Effect of a Social Determinants of Health Video Case Study on Attitudes Toward Poverty and Empathy in Nursing Students: A Quasi-experimental Study

Clarissa Marie Swope

Submitted in partial fulfillment of the
Requirements for the degree of Doctor of Education in
Teachers College, Columbia University

2025

Abstract

Effect of a Social Determinants of Health Video Case Study on Attitudes Toward Poverty and Empathy in Nursing Students: A Quasi-experimental Study

Clarissa Marie Swope

There is a need to integrate social determinants of health (SDOH) education throughout the undergraduate nursing curriculum. However, it is most often emphasized in community and public health courses of junior and senior-level nursing students. As a SDOH, poverty is a significant barrier to achieving optimal health and wellness. Nurse educators must be equipped with accessible and effective SDOH teaching strategies that can be implemented earlier in the nursing curriculum. These strategies can be used to help undergraduate nursing students begin to recognize their attitudes and empathy toward individuals living in poverty.

The main purpose of this study was to examine the effect of a SDOH classroom activity on attitudes toward poverty in prelicensure nursing students. The second purpose was to examine the effects of a SDOH classroom activity on empathy in prelicensure nursing students. The differences in empathy and attitudes toward poverty before and after participating in the activity were also explored. The final purpose was to examine the difference in the effect of a SDOH classroom activity on empathy and gender identity in prelicensure nursing students.

A quasi-experimental, multi-site, two-group, pretest-posttest design was conducted with a nonequivalent comparison group. A convenience sample of 98 prelicensure nursing students from three undergraduate nursing programs located in the Midwest and Northeastern parts of the U.S. participated in a SDOH classroom activity and completed pretest and posttest surveys. The study intervention consisted of a SDOH video versus paper case study followed by faculty-led,

structured debriefing. The intervention group watched the video case study, while the comparison group read a paper case study. The Attitude Toward Poverty-Short Form (ATP-SF) and Jefferson Scale of Empathy for Health Professions Students (JSE-HPS) were administered to participants before and after the SDOH classroom activity.

A statistically significant difference was found between total pretest and posttest ATP-SF scores. No statistically significant effect on posttest ATP-SF scores based on the type of case study was found. A statistically significant effect on JSE-HPS scores based on case study type was identified; however, the size of this effect was small. No statistically significant differences were found in the effect of the type of case study on empathy and attitudes toward poverty. Unequal sample sizes between gender identities of participants prevented a valid analysis of the data.

The findings from this study provide support that a SDOH classroom activity may be an effective teaching strategy to improve attitudes toward poverty in prelicensure nursing students. Although the type of case study was not effective, both groups received identical faculty-led debriefing and attitudes toward poverty were improved for both groups. Future research is needed to explore the effect of debriefing on attitudes toward poverty. Additionally, experiential SDOH teaching strategies should be employed in researching empathy as an acquired skill in prelicensure nursing students.

Table of Contents

List of Figures and Tables

Acknowledgments

I would like to express my sincere gratitude to my dissertation advisor, Dr. Jane K. Dickinson. Thank you for your patience, guidance, and incredible loyalty to the students of the TC ONE Program. I honestly don't think any of us would have made it this far without you. A special thank you to Dr. Karen Morin for your methodology wisdom and for patiently guiding me through my dissertation process, particularly the seemingly endless data analysis. Thank you to the other members of my dissertation committee, Dr. Desiree Hensel and Dr. George V. Gushue, for offering your time, expertise, and feedback.

Thank you to Cohort 5 of the TC One Program. From orientation nearly five years ago, to certification exams, and finally to the preparation for dissertation defenses, this group of intelligent and driven women have offered unwavering support and motivation. I wish each of you much success in your professional and personal lives. A very special thank you to Katherine Giannettino and Elizabeth Saska for collaborating with me on this research and making this journey survivable. When life threw me some difficult curveballs, you were both there to keep me going.

To Dr. Bobbie Weber and the nursing students at St. Louis Community College, thank you for inspiring me to continue my education. Dr. Weber, your love for nursing, and nursing education is contagious. For the last 10 years, you have been my coworker, professor, mentor, program director, and friend. Thank you for encouraging me to pursue a career in nursing education and for facilitating my employment at STLCC. To the nursing students of STLCC, it is because of you that I became passionate about nursing education and nursing education research. You were my true inspiration for wanting to become the best possible educator I could become, and I would have not been pushed to start this journey without you.

Finally, thank you to my family, my partner Mike, and to Gus Gus. To my mom, Gerbie, you are the reason I became a nurse, and I am forever grateful for your “gentle push” into this career. To my siblings, Mary, Ken, and Sean (brother in-laws are siblings), although miles away during this process, I am thankful for the moments of pause and laughter when together. To Mike, thank you for spending the last two years keeping me grounded during this process. You have been there to remind me to get outside and continue to experience life, because it is too short to waste. Finally, a big thank you to Gus Gus, my involuntary emotional support dog who was always available for me to cry to, snuggle with, or have one-sided conversations with. You have been the best side-kick through it all.

C.M.S.

Dedication

This dissertation is dedicated to my father, William “Bill” Swope. You always taught me the value of hard work and dedication. From a young age, you made me believe that I could accomplish anything I set my mind to. I wish for nothing more than for you to be here to witness this achievement, but I know that in some way you are and that you’re proud. I love you, and I miss you every single day.

Chapter 1: Introduction

The Phenomenon

Social determinants of health (SDOH) are defined by the World Health Organization (2023) as non-medical conditions that influence health outcomes. These conditions are factors in which people are born, grow, work, live, and spend their daily lives. In 2019, the National League for Nursing (NLN) reported that new nurses may not be prepared to assess SDOH due to a lack of integration into nursing education. Flaubert et al. (2021) discussed the *Future of Nursing* 2020-2030 report and stated that nursing education should include a curriculum that prepares students to promote health equity and participate in learning experiences that develop their understanding of SDOH. The NLN (2023) continues to advocate for nursing education strategies that will influence how care is delivered to influence SDOH. According to the NLN (2019), the core values of nursing are integrity, high-quality care, and a commitment to health equity. Thus, nurse educators are responsible for implementing effective teaching strategies that integrate SDOH into the undergraduate nursing curriculum to ensure that future nurses are equipped to understand and address health equity.

Purpose of the Study

The purpose of this study was to explore the effect of a SDOH classroom activity on empathy and on attitudes toward poverty in prelicensure nursing students, treated separately. This study also explored the difference in empathy and attitudes toward poverty in prelicensure nursing students before and after participation in a SDOH classroom activity. The difference in empathy by gender identity in prelicensure nursing students before and after participation in a SDOH classroom activity was examined.

Research Questions

The research questions addressed in this study were:

1. What is the effect of a SDOH video case study versus a SDOH paper case study on attitudes toward poverty in prelicensure nursing students?
2. What is the effect of a SDOH video case study versus a SDOH paper case study on empathy in prelicensure nursing students?
3. What is the difference in empathy and attitudes toward poverty in prelicensure nursing students before and after participating in a SDOH video case study versus a SDOH paper case study?
4. What is the difference in empathy by gender identity in prelicensure nursing students before and after participating in a SDOH video case study versus a SDOH paper case study?

Background

As of 2023, the national poverty rate in the United States was 11.1%, which means 36.8 million people were living in poverty at the time of the report (Shrider, 2024). The 2024 federal poverty income level threshold is $15,060 for a single person, $20,440 for a family of two, and $31,200 for a family of four (HealthCare.gov, n.d.). Poverty creates a barrier to optimal health and can cause an increased risk for chronic diseases, limited access to health care, and lower life expectancy (U.S. Department of Health and Human Services, n.d.).

Nurses are at the forefront of health care in the United States. Therefore, educating current and future nurses on the implications of poverty on health outcomes is imperative. The NLN (2019) has identified that SDOH are an integral part of nursing education and that strategies to integrate SDOH throughout the curriculum should be developed using evidence-

based practices. When nurses are aware of and understand SDOH, they are more prepared to comprehensively assess a patient's needs and develop a personalized treatment plan to provide care that is person-centered (Hirschey et al., 2021).

