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LGBTQIA+ Care Simulation: Examining Participating Students' Attitude and Comfort

Grezelro Gonzalez
DePaul University, grezelro@gmail.com

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Grezelro Gonzales, MSN, APN, FNP-C

School of Nursing, DePaul University

Abstract

Background: The LGBTQIA+ communities face healthcare disparities that contribute to reduced overall health. One factor affecting LGBTQIA+ communities' reduced overall health is poor health-promoting behaviors or avoidance of care due to healthcare providers' lack of knowledge, poor attitude, and low comfort levels with LGBTQIA+ care. There are limited studies to date that address nursing students' attitude and comfort with LGBTQIA+ affirming care interventions outside of lectures. Therefore, the purpose of this study was to evaluate the effect of a simulation intervention on the attitude and comfort of prelicensure nursing students towards providing care to members of the LGBTQIA+ community.

Sample: Study sample was comprised of a convenience sample of pre-licensure nursing students (n = 40) enrolled in a Community Health Nursing didactic course.

Method: This study utilized a pre-test post-test design in which the participants rated their attitude and comfort towards LGBTQIA+ care before and after a simulation experience utilizing the Nursing Student's Knowledge and Attitudes of LGBT Health Concerns (NKALH) survey.

Results: There was a statistically significant improvement in participating students' comfort levels after the simulation intervention. There was no statistically significant improvement in participating students' attitudes after the simulation intervention.

Conclusion: Results showed a significant improvement in participants' comfort towards providing LGBTQIA+ care after the simulation intervention. While the same intervention did not significantly improve participants' attitudes towards LGBTQIA+ care, results were trending towards positive. Simulation interventions focusing on LGBTQIA+ care should be integrated into prelicensure nursing curriculum to improve the nursing care of LGBTQIA+ communities.

Background

The percentage of American adults self-identifying as lesbian, gay, bisexual, transgender, or questioning is increasing over time, from 3.5% in 2012 to 4.5% in 2017 (Newport, 2018). Due to movements that increase awareness, the LGBTQIA+ communities are becoming more socially acknowledged; therefore, disparities, such as health disparities, are also revealed (National Academy of Sciences, 2011). The National Institute on Minority Health and Health Disparities (2016) officially designated the LGBTQIA+ communities as a health disparity population.

Multifactorial underpinnings lead to the reduced overall health of LGBTQIA+ communities relative to the cisgender heterosexual population. The reduced overall health of LGBTQIA+ communities is, in part, associated with delay or avoidance of healthcare due to fear of discrimination and stigmatization (Landry, 2017; Mead et al., 2019; Quinn et al., 2015). The LGBTQIA+ community's perception of healthcare providers lacking awareness of the community's relevant health issues also contributes to the avoidance of care (Greene et al., 2018). One study found that 18% of LGBTQIA+ patients avoided healthcare services due to anticipated discrimination (Casey et al., 2019). Uncomfortable clinic experiences also play a factor in avoiding healthcare services among transgender men (Sheim & Travers, 2017).

Poor health-promoting behaviors harm the overall health of the communities. For example, increased rates of substance abuse, psychiatric disorders, and suicide have been linked with health discrimination against the LGBTQIA+ communities (Office of Disease Prevention and Health Promotion, 2020). One of the reasons LGBTQIA+ communities avoid healthcare services is based on anticipating healthcare providers' negative attitude and lack of comfort towards providing sexual-minority care (Human Rights Watch, 2018). Furthermore, it is reported that nurses and nursing students hold varying comfort levels when caring for LGBTQIA+

patients, and there is a perception that nurses' attitudes change once these individuals' sexualities and gender identities are disclosed (Richardson, Ondracek, & Anderson, 2016).

