific to the Lesbian, Gay, Bisexual, and Transgender (LGBT) community?**
1-Yes 2-No
2. **If so, how many weeks ago did you take it?**
1-Less than a week to one week 2-Two to three weeks 3-Four to five weeks
4-Six to seven weeks 5-Eight or more
3. **I feel that providing culturally competent care to the LGBT patient is important and can impact patient outcomes.**
1-Strongly disagree 2-Disagree 3-Slightly Disagree 4-Equally disagree/agree
5-Slightly agree 6-Agree 7-Strongly agree
4. **Experiences during my degree program provided me with the knowledge to appropriately assess and address the medical and social needs of my LGBT patients.**
1-Strongly disagree 2-Disagree 3-Slightly Disagree 4-Equally disagree/agree
5-Slightly agree 6-Agree 7-Strongly agree
5. **My hospital or medical institution provides me with the resources and training needed to provide culturally competent care to the LGBT community.**
1-Strongly disagree 2-Disagree 3-Slightly Disagree 4-Equally disagree/agree
5-Slightly agree 6-Agree 7-Strongly agree
6. **I feel comfortable discussing cultural and lifestyle issues that may impact medical needs with my patients who are members of the LGBT community.**
1-Strongly disagree 2-Disagree 3-Slightly Disagree 4-Equally disagree/agree
5-Slightly agree 6-Agree 7-Strongly agree
7. **I think asking sexual orientation and gender identity is important to the healthcare experience of the LGBT community and improves perceived quality.**
1-Strongly disagree 2-Disagree 3-Slightly Disagree 4-Equally disagree/agree
5-Slightly agree 6-Agree 7-Strongly agree
8. **I would feel comfortable asking the sexual orientation and gender identification of patients seeking care at my hospital or medical institution.**
1-Strongly disagree 2-Disagree 3-Slightly Disagree 4-Equally disagree/agree
5-Slightly agree 6-Agree 7-Strongly agree
9. **If medically necessary, I would ensure sexual orientation and gender identification fields were filled out on all my patients if the electronic health record provided those fields.**
1-Strongly disagree 2-Disagree 3-Slightly Disagree 4-Equally disagree/agree
5-Slightly agree 6-Agree 7-Strongly agree
10. **Ensuring my hospital or medical institution has proper sexual orientation and gender identification for my patients can help identify health disparities in the LGBT community.**
1-Strongly disagree 2-Disagree 3-Slightly Disagree 4-Equally disagree/agree 5-Slightly agree 6-Agree 7-Strongly agree
11. **Do you have any thoughts or concerns about SOGI and the LGBT patient population that you feel this survey has not addressed?**
Open field for comments