According to Domain 2, person-centered care, of *The Essentials: Core Competencies for Professional Nursing Education* from the American Association of Colleges of Nursing (AACN) (2021), entry level nurses should develop caring relationships with individuals within their care and demonstrate empathy. Empathy is an integral aspect of providing compassionate, person-centered care. Researchers have found that empathy can increase patient satisfaction and improve health outcomes (Licciardone et al., 2020). Empathy is defined by the online Cambridge Dictionary (2023) as "the ability to share someone else's feelings or experiences by imagining what it would be like to be in that person's situation." To demonstrate empathy, the nurse must acknowledge the patient's experiences as an individual. Social psychology researchers have found that feelings of empathy toward a specific group of people or persons can also improve the attitudes toward that group (Batson et al., 1997, 2002). Seminal research conducted by Batson et al. (2002) also revealed that increased feelings of empathy and improved attitudes led to participants engaging in activities to help the targeted persons. Yun and Weaver (2010) described attitudes toward poverty as two separate constructs, an individualistic explanation for poverty and a structural explanation. Wittenauer et al. (2015) further described the individualistic attitude as attributing poverty to a person's deficits and poor behaviors (negative attitudes), while a structural attitude focuses on external socioeconomic factors such as lack of education or limited employment opportunities (positive attitudes). Education on SDOH for nursing students should promote empathy toward stigmatized groups and positive attitudes that align with the American

Nurses Association's (ANA) (2017) Interpretive Statement 8.4 concerning human rights protections for vulnerable groups such as the poor and those experiencing homelessness.

Investigators have found that females may have a greater capacity for empathy than males (Deprey & Kobiske, 2023; Strekalova et al., 2019; Ward et al., 2009). Wamsley (2021) described gender as behaviors, attributes, and roles defined by social norms and expectations. Common categories for gender include male, female, or nonbinary. Sex, as defined by the Centers for Disease Control and Prevention (CDC) (2022), is the biological status of male, female, or intersex and is determined by physical anatomy and chromosomes. Not all persons identify their gender with that of their biological birth sex. Gender identity is how a person identifies, whether as a man, woman, transgender, or other identity (CDC, 2022). While gender is a social construct, gender identity acknowledges that a person's gender is an internal psychological sense that is not limited to their biological sex at birth. When developing empathy teaching strategies, nurse educators should understand how the effects of those strategies may differ based on a student's gender identity.

In nursing education, various teaching strategies are employed to promote the cognitive, affective, and psychomotor domains of learning. Billings and Halstead (2020) describe case studies as a strategy that can be used to apply didactic content to real-life scenarios. According to Harrison (2012), case studies provide students with a human experience with which they can apply content learned from the classroom or textbooks. At the completion of a case study, the instructor should assist students with comprehending concepts from the case (Billings & Halstead, 2020). The NLN (2015) defines debriefing as a critical conversation to assist students in finding meaning behind information. Debriefing is not limited to simulation activities and should be applied throughout the nursing curriculum (NLN, 2015). According to Billings and

Halstead (2020), debriefing can promote the affective domain of learning, by encompassing the learner's feelings concerning an experience. They define the affective domain of learning as one that focuses on attitudes, values, beliefs, feelings, and emotions (Billings & Halstead, 2020). This study employed case study and debriefing teaching strategies on SDOH to assess the effects on attitudes and empathy within the affective domain of learning, and the difference in the effect of teaching empathy based on gender identity.

Definitions

For the purposes of this study, the following terms are defined: attitudes toward poverty, empathy, gender identity, and poverty.

Attitudes Toward Poverty

Described by DiNitto (2000) and Mullaly (2007), attitudes toward poverty is defined as the attitude one has toward impoverished persons. They described these attitudes within the constructs of individualistic and structural perspectives. An individualistic perspective views poverty as being a result of a person's personal deficiencies and is considered a negative attitude. A structural perspective, on the other hand, places the blame of poverty on external societal and economic constraints. The structural perspective is considered a positive attitude toward poverty. Attitude toward poverty was measured by the total score on The Attitude Toward Poverty - Short Form (Yun & Weaver, 2010), see Appendix A.

Empathy

Hojat et al. (2023) defined empathy as "a predominantly cognitive (rather than an affective or emotional) attribute (brain mechanism) that involves an understanding (rather than feeling) of the patient's pain and suffering, combined with a capacity to communicate

this understanding (behavioral component), and an intention to help (outcome component)" (p. 3). Empathy was measured by the total score on the Jefferson Scale of Empathy for Health Professions Students (JSE-HPS) (Hojat, 2016), see Appendix B.

Gender Identity

As defined by the CDC (2022), gender identity is a person's own perception of themself as a man, woman, transgender, or other. In this study, gender identity refers to male, female, transgender male, transgender female, and non-binary. Gender identity was measured by Question 9 in the demographic survey, see Appendix C.

Poverty

According to the Institute for Research on Poverty at the University of Wisconsin-Madison (n.d.), people in the United States who are living in poverty are those whose income does not meet a set poverty threshold or the minimum amount of income necessary for basic human needs. For the purposes of this study, poverty was a personalized perception for the participants when answering survey questions. The participants were not asked to indicate how they defined poverty.

Conceptual and Theoretical Frameworks

Empathy

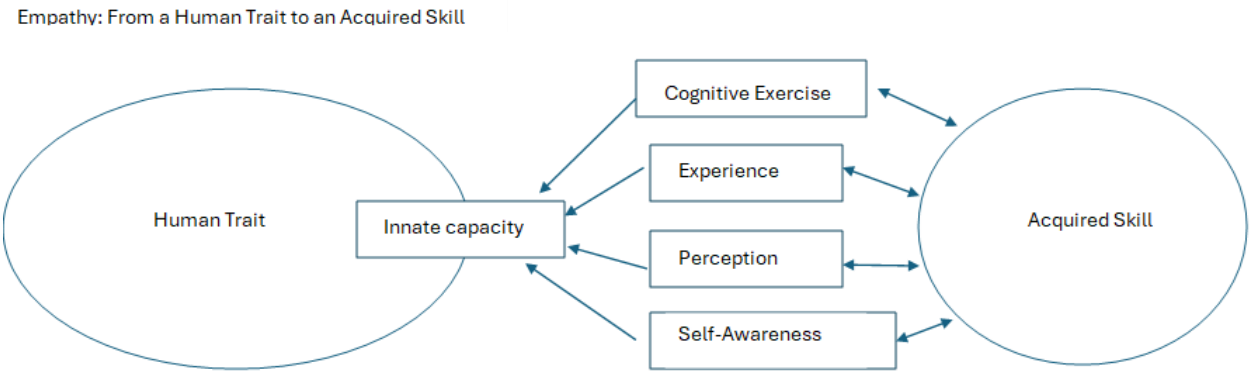
Empathy, as a concept, has been explored in depth in the nursing discipline. Empathy was conceptualized by Kunyk and Olson (2001) through a concept analysis of nursing literature published between 1992 and 2000. These authors identified five conceptualizations of empathy: a human trait, professional state, communication process, caring, and special relationship. Alligood (1992) described empathy as two distinct types, a basic human developmental trait and an acquired clinical skill. As a human trait, empathy is an innate ability and cannot be taught.

However, as an acquired clinical skill, behavioral and cognitive skills can be taught and learned. In their seminal research, Kalisch (1971) found that empathy is a teachable skill that can be taught through various modalities.

Through experience, practice, and cognitive exercise, a person builds upon their basic human empathy trait and gains a better understanding of their self-awareness and perception to develop an acquired clinical skill of empathy, as presented in Figure 1.1 (Alligood, 1992; Kunyk & Olson, 2001). In Figure 1.1, the four key contributing factors that assist a person in developing empathy as a skill are emphasized. Through cognitive exercises, such as reflection, and analysis of experiences or exposure to different scenarios, a person can improve their comprehension of others' emotions. These cognitive exercises and experiences develop a greater perception and understanding of other persons' situations, and an increased self-awareness of one's emotions and responses can be gained. How the concept of empathy was operationalized in this study will be discussed in further detail in Chapter 2.