Various studies exist in the literature addressing healthcare providers' knowledge, skills, attitudes, and comfort in LGBTQIA+ care. Academic interventions focusing on LGBTQIA+ care are relevant in the students' readiness to care for this population, improve knowledge, promote a positive attitude (Craig, Dentato, Messinger, & McInroy, 2016; Mead et al., 2019; Strong & Folse, 2015). Educational interventions focused on LGBTQIA+ health include lecture modules, reading assignments, and case studies reported improvements in students' knowledge, attitudes, comfort level, awareness, and sensitivity towards LGBTQIA+ care (Cabarez, Pellegrini, Mankovitz, Eliason, & Dariotis, 2015; Henriquez, Hyndman, & Chachula, 2019; Mead et al., 2019).

Another pedagogical strategy widely utilized in health education is the use of healthcare simulation. Simulation in nursing education is a pedagogy where students undergo a simulated patient care experience in a safe and controlled environment. Adopting sex and gender-focused simulation in medical education can positively impact medical training, leading to decreased disparities in sex and gender-based health care (Beauchamp, McGregor, Choo, Safdar, & Rayl Greenberg, 2019). The same impact may be reflected in other facets of healthcare, such as nursing.

There has been a success in the use of simulation focusing on the LGBTQIA+ population. A simulation experience focused on LGBTQIA+ care showed an increase in nursing students' knowledge, attitude, and affirmative practice (Kang & Min, 2019; Maruca, Diaz, Stockmann, & Gonzalez, 2018). Simulation also showed overall confidence in BSN students'

confidence in caring for LGBTQIA+ patients (Englund, Basler, & Meine, 2019; Hickerson, Hawkins, & Hoyt-Brennan, 2018).

Healthcare providers' attitudes and comfort levels affect the LGBTQIA+ community's health-promoting behaviors. The efforts to acknowledge LGBTQIA+ rights are insignificant if healthcare providers are uncomfortable and have negative attitudes towards LGBTQIA+ care. Steps should be taken to improve healthcare providers' attitudes and comfort levels when caring for LGBTQIA+ individuals.

Health sciences research to date describes the need for more focus on LGBTQIA+ care in academia to better prepare healthcare professionals to care for the LGBTQIA+ communities. Previous studies have implemented lecture or presentation-type pedagogical strategies in promoting healthcare professionals' knowledge, skills, attitudes, and comfort when caring for LGBTQIA+ individuals (Cabarez et al., 2015; Mead et al., 2019; Strong & Folse, 2015;. The majority of previous studies positively impacted healthcare providers' knowledge regarding LGBTQIA+ care.

Mead et al. (2019) found that a lecture-only intervention markedly improved MENP students' LGBTQIA+ care knowledge with a large Cohen's d effect size. However, the effect size on attitudes and comfort was small. Previous research studied simulation in nursing education and its impact on LGBTQIA+ care. Kang and Min (2019) studied general nursing education using simulation. Maruca et al. (2018) used simulation to promote affirmative practice. Englund et al. (2019) focused on improving students' history-taking proficiency using simulation, and Hickerson et al. (2018) studied simulations' effect on competence and confidence. However, there are limited LGBTQIA+ health simulation studies.

While previous studies have evaluated simulation and LGBTQIA+ care, and one study focused on MENP students' knowledge, attitudes, and comfort towards LGBTQIA+ care, no known studies to date have looked at the effect of simulation in nursing education on the attitude and comfort of MENP students towards LGBTQIA+ care. The purpose of this study is to evaluate the effect of a simulation intervention on the attitude and comfort of Masters-Entry to Nursing Practice (MENP) students towards LGBTQIA+ care.

Sample

The study participants were comprised of a convenience sample of pre-licensure nursing students enrolled in a Masters Entry to Nursing Practice program students (n = 40) at DePaul University (DPU) in Chicago, Illinois, who were concurrently enrolled in Community Health Nursing, where LGBTQIA+ Health Considerations is delivered as one of the lecture modules. This study obtained formal approval from the DePaul University Institutional Review Board in Month of 2020 with subsequent data collection completed in October of 2020.