Figure 1.1

Conceptualization of Empathy



Note. This figure depicts a conceptualization of empathy based on the descriptions by Alligood (1992) and Kunyk and Olson (2001).

Constructivism

Constructivism implies that humans learn new information by constructing new ideas and building on previous knowledge (Brandon & All, 2010). Knowledge is dynamic and adaptable to change. Individuals learn by taking newly introduced concepts and adding them to previous knowledge or replacing previously learned concepts. There are three categories of constructivism: cognitive, social, and radical (McLeod, 2024). Cognitive constructivism, based on Jean Piaget's (1973) foundational work, emphasizes that learning occurs through assimilation and accommodation (Billings & Halstead, 2020). Based on the work of L.S. Vygotsky (1962), social constructivism views learning as a collaborative process where knowledge develops through interactions with other individuals, requiring both internal cognition and social interaction (Billings & Halstead, 2020). Radical, or chaotic, constructivism suggests that knowledge is actively constructed by an individual to help them create an understanding of reality, which is therefore subjective and never fully complete (McLeod, 2024).

Following a constructivist approach, educators place the students at the center of their learning. Through the lens of constructivism, learners are individuals with unique values and experiences who will continuously transform their thoughts and knowledge through collaboration, conversation, and reflection (Brandon & All, 2010; Hunter & Krantz, 2010). Rather than students learning passively, the instructor guides them to learn actively by asking questions throughout activities and prompting discussion with their peers (Brandon & All, 2010; Hunter & Krantz, 2010). In nursing education, this can be done with many activities such as simulation, case studies, and clinical experiences. The operationalization of constructivism will be discussed in detail in Chapter 2.

Assumptions of the Study

The following assumptions underlined this study:

1. Empathy can be a learned behavior (Kalisch, 1971).
2. Participants will engage with the instructor and their peers in debriefing activities.
3. Participants will complete the pretest and posttest after participating in a classroom activity.

Significance of the Study

The results of this study provide evidence of an accessible teaching strategy addressing SDOH in undergraduate nursing curriculum. Rigorous research methods were used for this study. This was a multi-site study conducted at three nursing programs in three different states. A pretest-posttest, two-group design provides stronger support when identifying whether outcomes were a result of the intervention rather than external factors. This study identified the effects of a SDOH teaching strategy on the attitudes toward poverty and empathy in prelicensure nursing students and the differences in these two variables.

The affective domain of learning was studied, which is a unique topic of interest in nursing education research. This study used inclusive language when assessing gender identity that has not been commonly seen in nursing education research literature. The target population assessed in this study were sophomore-level prelicensure nursing students. This is significant because most of the nursing education research concerning SDOH targets prelicensure nursing senior-level students in a population health course. The findings of this study are significant to nursing education because it is necessary to integrate SDOH throughout the nursing curriculum

and to identify methods that may help nursing students develop more positive attitudes toward poverty and enhance empathy.

Study Collaboration

This study was conducted in collaboration with two other primary investigators (PIs), Katherine Giannettino (KG) and Elizabeth Saska (ES). The three PIs shared the investigation of the variable of attitudes toward poverty. In addition to the shared variable, KG investigated the beliefs about the relationship between poverty and health and ES examined satisfaction and self-confidence in learning. Additional details of this collaboration are described in Chapter 3. Due to the nature of the collaboration of this study, sections of this dissertation were written collaboratively. Chapter 3, and the description of demographics and the analysis of attitudes toward poverty in prelicensure nursing students in Chapter 4, were a collaborative effort. All other sections and chapters were written by this author.

Organization of the Study

This chapter introduced readers to the background information for this study's aims and research questions. National nursing and medical organizations have called upon nursing education to address SDOH throughout the curriculum. Nurse educators are faced with finding evidence-based teaching strategies that develop prelicensure nursing students' understanding of SDOH and their implications on health outcomes. Addressing attitudes toward poverty and empathy in prelicensure nursing students may help lay the foundation for the development of the core values of nursing as outlined by the NLN (2019). The concept of empathy and the theory of constructivism were described.

The remaining chapters in this dissertation will provide a detailed description of a quasi-experimental research study. In Chapter 2, a narrative literature review is presented that

examines the evidence of teaching strategies for SDOH, empathy, gender identity and empathy, and attitudes toward poverty in prelicensure nursing students. An explanation for how the concept of empathy and theory of constructivism guided this study will also be discussed. Chapter 3 presents a description of the methods used in the study. The data analysis and findings are shared in Chapter 4. Finally, Chapter 5 offers a discussion of the findings in the context of the research questions and theoretical framework as well as study strengths, limitations, and implications for future research.

Chapter 2: Literature Review

The National League for Nursing (NLN) (2019) has recommended that social determinants of health (SDOH) be integrated throughout the nursing curriculum rather than taught in stand-alone courses. A literature review was conducted to examine previous and current nursing education teaching strategies related to poverty as a SDOH and attitudes toward poverty in prelicensure nursing students. An additional literature review was performed to analyze the assessment of empathy in prelicensure nursing students concerning gender identity, teaching strategies, and SDOH.

The following databases were used: Cumulative Index to Nursing and Health Literature® (CINAHL®), Educational Resources Information Center® (ERIC®), ProQuest Dissertations and Thesis Global® (ProQuest®), Medical Literature Analysis and Retrieval System Online® (MEDLINE®), and the Columbia University Libraries Catalog (CLIO). The search was initially limited to articles published between 2019-2024. However, the review was expanded to include studies from 2010 - 2024 due to the limited initial findings for studies published within the last 5 years. A Boolean search was conducted with the phrase AND, and the keywords: “attitudes toward poverty,” “nursing education,” “social determinants of health,” “nursing students,” “prelicensure nursing students,” “empathy,” “gender,” and “gender identity”.

The literature found in this search was limited to peer-reviewed journals that met the inclusion criteria of articles written in English, based in nursing or health care education, teaching about SDOH, addressing either attitudes toward poverty or empathy, and empathy and gender identity. Literature was excluded that did not meet the inclusion criteria or were not published in peer reviewed journals.

Teaching Strategies Addressing Attitudes Toward Poverty and SDOH

Many studies have employed various teaching strategies to assess their impact on prelicensure nursing students' attitudes toward poverty, using the Attitude Toward Poverty-Short Form (ATP-SF) (Delpier et al., 2023; Gillis et al., 2023; Lowey, 2021; Meaux et al., 2019; Menzel et al., 2014; Noone et al., 2012). The ATP-SF is a reliable instrument used to assess attitudes toward poverty (Yun & Weaver, 2010). Large-group role-play scenarios such as the Community Action Poverty Simulation (CAPS) and researcher-developed scenarios were used in those studies (Delpier et al., 2023; Kruse & El-Khoury, 2022; Lowey, 2021; Meaux et al., 2019; Noone et al., 2012). Other teaching strategies included standardized patient and virtual simulations, which were studied by Gillis et al., 2023, Menzel et al., 2014, and Morgan et al., 2023. Lastly, service learning was cited as an instructional method to address nursing students' attitudes toward poverty (Decker et al., 2017; Tillman et al., 2020; Vliem, 2015).

The CAPS, a teaching strategy requiring a large room with various stations representing community agencies and family homes, was used by Delpier et al., 2023, Kuehn et al., 2020; Lowey, 2021, Meaux et al., 2019, and Noone et al., 2012. After participating in CAPS, statistically significant differences in the participants' ATP-SF pretest and posttest scores were found in studies by Kuehn et al. (2020), Meaux et al. (2019), and Noone et al. (2012). However, Kuehn et al. (2020) and Meaux et al. (2019) used only a single-group design, which decreases the strength of causal inference. Both studies were also conducted at a single site, possibly limiting generalizability of the findings. A two-group, pretest-posttest design was used by Noone et al. (2012) to compare the effect of CAPS to the standard curriculum on the attitudes toward poverty of junior-level nursing students enrolled in a population health course across five campuses of one nursing program. Although Noone et al. (2012) reported statistically

significantly more positive attitudes toward poverty in the experimental group, it is not clear what the standard curriculum of the control group entailed.

Delpier et al. (2023) assessed the effects of CAPS on four different undergraduate disciplines: nursing, education, communication disorders, and business at a single higher education institution. They found that compared to business students, third-year BSN nursing students had more positive attitudes after participating in CAPS. Lowey (2021) conducted a mixed-methods single-group study on the attitudes toward poverty in senior-level undergraduate nursing students using CAPS. Although Lowey (2021) found no significant differences in the pretest and posttest ATP-SF scores, their qualitative analysis revealed that participants reported increased understanding and empathy toward people living in poverty after the CAPS intervention.

In a quasi-experimental pretest-posttest study, Kruse and El-Khoury (2022) assessed the effect of CAPS on senior-level nursing students' self-perceived knowledge, skills, and attitudes toward poverty in a community health course, compared to students who did not participate in CAPS. These researchers did not use the ATP-SF, but instead created their own survey using items from previously established instruments. Kruse and El-Khoury (2022) found that knowledge, skills, and attitudes had statistically significant increases in all but one category compared to the comparison group, who did not participate in the CAPS intervention. Participants in the comparison group had statistically significantly greater political awareness than the intervention group.

Menzel et al. (2014) developed a virtual simulation environment using Second Life® and conducted a randomized controlled trial assessing the attitudes toward poverty of baccalaureate students in a community health course using the ATP-SF with eight additional questions. The

Second Life® created by Menzel et al. (2014) allowed participants in the experimental group to use virtual avatars to work through scenarios of living in poverty, while the control group participated in an online self-study and quiz. No statistically significant differences were found between the intervention and control group in total ATP-SF scores. However, the intervention group had statistically significantly higher scores than the control group on one question within the ATP-SF concerning the subscale of personal deficiency. It should be noted that the sample size in this study was small and did not meet the projected target number of participants to detect a difference between two groups, as discussed by the researchers.

Virtual simulation teaching strategies were also used by Gillis et al. (2023), including Make the Month, Making Tough Choices, and SPENT©. These virtual simulations allow participants to simulate making financial decisions with limited funds and faced with various real-life scenarios to simulate the everyday struggles of those living in poverty. The three strategies were used to examine attitudes toward poverty of senior-level nursing students in a community health course using a pretest-posttest mixed-methods single-group design. After participants completed all three virtual simulation programs, Gillis et al. (2023) found statistically significant differences in the pretest and posttest scores for the ATP-SF concerning specific items within the instrument's three subscales: personal deficiency, stigma, and structural perspective. However, the researchers did not report on differences between total ATP-SF pretest and posttest scores, or on total subscale scores. Additionally, qualitative analysis from this study revealed four themes: empathy, sacrifice, stress, and moral struggle.

Decker et al. (2017) shared a teaching brief on the outcomes of employing a constructivist approach to facilitate the inclusion of SDOH concepts throughout a curriculum by incorporating poverty simulations, film screenings, and community clinical and service-learning

experiences. Quantitative results were not reported in this brief, but the authors did report that the total scores on the ATP-SF increased after each teaching strategy, and that the students' reflective journals showed students felt more empowered to address health risks. Like Decker et al. (2017), service-learning was also used by Tillman et al. (2020) and Vliem (2015) in research assessing attitudes toward poverty.

In both service-learning studies, Tillman et al. (2020) and Vliem (2015) found statistically significant effects on ATP-SF scores. In a single-group pretest-posttest study, Tillman et al. (2020) employed an interprofessional free health screening community service-learning event to assess the attitudes and beliefs about poverty of students from six undergraduate health profession programs. This service-learning experience was a large-scale event supported by the Department of Defense where 350 military personnel provided care, and the students assisted with the processing of 7,942 community members. The researchers reported that participants had more positive attitudes toward poverty on 14 of the 21 items and two out of the three subscales of the ATP-SF after participating in an interprofessional free health screening community event. The researchers especially noted that such a large-scale event would be difficult to reproduce with limited resources. In the study by Vliem (2015), the ATP-SF was used to determine the effect of an experiential service-learning activity compared to an online learning activity on undergraduate nursing students' attitudes toward poverty. The study results revealed that the experimental group, who participated in the experiential service-learning, demonstrated more positive attitudes toward poverty than the comparison group.

Empathy Teaching Strategies

In a review of the literature concerning empathy education in nursing programs, Brunero et al. (2010) identified 17 studies that met the inclusion criteria of measuring the effectiveness of

empathy teaching strategies on empathy in prelicensure and graduate nursing students. Juan and O'Connell (2024) conducted a systematic review of 20 studies concerning simulation modalities used in nursing education to promote empathy. Brunero et al. (2010) reported that 11 of the 17 studies reviewed had statistically significant improvements in empathy scores. As discussed by Brunero et al. (2010), these studies used reflection, case studies, and role play case scenarios to foster empathy skills. Of the 20 studies reviewed by Juan and O'Connell (2024), five different simulation modalities were identified as having a statistically significant effect on empathy: standardized patient, simulated suit, manikin, virtual simulation, and virtual reality simulation. Juan and O'Connell (2024) found that simulation suit was cited as the most effective method. Additionally, they reported the Jefferson Scale of Empathy-Health Professions Students (JSE-HPS) as the most frequently used instrument for assessing empathy.

Reflective teaching strategies were studied by Webster (2010) and Witherspoon et al. (2023) in relation to promoting empathy in undergraduate nursing students. Webster (2010) conducted a mixed-methods, pretest-posttest quasi-experimental study with 73 prelicensure students in a psychiatric nursing course. The experimental group in that study participated in creative, reflective activities, while the control group received traditional teaching methods. Witherspoon et al. (2023) used role-play simulations that allowed participants to experience the life of an older patient with physical limitations, followed by guided reflection, as the intervention in assessing empathy in junior-level nursing students. While Webster (2010) found no significant differences related to empathy between the two groups, Witherspoon et al. (2023) reported a significant increase in empathy of the participants in their one-group, pretest-posttest study. However, the qualitative data from Webster (2010) revealed a "changing perceptions"

theme, indicating that students in the experimental group could identify their bias and prejudice towards people with mental illness.

The effects of experiential learning strategies on empathy in undergraduate nursing students were studied by Arrogante et al. (2022), Deprey & Kobiske (2023), Patterson et al. (2020), Thomas et al. (2020), Witherspoon et al. (2023), Yu et al. (2021), and Zeller et al. (2023). In one quasi-experimental study, empathy significantly increased in participants who wore an Empathy Belly Simulator (Thomas et al., 2020). Using one-group, pretest-posttest designs, the effects of standardized patient simulations were studied by Arrogante et al. (2022) and Patterson et al. (2020) to examine empathy in undergraduate nursing students toward older people and patients with alcohol use disorder (AUD). Arrogante et al. (2022) reported a significant increase in empathy toward older people and Patterson et al. (2020) found that those who had personal experience had greater empathic concerns, such as feelings of distress, when observing another person's situation concerning AUD. Arrogante et al. (2022), Patterson et al. (2020), and Thomas et al. (2020) all conducted their studies at a single site.

Another experiential learning activity that has been investigated in relation to empathy is the use of virtual simulations. Deprey and Kobiske (2023) used a cross-sectional study design and allowed participants to experience the life of someone living with dementia using virtual simulation. They reported a significant increase in empathy concern and perspective taking. Deprey and Kobiske (2023) described empathy concern and perspective taking as one's ability to understand another person's feelings. The virtual simulation used by Yu et al. (2021) provided participants with the experience of a day in the life of someone hospitalized with cancer. The initial posttest scores revealed that empathy was greater for participants in the intervention group, who participated in the virtual simulation, compared to those who did not. However, there

was no difference between the groups in the follow-up results at 8-12 weeks after the intervention.