Method

This study aims to evaluate the effect of simulation on the attitude and comfort of MENP students towards LGBTQIA+ care. Simulation in nursing education is a pedagogy where students undergo a simulated patient care experience in a safe and controlled environment, which is the simulation laboratory. The master's entry to nursing practice (MENP) program is a pre-licensure registered nurse program at DePaul University in Chicago, Illinois, for college graduates in another field. The conceptual definitions of attitude and comfort were adapted from previous studies. Attitude is defined as a combination of rational thinking and nonverbal cues reflected in a person's behavior (Dorsen & Van Devanter, 2016). Comfort is the general feeling of ease and the absence of distress (Malinowski & Stamler, 2002).

This was a pre-test post-test study where the participants rated their attitudes and comfort levels towards LGBTQIA+ care before and after a simulation experience. The simulation experience was conducted at DePaul University School of Nursing's (SON) simulation laboratory.

The simulation interventions were scheduled after the LGBTQIA+ Health Considerations module has been presented in the Community Health Nursing course. The students were placed in groups of no more than three students. The simulation experiences were scheduled on different dates and times until the entire cohort (n = 40) participated in the simulation experience.

The participants cared for a transwoman patient in a simulation experience. A standardized patient (SP) was used in the simulation scenario. A standardized patient was a person trained to act as the patient. The SP was recruited within the simulation team. The participants were given preparation coursework to prepare them with the concepts of LGBTQIA+ care, congruent with their didactic content. The preparation coursework is a series of questions about the patient's case without giving away the scenario's details and was completed a week before the scheduled simulation experience. Refer to Appendix A for the preparation coursework.

On the day of the simulation experience, each participant completed an evaluation tool to rate their attitude and comfort in caring for LGBTQIA+ clients. The participants were then given a pre-briefing of the scenario with a short orientation to the room and background information about the patient, as well as the objectives of the simulation experience. See Appendix B for the pre-briefing document. The participants were given several minutes to review the pre-brief materials to familiarize themselves with the patient's background.

Each group was given 20 minutes to complete the simulation experience. After the simulation experience was completed, the students participated in a debriefing session about the experience. During the debriefing, the researcher facilitated a discussion of events that transpired during the scenario. At the end of the debriefing session, the participants completed the post-test evaluation tool to assess their comfort and attitude at that time. The pre-test and post-test evaluation tools were identical.

The participants completed pre-test and post-test surveys. The pre-test was taken just before the students underwent the simulation experience. The post-test was conducted immediately after the debriefing portion of the simulation experience. The survey tools were completed on university tablet computers kept at the simulation laboratory.

This study was approved to use and adapt the Nursing Student's Knowledge and Attitudes of LGBT Health Concerns (NKALH) survey (Cornelius & Carrick, 2018) by the primary authors. The adapted survey tool had two sections: attitude and comfort sections. Each section contained 5-point Likert-type questions asking the participants to rate their attitude or comfort from strongly disagree to strongly agree about LGBTQIA+ care. The comfort section had ten items, while the attitude section had 11 items. Content experts in simulation education, LGBTQIA+ care, and research methodology examined the instrument. The final instrument was piloted with select MENP students. The two steps ensured instrument validity and reliability.

The 5-point Likert-type questions were designated points for each rating: 1 point for strongly agree to 5 points for strongly disagree. The lower the point score, the higher the level of attitude and comfort. Due to the nature of the questions, some items were reversely coded. Scores from the survey were added to create a sum of the data. For both pre-test and post-test, each participant had an attitude sum score and comfort sum score. All of the participants' pre-

test sum scores were added to create the attitude overall pre-test scores, and the post-test sum scores were added to create the attitude overall post-test scores. The same was done for the comfort scores' sums creating comfort overall pre-test scores and comfort overall post-test scores.