There was one study that reported on the effect of a virtual simulation concerning poverty. Zeller et al. (2023) conducted a one-group, pretest-posttest-posttest study to evaluate the effects of a virtual simulation on empathy and attitudes toward persons experiencing homelessness. These authors reported increases in the mean scores from pretest to posttest but only provided descriptive statistics due to the small sample of 12 participants. Therefore, it has not been determined whether or not the findings from Zeller et al. (2023) are significant.

Empathy and Gender-Identity

There is some existing evidence indicating that gender identity may play a role in empathy. Hojat et al. (2023) discussed the Jefferson Scale of Empathy (JSE), and empirical findings related to the use of this instrument in research on empathy in health professions students and health care practitioners since 2001. When reporting findings concerning the difference in empathy and gender identity, they cited seven studies that found higher levels of empathy in female participants than male participants. Of those seven studies, three were published after 2010.

Fjortoft et al. (2011) and Hojat et al. (2020) conducted research on empathy using different versions of the JSE and found statistically significant differences based on gender-identity. Using a convenience sample of 187 pharmacy students, Fjortoft et al. (2011) examined the validity and reliability of the Jefferson Scale of Empathy-Health Professions Student version (JSE-HPS), and in doing so found that female participants had statistically significantly higher mean scores than male participants, indicating greater levels of empathy. In a large-scale correlational study exploring the association between empathy and demographic variables in

osteopathic medical students, Hojat et al. (2020) reported that female participants (n = 5,271) had consistently higher empathy scores than male participants (n = 5351) and that these findings were statistically significant. It is important to note these sample sizes because there were limited findings concerning empathy and gender identity in nursing education due to inadequate sample sizes of more than one gender identity. Arrogante et al. (2022), Patterson et al. (2020), Thomas et al. (2020), Witherspoon et al. (2023), Yu et al. (2021), and Zeller et al. (2023) all reported inadequate male sample sizes to compare empathy findings to the female participants. However, some research was found concerning the difference in empathy and gender identity in nursing education.

When assessing the reliability and validity of a modified version of the Jefferson Scale of Empathy in undergraduate nursing students, Ward et al. (2009) found that female students had significantly higher empathy scores than male students. Similar gender differences were found by Strekalova et al. (2019) when they examined male and female nurses identifying and acting on opportunities to demonstrate empathy. In a retrospective design, the authors reviewed conversations between prelicensure nursing students and a virtual patient. The authors found that male students were less likely to use opportunities to express empathy than female students. Additionally, Deprey and Kobiske (2023) reported that female participants had higher scores than male participants regarding the ability to take on the feelings of others, referred to by the authors as empathic concern.

Summary

The focus of this literature review was to explore the evidence of SDOH teaching strategies on attitudes toward poverty and empathy in prelicensure nursing students, and the difference in empathy and gender identity. From the reviewed literature, it is known that

experiential teaching strategies have been studied as a method of improving attitudes toward poverty and empathy in prelicensure nursing students. These experiential teaching strategies have included role-play, standardized patient simulations, service learning, and virtual learning environments. Most of the studies examining attitudes toward poverty were conducted in community and public health courses.

In a review of the literature on SDOH teaching strategies and empathy, only one study was identified that focused on poverty. Findings were reported on empathy and attitudes toward poverty, but there is a lack of data on the difference between the two variables. It is also known that differences in empathy based on female and male gender identity have been analyzed and indicate that females have more empathy than males. However, there are limited findings from nursing education research concerning the difference in empathy and gender identity in prelicensure nursing students. In the reviewed literature, gender identity was acknowledged as a binary construct. Nursing education research on empathy and gender identity through a lens that acknowledges gender using a comprehensive definition was not found in the published literature.

Limitations of Reviewed Studies

As with all research, there are limitations of the reviewed literature. A common limitation found was the use of one-group, pretest-posttest study designs. This type of study design does not provide strong support for causal inference and increases the threats to internal validity (Polit & Beck, 2016). Few researchers reported the use of a longitudinal design, therefore limiting the evidence of the effects on dependent variables over time. Convenience samples from a single site were primarily used, and study samples were typically homogeneous with primarily Caucasian female participants. These homogeneous, single-site convenience samples may make it difficult to generalize the findings. Validated instruments were also not used in all studies.

Another limitation concerns the interventions used in many of the studies. The teaching strategies cited in the literature lack accessibility for institutions with limited funding, faculty, and simulation resources. This lack of accessibility makes it challenging to replicate the intervention or study and therefore also unrealistic for use in all undergraduate nursing programs. Many of the teaching strategies cited would also require additional preparation for faculty, such as facilitating simulation with new technology, or role-playing without promoting stigmatized beliefs of marginalized populations through stereotyped behaviors. There is a need for rigorous nursing education research on accessible SDOH teaching strategies that also use inclusive language and acknowledge gender identity as a complex personal perception.

Conceptual and Theoretical Frameworks

Empathy

The concept of empathy as a learned skill behavior and innate human trait was applied to studies conducted by Alexander et al. (2020), Strekalova et al. (2019), Ward et al. (2009), Webster (2010), and Witherspoon et al. (2023). Webster (2010) based their study of reflective teaching strategies on the basis that empathy is both a human trait and a behavior that can be influenced. Strekalova et al. (2019) also used this concept of empathy to hypothesize that female nursing students would be more likely to express empathy than male nursing students. A conceptualization of empathy as both a learned skill behavior and an innate human trait (Alligood, 1992; Kunyk & Olson, 2001) was used to guide this study's analysis of empathy in prelicensure students.

Presented in Chapter 1, Figure 1.1 offers a visualization of how empathy was conceptualized in this study. As a human trait, empathy is a developmental phenomenon that begins in infancy and increases over time through experiences, self-awareness, perception, and

cognitive growth until a point of innate capacity (Alligood, 1992; Peplau, 1952). It is also through these factors that empathy can be acquired as a skill (Alligood, 1992; Kuynk & Olson, 2001). In this study, empathy was assessed before students participated in the teaching strategy. This preassessment provided the participants' baseline capacity for empathy, their human trait. Empathy, as an acquired skill, was then assessed after participants watched or read a SDOH case study and participated in faculty-led debriefing. By conducting the posttest survey, this study was able to examine if empathy is a learned skill behavior that can be acquired.

Constructivism

Constructivism explains that the learning process is an individual cognitive experience that is fostered through social interactions (Billings & Hallstead, 2020). This learning theory has been used in previous nursing education research. A constructivist framework was used by Decker et al. (2017) to assess the effects of a concept-based curriculum on attitudes toward poverty, and Webster's (2010) reflective teaching strategies were also rooted in constructivism. Hunter and Krantz (2010) redesigned a cultural diversity course based in constructivism in their examination of graduate nursing students' perceptions, attitudes, and skill within the realm of cultural competence. Through a constructivist approach to teaching and learning, learners can transform their knowledge when presented with new information, collaborate and converse, and reflect on what they previously knew (Brandon & All, 2010; Hunter & Krantz, 2010).

In this study, the teaching strategies and assessment of participants' empathy and attitudes toward poverty were guided by constructivism. The classroom teaching strategy was designed to expose participants to the lived experiences of those living in poverty. As participants were exposed to the visualization and audible experiences through a YouTube video compilation, or as they read the experiences in a typed transcript, they were presented with an

experience that either built on previously held attitudes and empathy or constructed new attitudes and empathy. The faculty-led structured debriefing gave participants an opportunity to converse with their peers, hear different perspectives, and reflect on their own empathy and attitudes toward individuals living in poverty. The facilitators asked the debriefing questions, facilitated the discussion, and encouraged active engagement. Following a constructivist approach, participants were presented with a teaching strategy that allowed them to examine their empathy and attitudes toward individuals experiencing poverty.

Chapter Summary

The literature presented in this chapter examined the teaching strategies for addressing SDOH in prelicensure nursing education. Studies that explored attitudes toward poverty, empathy, and gender identity and empathy were reviewed. Limitations of the reviewed literature concerning homogeneous samples, sample sizes, and study design were described. Gaps in the evidence concerning the differences between empathy and attitudes toward poverty, and the differences in empathy and gender identity, were identified. This chapter described how the concept of empathy and the theory of constructivism were used to guide the development of the intervention and comparison and examination of dependent variables. Chapter 3 provides a detailed description of the study methods.

Chapter 3: Method

Design

A quasi-experimental, two-group pretest-posttest design using nonequivalent comparison groups was used to study the effect of different formats of a SDOH case study classroom activity on attitudes toward poverty, beliefs about the relationship between poverty and health, empathy,

and satisfaction and self-confidence in learning in prelicensure nursing students. The researchers also examined the differences between the following variables: attitudes toward poverty and empathy in prelicensure nursing students, empathy and gender identity, and attitudes toward poverty and satisfaction and self-confidence in learning. The following is a summary of the methodology.

A quasi-experimental, two-group pretest-posttest design was selected due to the nonrandom self and administrator selection of students into course sections. While quasi-experimental studies lack randomization, this design offered the researchers control over how a treatment condition was manipulated and compared with a different group (Shadish et al., 2002). The pretest-posttest design provides valuable information about differences between the intervention and comparison groups as well as information about the differences within groups (Shadish et al., 2002).

Setting

This multi-site study was conducted at three Bachelor of Science in Nursing (BSN) programs at private, not-for-profit universities in the Northeast and Midwest areas of the United States: Site A is located in New Jersey; Site B is in Connecticut; and Site C is located in Missouri. Each university offers a traditional, 4-year BSN curriculum. The study took place in the selected classrooms of sophomore-level nursing courses during the 2024 spring semester. Due to the various course schedules at each site, the intervention and comparison for this study were conducted on different dates and times.

Sample

A convenience sample of prelicensure nursing students enrolled in the fundamentals/foundations of nursing or health assessment courses offered in the sophomore year

at each site were invited to participate in the study. Curricula at the three sites were reviewed and compared to ensure that students in the sophomore year nursing courses had not yet had a public health or community health course prior to this study.

G*Power 3.1.96 software was used to conduct an a priori statistical power analysis for paired *t* tests, a multivariate analysis of variance (MANOVA), analysis of covariance (ANCOVA), and Pearson's correlations, using a moderate effect size of .50, a power of .8, and an alpha of .05 (Cohen, 1988, 1992). Based on these calculations, the smallest recommended number of total participants was 34, and the largest number of total participants was 128. To address attrition risks, the PIs planned to over sample by 20%. Therefore, this study's target sample size was 154 students (77 students per group).

The total population of sophomore undergraduate nursing students from all three institutions at the time of data collection was 289. Forty students were studying abroad in Ireland, which made them ineligible for the study. A total of 249 prelicensure nursing students were invited to participate in this study (84 at Site A, 125 at Site B, 40 at Site C).

Students were included in the study if they were over the age of 18, enrolled full-time in a traditional BSN program and in a foundations/fundamentals of nursing or health assessment course, and had completed a signed informed consent. Students were excluded from this study if they were under the age of 18, repeating the course, enrolled in an accelerated BSN program, had a primary residence in another country, had a previous degree, or were enrolled in an RN-BSN program. These criteria were based on excluding participants who could not legally consent to the study and those who may have been exposed to SDOH material in their previous degree. Site B allowed nursing students to enroll in the health assessment course while studying abroad in Ireland; as previously stated, those students were also excluded from this study. Out of 249

students invited to participate, a total of 149 pretests and 198 posttests and consents were received, yielding a response rate of 59.8% for the pretests and 79.5% for the posttests.

Participants were excluded at the conclusion of this study, prior to data analysis. A breakdown of the number of participants excluded from this study and the rationale are presented in Table 3.1. Fifteen participants completed only the pretest survey and reported having a previous degree, for which they were excluded from the study. There were 14 participants who completed both the pretest and posttest surveys but were excluded from data analysis for having a previous degree. One participant, who also completed only the pretest, was excluded for repeating the course. Six participants completed only the pretest consent, and four completed only the pretest consent and the demographics survey. Nine participants completed only the posttest consent. A total of 49 participants were excluded from the study, 26 from the pretest data and 23 from the posttest data.

Table 3.1

Participants Excluded from Study

Exclusion Reason	**Quantity**
2nd Degree	15 (pretest survey)
2nd Degree	14 (paired pretest and posttest survey)
Repeating students	1 (pretest survey)
Incomplete pretests	10
Incomplete posttest	9

After addressing the exclusion criteria, the total sample was 123. However, of the 123 total responses, there were 25 participants who did not complete both the pretest and posttest for the attitudes toward poverty instrument (ATP-SF), which resulted in a final paired sample size of $N = 98$. Inspection of demographic data between those 25 participants and the paired participants ($N = 98$) indicated there were no statistically significant differences between the two groups.

From the final paired sample of $N = 98$, 29 participants were enrolled at Site A, 49 at Site B, and 20 at Site C (Table 3.2). Two of the participants from the total paired sample did not complete the JSE-HPS questions, yielding a sample of 96 for the Jefferson Scale of Empathy for Health Professions Students (JSE-HPS). See Table 3.3 for a description of the responses and final sample sizes for each study variable, including those for the Beliefs About the Relationship Between Poverty and Health (BRPH) and Student Satisfaction and Self-Confidence in Learning (SSSC) studied by the other PIs in this study.

Table 3.2

Sample by Institution

Institution	Sample	Population	Response Rate	Percentage per Total Sample
Site A	40	84	47.62%	32.52
Site B	62	125	49.60%	50.41
Site C	21	40	52.50%	17.07
Total	123	249		100.0

Table 3.3

Survey Responses

	ATP-SF	BRPH	JSE-HPS	SSSC
Total Pretest	123	123	117	n/a
Total Posttest	174	173	169	175
Paired Data	98	98	96	n/a

Instrumentation

Five instruments were used in the larger, collaborative study: Attitude Toward Poverty Short Form (ATP-SF) (Yun & Weaver, 2010), the Jefferson Scale of Empathy for Health Professions Students (JSE-HPS) (Hojat, 2016), the Beliefs About the Relationship Between Poverty and Health (BRPH) scale (Reutter et al., 1999), Student Satisfaction and Self-

Confidence (SSSC) in Learning scale (NLN, 2005), and a researcher-developed demographic survey. However, only three instruments are relevant in this study: Attitude Toward Poverty Short Form (ATP-SF) (Yun & Weaver, 2010), the Jefferson Scale of Empathy for Health Professions Students (JSE-HPS) (Hojat, 2016), and a researcher-developed demographic survey. All surveys and permissions for use are provided in Appendix A-C.

Attitude Toward Poverty Short Form (ATP-SF)

Description: This survey measures "potential changes in attitude toward poverty and people living in poverty" (Tillman et al., 2020, p.317). The ATP-SF is a validated and reliable 21-item scale that assesses attitudes toward poverty and was developed by Yun & Weaver (2010). The short form is an abbreviated version of the original 37-item instrument (Atherton et al., 1993).

Validity: According to Tillman et al. (2020), validity was established for the ATP-SF through correlation analysis and independent-samples *t* tests. Convergent validity was established by analyzing the correlations between the ATP and the ATP-SF, revealing high positive correlations for the personal deficiency and stigma attitude subscales (.76 and .85, respectively), and a negative correlation for the structural deficiency attitude subscale (-.30). The authors posited that the discrepancy may be related to the uniqueness of this concept in comparison to the other two subscales (Yun & Weaver, 2010). Yun and Weaver (2010) established known group validity using an independent-samples *t* test analysis of students' self-identified political affiliation compared with their attitudes toward poverty with the ATP-SF ($t(214) = -3.5$, $p = .000$).

Reliability: Yun and Weaver (2010) reported an acceptable reliability for the ATP-SF with a Cronbach's alpha of .87. Cronbach's alpha for the subscales ranged from .87 to .89 (Wise

et al., 2023). In this study, Cronbach's alpha was used to compute the internal consistency of the ATP-SF; the pretest Cronbach's alpha was .87 (N = 123) and the posttest Cronbach's alpha was .87 (N = 174), indicating acceptable reliability.