To identify the significance of the change in attitude and comfort, the pre-test and post-test data for both variables were analyzed using paired *t*-test. To determine the effect size, attitude, and comfort, pre-test and post-test scores were analyzed using Cohen's *d*.

Analysis of the participants' attitudes and comfort after completing pre-and post-test Likert-type survey following a simulation intervention was done. The 5-point Likert-type questions were designated points for each rating: 1 point for strongly agree to 5 points for strongly disagree. The lower the point score, the higher the level of attitude and comfort. Due to the nature of the questions, some items were reversely coded. Each participant's pre-test scores were added to create a sum of the data; the same was done for the post-test.

All inferential statistical analysis was conducted with an alpha level of 0.05. A two-tailed paired samples *t*-test was conducted to examine whether the mean difference of pre-test and post-test comfort levels was significantly different from zero. A two-tailed paired samples *t*-test was conducted to examine whether the mean difference of pre-test and post-test attitude levels was significantly different from zero.

Results

The study sample consists of 40 Masters Entry to Nursing Practice (MENP) program students from DePaul University School of Nursing. The survey's demographic portion was made optional for the sample, and 39 out of 40 participants answered this portion. Most of the participants were female (n=35, 88%), belonged in the 26-30 years age group (n=17, 42%),

Caucasian race (n=22, 55%), Roman Catholic religion (n=16, 40%), and heterosexual orientation (n=38, 95%). The majority of the participants reported knowing someone identifying as LGBTQIA+ (n=37, 92%). Frequencies and percentages are presented in Table 1.

Comfort change from pre-test to post-test was statistically significant based on an alpha value of 0.05 ($t = 2.70$, $p = 0.010$). The results are presented in Table 2. A bar plot of the means is presented in Figure 1. Attitude change was not statistically significant; however, it was trending towards statistical significance ($t = 1.91$, $p = 0.063$). The results are presented in Table 3. A bar plot of the means is presented in Figure 2.

Discussion

This study aimed to evaluate the impact of a simulation experience on MENP students' attitude and comfort towards providing care to the LGBTQIA+ communities. For the comfort variable, a significant result based on an alpha value of 0.05, $p = .010$, indicates that the simulation intervention positively improved the participating students' comfort levels in providing care for the LGBTQIA+ communities. A significant increase in comfort levels towards LGBTQIA+ care reflects similar findings by Englund, Basler, and Meine (2019) that showed nursing students' increased overall confidence in caring for LGBTQIA+ clients after a simulation experience. A standardized patient playing the role of the transgender patient during the simulation experience contributed to eliciting the participants' comfort levels by providing a sense of human interaction.

While this study showed a significant change in participating students' comfort towards LGBTQIA+ care after the simulation intervention, there was no significant change in participants' attitudes. These results reinforce what Maruca, Diaz, Stockman, and Gonzalez (2018) found no significant difference in attitudes towards LGBTQIA+ communities of BSN

students before and after a simulation intervention. Although the results are not significant based on an alpha value of 0.05, $p = .063$, the results trend towards positive, significant change. For a single simulation experience, these results are promising.

The Dunning-Kruger Effect is a possible explanation of why there is no significant change in attitude after the simulation intervention. The Dunning-Kruger Effect is a phenomenon where individuals overestimate their abilities compared to their actual capabilities, while competent individuals underestimate their competence (Mahmood, 2016). The less competent a person is, the higher his confidence is, while the more competent a person becomes, the lower his confidence gets. See Figure 3. The participating students showed the right attitude towards LGBTQIA+ care before the simulation experience. However, after the simulation experience, they realized how much more they need to know. Although they learned, the simulation experience opened their minds that LGBTQIA+ care can be complicated; thus, post-test attitude results, through trending positive, did not show a statistically significant change.

Another explanation behind these findings on the attitude variable is the LGBTQ+ Health Module. As part of their Community Health Nursing course, the participants had a lecture component on LGBTQ+ health considerations. The lecture component was done before the simulation experience. The lecture may have positively contributed to the students' attitude towards LGBTQIA+ care, so their baseline attitude levels might have been higher going into the simulation experience. This is consistent with Mead et al. (2019), showing a statistically significant change in attitudes and comfort before and after a lecture intervention. It is also possible that implicit bias played a role in the results of attitude change. Historically, implicit bias has been noted by providers working with the LGBTQIA+ population (Dorsen & Van Devanter, 2016).

This study showed significant improvement in participating students' comfort when delivering LGBTQIA+ care, which mirrors a previous simulation-related study. Interestingly, the same simulation experience did not show statistically significant improvement in participating students' attitudes towards LGBTQIA+ care; although, the results were trending. A small sample size of 40 could offer a possible explanation for this finding.

As stated above, the survey results showed a significant change in participating students' comfort towards LGBTQIA+ care after the simulation intervention, while there was no significant change in their attitudes. The survey results tell us that one simulation intervention can have a different impact on attitude and comfort levels; no previous studies have evaluated this in the past

Implications

There is a need to focus on LGBTQIA+ care in the academe to prepare future healthcare professionals to care for the LGBTQIA+ communities. With a significant improvement in comfort after the simulation intervention, incorporating this simulation as part of the MENP Program curriculum will improve nursing students' delivery of care towards the LGBTQIA+ communities. Students that are well-prepared to care for the LGBTQIA+ communities will emerge as competent healthcare professionals. LGBTQIA+ individuals perceiving healthcare provider competence will, in turn, improve their health-seeking behaviors. Thus, making a positive impact on the overall health of the LGBTQIA+ communities.

This study opened up an opportunity for future research to study the impact of simulation on students' attitude and comfort before undergoing any form of a lecture on LGBTQIA+ health considerations. Recommended future study must be done to evaluate attitude and comfort before

and after both didactic information sharing and simulation experience. Lastly, the study may be conducted with a bigger sample size and evaluate if the current results remain or change.

Conclusion

This study evaluated the impact of a simulation experience on participating nursing students' attitude and comfort towards LGBTQIA+ care. Results showed a significant improvement in participants' comfort towards providing LGBTQIA+ care after the simulation experience. However, the same intervention did not significantly improve participants' attitudes towards LGBTQIA+ care, but results were trending towards positive. These findings suggest that if included as part of the nursing curriculum, a simulation experience focusing on LGBTQIA+ care will benefit future nurses and the members of the LGBTQIA+ communities alike. If nursing students are trained early on to care for vulnerable groups, such as the LGBTQIA+ communities, they will enter the professional nursing force with the knowledge, right attitude, and comfort levels to provide compassionate, efficient, and effective nursing care. In turn, they will gain the trust and confidence of the members of the LGBTQIA+ communities, prompting them to seek, and not avoid, healthcare services. Thus, increasing the overall health of the community.

Limitations to this study include small sample size and a single simulation intervention. Future research should evaluate simulation intervention's impact on attitude and comfort on a larger scale – a bigger sample size and more than one simulation intervention. There is also an opportunity to conduct a similar study while measuring attitude and comfort levels before and after both lecture and simulation interventions.

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Table 1

Demographics

Demographic Category	*n*	*%*
Gender		
Female	35	87.50
Male	4	10.00
Missing	1	2.50
Age Group		
26-30	17	42.50
22-25	14	35.00
41-45	2	5.00
36-40	3	7.50
30-35	3	7.50
Missing	1	2.50
Race Ethnicity		
White/Caucasian	22	55.00
Asian/Pacific Islander	7	17.50
Black/African American	6	15.00
Hispanic/Latino/Latina	3	7.50
Middle Eastern	1	2.50
Missing	1	2.50
Religion		
Roman Catholic	16	40.00
Atheist	3	7.50
Muslim	2	5.00
Presbyterian	1	2.50
Non-Affiliated	6	15.00
Jewish	1	2.50
Protestant	2	5.00
Christian	4	10.00
Other	1	2.50
Coptic Orthodox	1	2.50
Buddhist	1	2.50
Hindu	1	2.50
Missing	1	2.50
Sexual Orientation		
Heterosexual	38	95.00

Lesbian/Gay/Homosexual	1	2.50
Missing	1	2.50
Know Someone LGBTQ		
Yes	37	92.50
No	3	7.50
Missing	0	0.00

Note. Due to rounding errors, percentages may not equal 100%.