Scoring: There are five response options (1 = *strongly agree to* 5 = *strongly disagree*), with a possible score of 21 to 105. The ATP-SF has three sub scales: personal deficiency, stigma attitude, and structural deficiency attitudes. Items in the third subscale are reverse coded. High scores indicate a belief that structural, political, and economic factors influence poverty (positive attitude); low scores indicate a belief that poverty has an individualistic cause (negative attitude) (Wise et al., 2023).

Jefferson Scale of Empathy for Health Professions Students (JSE-HPS)

Description: This scale measures the concept of empathy in the context of the nurse-patient relationship, specifically, the nurse's ability to understand the patient's experiences, concerns, and perspectives and the nurse's ability to communicate this understanding to the patient (Ward et al., 2009). Ward et al. (2009) adapted The Jefferson Scale of Empathy (JSE) for prelicensure nursing students to administer to 333 prelicensure nursing students at various academic levels. The JSE was later modified for use among all health care students, not solely medical students, and is known as the Jefferson Scale of Empathy for Health Professions Students (JSE-HPS) (Fjortoft et al., 2011). Presently, there are three versions of the JSE available for use: medical students (S-version), Health Professions (HP-version), and Health Professions students (HPS-version). The JSE-HPS is the version that was used in this study.

Validity: Hojat et al. (2001) established construct validity of the original JSE using three-factor analysis and criterion-related validity using external criteria from the Empathic Concern scale of the Interpersonal Reactivity Index for the original JSE. For the JSE-HPS, construct

validity was supported by a .86 overall index using Kaiser-Meyer-Olin's (KMO) measure (Fjortoft et al., 2011). A KMO measure of 0.80 or greater indicates that the factor analysis is supportive (Kellar & Kelvin, 2013, p. 384). Additionally, Fjortoft et al. (2011) conducted a Barlett's test of sphericity and found support for using the factor analysis ($X_{(190)} = 1254.1$, $p < 0.001$).

Reliability: The reliability coefficient of .84 was identified for the JSE-HPS using a sample of pharmacy students (Fjortoft et al., 2011). In this study, reliability of the JSE-HPS was computed using Cronbach's alpha: the pretest ($N = 117$) reliability revealed Cronbach's alpha of .80, and the posttest ($N = 169$) was .84.

Scoring: The JSE-HPS is a 20-item, 7-point Likert scale (1 = *Strongly Disagree* to 7 = *Strongly Agree*), with a possible score ranging from 20 to 140. Higher scores indicate greater empathy orientation.

Demographic Survey

The researchers developed a 15-item demographic survey to assess eligibility to participate in the study and collect possible covariate factors to be addressed in the data analysis. The survey includes items concerning the institution of enrollment, age, race, ethnic origin, gender identity, religion, previous degree, repeating the course, first-generation status, previous work experience in health care, zip code of primary residence, exposure to poverty, volunteer or work experience with individuals living in poverty, veteran status, personal experience with poverty, and political affiliation. Previous research indicated that these questions may provide valuable information about personal experiences that could affect participants' attitudes and beliefs about individuals experiencing poverty (Alexander et al., 2020; Noone, 2022). Previous

researchers have found a correlation between prior experiences with poverty and attitudes toward poverty (Noone et al., 2012; Sword et al., 2004; Vliem, 2015).

Pilot Study of the Surveys

In the proposal for this study, the PIs planned to pilot the pretest and posttest surveys at sites A and B. However, the surveys were only piloted at site B due to a lack of volunteer response at site A. The pilot of the pretest and posttest surveys was conducted with a volunteer sample of eight senior-level students at Site B. The students were invited to complete the surveys and provide feedback concerning the overall ease of completing them, clarity of the survey instructions, type of device used (computer versus mobile device), accuracy of the demographic survey questions, discomfort caused by the demographic survey questions, and the amount of time in minutes it took each participant to complete the pretest and posttest. These questions are presented in Appendix D. Volunteers were incentivized with a free lunch. Eight students participated in the pilot of the survey and six students completed the pilot feedback survey. Feedback from the survey pilot indicated that participants viewed the pre- and posttest surveys as either somewhat or very easy to use, the clarity of the instructions as either somewhat or very understandable, and either somewhat or strongly agreed that the demographic survey questions were accurate and bias-free. When surveyed about discomfort caused by the demographic questions, 71% of the pilot participants chose “strongly disagree,” 14% chose “somewhat disagree,” and 14% chose “strongly agree.” The average reported time to complete the pretest was 12.7 minutes and 11.8 minutes for the posttest. No changes were made to the pre- and posttest survey questions after the pilot testing was completed.

Procedures

Case Studies

A SDOH video case study was developed by the PIs using a compilation of three videos from YouTube that depicted various real-life (not actors) individuals describing their experience with living in poverty and how poverty affects their lives (Appendix E). The videos were all accessible under YouTube's Fair Use policy (Appendix F). A SDOH paper case study was also created by the PIs using a written narrative of the case identical to the video case study (Appendix G).

Content Validity: The video and paper case studies were reviewed by six subject matter experts (SMEs), who were a mix of registered nurses and licensed social workers. The SMEs were asked to report on the accuracy of representation of individuals experiencing poverty, promotion of stereotypes, challenging of stereotypes, the accuracy of the paper case study's transcription, any grammatical errors in the paper case study, and the inclusion of relevant details in the paper case study (Appendix H). The SMEs were also asked to provide free-text feedback about the video and paper case studies. Feedback from the SMEs indicated that the video case study was an accurate representation of individuals experiencing poverty, the majority of the SMEs disagreed that the video case study promoted stereotypes, all agreed that the video case study challenged stereotypes, and the majority of the SMEs agreed that the video case study demonstrated the relationship between poverty and health. All the SMEs agreed that the paper case study provided an accurate transcript of the video case study. The majority of the SMEs agreed that the paper case study was free from grammatical errors, and all agreed that the paper case study provided relevant details from the videos. Based on the SME feedback, no changes were made to the video or paper case studies.

Debriefing Questions and Faculty Training

The process of debriefing allows learners to identify their knowledge gaps, and reflect on their perspectives and assumptions, while also acquiring new knowledge (INACSL Standards Committee, 2016). Structured debriefing was designed by the PIs for this study by first identifying the objectives of the SDOH case studies classroom activity. The objectives of these classroom activities were for learners to be able to identify barriers to optimal health, discuss socioeconomic factors that influence individual health and wellness, and examine how personal values influence the care of individuals who live in poverty. Debriefing questions were developed that focused on what the students identified as barriers to optimal health, challenges faced by the individuals in the case study, the strengths of the individuals in the case, factors that influence individual health and wellness, and the relationship between poverty and health. Five debriefing questions were written and can be found in Appendix I. Debriefing should be approximately double the time spent on simulation or the course activity (Palaganas et al., 2016, p. 79). The designated amount of time for the structured debriefing in this study was 30 minutes.

To ensure consistency across all three sites, a Faculty Training Guide (Appendix J) was developed and shared with each faculty member teaching in the health assessment or fundamentals/foundations of nursing courses. The three PIs collaboratively developed a Faculty Training Guide containing information on how to conduct a structured debriefing that was provided to each faculty member. The Faculty Training Guide focused on conducting the structured debriefing based on four phases: description phase, reaction/defuse phase, analysis/discovery phase, and the summary/application phase (INACSL Standards Committee, 2016; Palaganas et al., 2016). The PIs also facilitated a live, 1-hour session on Zoom using a PowerPoint presentation (Appendix K), attended by all participating faculty. The session

included a brief review of the training guide and focused heavily on best practices for debriefing and how to debrief difficult situations. All faculty were given an opportunity to ask questions at the end of the session.

Surveys

The pretest and posttest surveys were created using Qualtrics© software. Surveys were designed so participants could not skip questions. Students received emails from Qualtrics© including the consent form and link to the pretest survey. Reminder emails were sent to students who did not complete the pretest prior to the intervention. The posttest was deployed at the end of the classroom activity. Students were given time during class to complete the posttest survey. To decrease the risk of contamination, reminder emails were not sent for the posttest survey (Shadish et al., 2002).