Table 2

Two-Tailed Paired Samples t-Test for the Difference Between Comfort Pre-Test and Comfort Post-Test

Comfort Pre-Test		Comfort Post-Test				
M	*SD*	*M*	*SD*	*t*	*p*	*d*
15.60	4.24	13.68	3.80	2.70	.010	0.43

Note. N = 40. Degrees of Freedom for the *t*-statistic = 39. *d* represents Cohen's *d.*

Table 3

Two-Tailed Paired Samples t-Test for the Difference Between Attitude Pre-Test and Attitude Post-Test

Attitude Pre-Test		Attitude Post-Test				
M	*SD*	*M*	*SD*	*t*	*p*	*d*
21.40	4.65	19.82	4.53	1.91	.063	0.30

Note. N = 40. Degrees of Freedom for the *t*-statistic = 39. *d* represents Cohen's *d.*

Figure 1

The means of Comfort Pre-Test and Comfort Post-Test

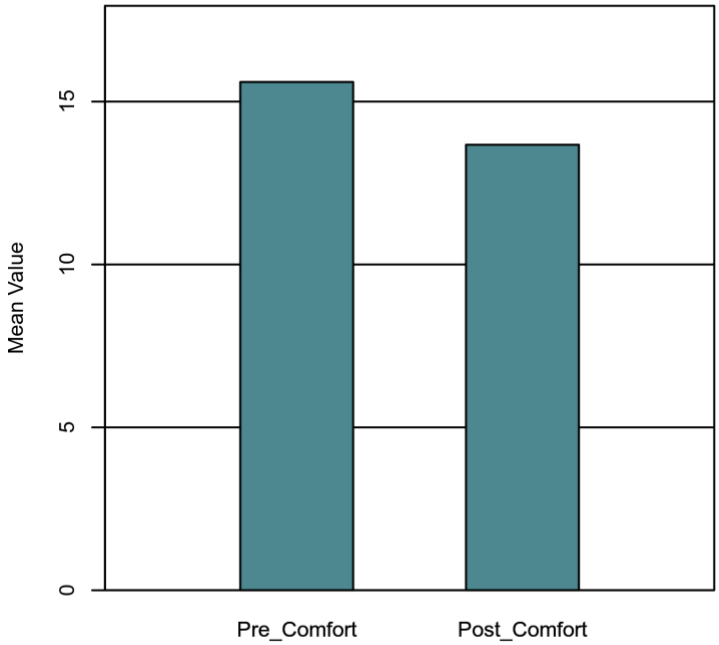


Figure 2

The means of Attitude Pre-Test and Attitude Post-Test

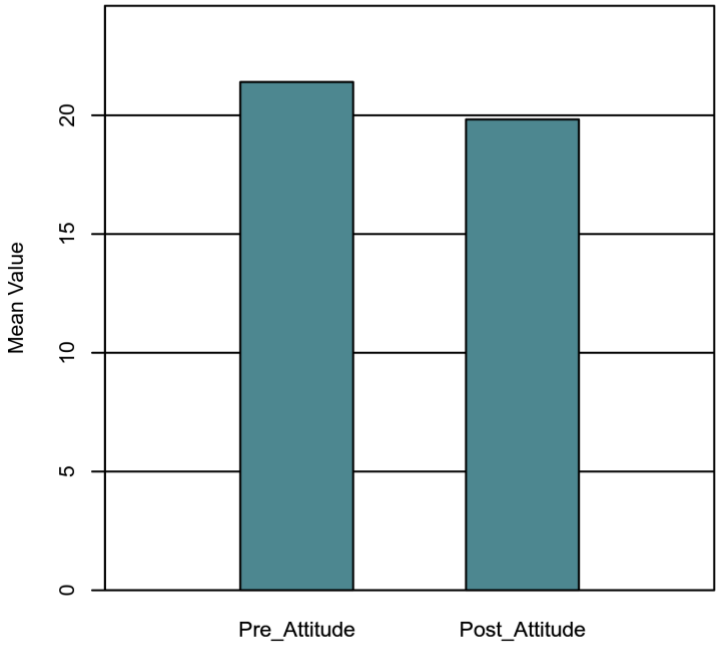
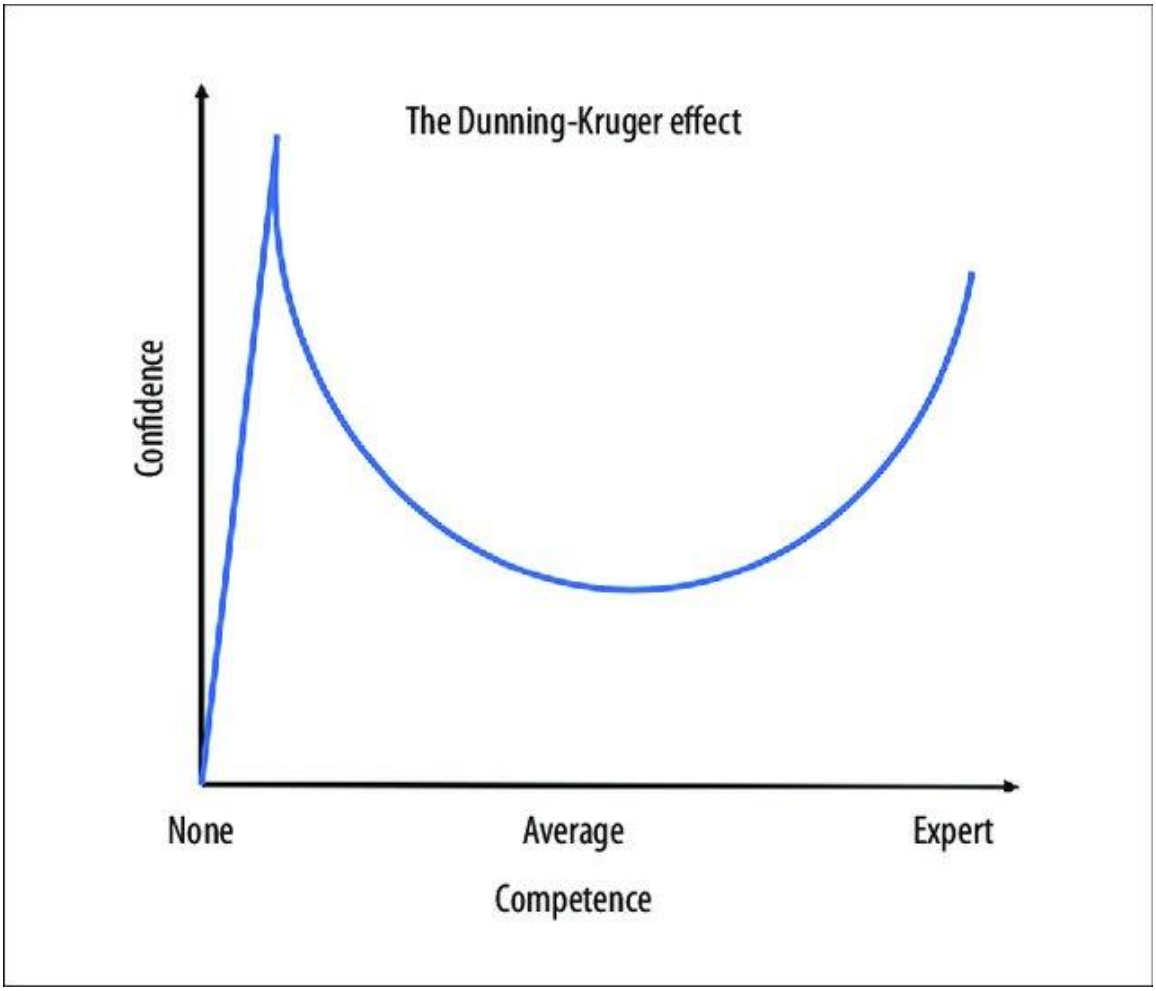


Figure 3

The Dunning-Kruger Effect



Note. From "Lessons Learned from a Study of the Integration of a Point-of-Care Ultrasound Course into the Undergraduate Medical School Curriculum," by M. Zawadka, A. Graczynska, A. Janiszewska, A. Ostrowski, M. Michalowski, M. Rykowski, and P. Andruszkiewicz, 2019, *Medical Science Monitor: International Medical Journal of Experimental and Clinical Research, 25*, p. 4107 (doi:10.12659/MSM.914781). Copyright 2021 by Researchgate.net.

Appendix A. Student Preparation Coursework

LGBTQ+ Simulation – Student Preparation Questions

1. What is the difference between sexual orientation and sexual identity? Provide examples.
2. What questions may you ask when obtaining health, surgical, and sexual histories from a) a gay man, b) a lesbian, c) a transgender man, and d) a transgender woman?
3. Provide at least three examples of nonjudgmental questions to ask when obtaining a sexual history.
4. What are some major screenings a nurse should do for the LGBTQ+ population? Consider chronic disease, infectious disease, social considerations.
5. What specific considerations would a nurse need to know about when conducting a physical assessment on a) a transgender man, and b) a transgender woman?

Appendix B. Pre-briefing Document

LGBTQ+ Simulation – Pre-briefing Document

Time of Day: 0900
Location: Doctor's Office
Patient Name: Michael Marks (Preferred name: Mimi) **Pronouns**: She/her/hers
Age: 52 **DOB:** January 30, 1968
Sex Assigned at Birth: Male **Gender Identity:** Female
Height: 5'11" **Weight:** 186lbs **BMI:** 25.9
Allergies: No Known Allergies

Reason for Visit: New patient well visit/establish care

Mimi Marks is a 52-year-old African-American transgender woman presenting to the doctor's office to establish care as a new patient after moving from another city. Mimi identifies as a woman and her pronouns are she/her/hers. She had undergone breast augmentation 20 years ago, and no other gender-affirming surgeries. She is considering starting hormone therapy. She has a history of hypertension.

Past Medical History:
HTN

Surgical History:
Breast augmentation

Social History:
Lives alone in an apartment. Works as an office administrator in an office supply business. Remote history of cigarette smoking, drinks beer occasionally, no illicit drug use.

Family History:
Mother has breast cancer.
Father died from complications after a fall; had a history of stroke.

Home Medications:
Amlodipine 5mg PO daily

Start of Scenario
The students will begin the scenario in the doctor's office. The patient will be sitting on the examination table. The students will have 20 minutes to complete the simulation objectives.

Scenario Objectives

1. Conduct a thorough head-to-toe assessment.
2. Obtain pertinent patient histories (health, surgical, sexual histories).
3. Communicate with the patient utilizing appropriate language/terminologies in a non-judgmental manner.
4. Conduct health screenings based on the patient's risk factors (age, race, sexual history, familial history).
5. Provide appropriate patient health education and recommendations based on assessment findings.
6. Communicate with the provider using SBAR. Promote professional communication within the group.