Intervention Group

Participants in the intervention group watched the SDOH video case study in class. Participants were given approximately 15 minutes to watch the video case study. After the video ended, course faculty conducted a structured debriefing with the five debriefing questions. Students who did not complete the pretest were given the option to consent and complete the posttest. Immediately after the debriefing, participants were given 15 minutes to complete the posttest.

Comparison Group

Participants in the comparison groups received the SDOH paper case study. Participants were instructed to read the paper case study to themselves. Approximately 15 minutes were allotted for participants to read the paper case study. This ensured that no one would read the case out loud and inflect tone to any portion of the narrative. After individually reading the

narrative, the comparison group participants engaged in the same faculty-led structured debriefing using the same five debriefing questions as the intervention group. The focus of the debriefing was identical to the debriefing the intervention group received. Immediately after the debriefing, participants who had previously consented were given 15 minutes to complete the posttest. Students who had not completed the pretest were given the option to consent and complete the posttest.

Procedure Timeline

March 5, 2024. This PI conducted a classroom visit with the students at Site C. Due to the course schedule and faculty availability, this was the only available date for a visit before data collection began. Visiting the research sites allowed the investigators to introduce themselves to the students enrolled in the courses to offer a more personal component to the study (Dillman et al., 2014, pp. 27-32). A standard script was used by each PI to introduce the study and recruit participants, as well as make clear that participation in the pre- and posttests would not affect their course grades (Appendix L). The PIs also informed participants that they would have the opportunity to experience both teaching strategies once data collection had ended. A recruitment flyer was distributed by hand and electronically by email (Appendix M).

March 13, 2024. The researchers used an electronic randomizer for participants at Site C and a simulated coin flip from www.flipsimu.com for participants at Site B and Site A. At Site A and Site B, groups were based on course section and not individual participants; course sections were predetermined by faculty, administration, or student registration. There were five course sections at Site A; two were assigned to the intervention group, and three were assigned to the comparison group. Site B also had five course sections; three were assigned to the intervention group, and two were assigned to the comparison group. There was only one section

of the foundations course at Site C; therefore, the Site C students were randomly assigned to the intervention and comparison groups by assigning each student an identification number and using the Randomizer from www.randomizer.org to generate one set of unsorted numbers with assignment to condition 1 (intervention) or condition 2 (comparison). This method of random assignment was recommended by Polit and Beck (2017, p.188). There was a total of six intervention groups and six comparison groups across all three sites. Participants were not aware of which group they were assigned until the day of the intervention and comparison.

March 18, 2024. The pilot study of the pretest and posttest surveys was conducted.

March 20, 2024. PIs conducted the synchronous remote debriefing training via Zoom. Faculty also received the SDOH video or paper case study based on their assigned course section or group. Debriefing training was conducted synchronously with all faculty at the same time to ensure that all faculty received the same protocol training. This helped maintain consistency among all sites (Polit & Beck, 2016, pp. 56, 121).

March 21, 2024. Informed consent, and the pretest survey containing the demographics survey, ATP-SF, JSE-HPS, and BRPH were deployed to students at Site C via student emails.

April 2, 2024. The pretest survey closed for students at Site C. Students at Site C were separated into two classrooms (each with one faculty member): one for the intervention group, and one for the comparison group. Students in the intervention group watched the SDOH video case study and then participated in the structured debriefing conducted by course faculty immediately after. For the comparison group, course faculty handed out the SDOH paper case study to read individually, and then immediately after participated in the structured debriefing conducted by course faculty. Following the debriefing, all students received an email with a link to consent and complete the posttest survey containing the ATP-SF, JSE-HPS, BRPH, and

SSSC. One additional question was included asking which form of the case study the student participated in.

ES also conducted the classroom visit at Site B on this date. Like at Site C, the standard script was used, and the recruitment flyer was distributed by hand and via email (Appendices I & J). Informed consent, and the pretest survey containing the demographics survey, ATP-SF, JSE-HPS, and BRPH were then deployed to students at Site B via student emails.

April 10-12, 2024. KG conducted the classroom visit at Site A for each of the five course sections scheduled over three days. Following each classroom visit, informed consent, and the pretest survey containing the demographics survey, ATP-SF, JSE-HPS, and BRPH were then deployed to students in each course section at Site A via student emails.

April 16, 2024. The pretest survey closed for students at Site B. Students at Site B either watched the SDOH video case study or read the paper case study based on their preassigned group for their course section. Each group immediately participated in the structured debriefing conducted by course faculty. All students then received an email with a link to consent and complete the posttest survey containing the ATP-SF, JSE-HPS, BRPH, and SSSC. One additional question was included asking which form of the case study the student participated in.

April 17-19, 2024. The pretest survey closed for students at Site A in one course section on April 17th, two course sections on April 18th, and two other course sections on April 19th, all prior to participation in the intervention or comparison groups. On each day corresponding with the close of the pretest, the students at Site A either watched the SDOH video case study or read the paper case study. Immediately following the case study, the students participated in the structured debriefing conducted by course faculty and then received an email with a link to consent and complete the posttest survey containing the ATP-SF, JSE-HPS, BRPH, and SSSC.

One additional question was included asking which form of the case study the student participated in.

April 22, 2024. The SDOH video and paper case studies were emailed to all students. Providing all students with both forms of the case study ensured that everyone had equal access to the content. Although there was no impact on the course grade, it was ethically imperative that students have equal access (Houle, 2015, p. 31).

May 8, 2024. Amazon gift cards were emailed to qualifying study participants.

Protection of Human Subjects

At the time of the proposal, the PIs intended to apply for Institutional Review Board (IRB) approval at each site. However, upon discussion with each site's IRB administrators, sites A and C accepted Teachers College IRB approval in lieu of their individual site IRBs; only site B required their own IRB case number. Approval from the IRB was obtained from Teachers College and Site B (Appendix N & O). Site A and Site C did not require separate institutional IRB approval. Site approvals were obtained from the Deans and Directors for the programs at each university (Appendix P & Q).

Participation in this study was voluntary, and participants were informed that they could choose to withdraw from the study at any time. Students eligible to participate were recruited through email (Appendix R); additionally, the PIs visited the classroom at each site to distribute recruitment flyers, introduce the study, and answer questions. Investigators reinforced that the course grade would not be affected by a student's decision to participate or not participate. All students attended their regularly scheduled class and participated in either the SDOH video or paper case study classroom activity, regardless of enrollment in the study. None of the PIs were involved in the administration of the intervention or comparison SDOH case study or debriefing.

At Site B, one of the PIs is a faculty member in the course; to ensure that there would be no contamination or ethical conflict, another course faculty taught the PI's section on the day of the intervention. Students were informed that they would receive a $30 Amazon gift card if they completed all study components. After the proposal hearing for this study, it was determined that participants who completed only the posttest would receive a $15 Amazon gift card; this change was made in an attempt to collect additional responses for the posttest-only instrument, Student Satisfaction and Self-Confidence in Learning (SSSC).

Students were emailed a copy of the consent form and electronically consented to the study in Qualtrics© prior to answering the survey questions. Informed consents and all data were stored in Qualtrics©. No identifying data were collected, and participants created a unique code for both the pre and posttest surveys to match their data and de-identify the participants' surveys. Data were collected anonymously, remained confidential, were used only to conduct this study, and were not reviewed by anyone outside of the IRB-approved researchers. Email addresses for the gift card incentive were collected via Qualtrics©' "anonymous raffle" option, which generated a separate survey that collected only the participants' email addresses. This process ensured that the pre- and posttest survey data were separate from any identifying information. The PIs were not involved in the assignment of unique codes to protect the integrity of the data collection.

Data Analysis

Data were exported from Qualtrics© to SPSS© version 29.0.2.0 for coding and analysis. The three PIs collaborated on data analysis using shared password protected electronic files.

The three PIs worked together to conduct data analysis using SPSS© version 29.0.2.0. Descriptive statistics were calculated for all measures, including sums, means, ranges,

correlations, kurtosis, skewness, and standard deviations for all continuous variables and percentages for all categorical variables. Cronbach's alphas were computed for each instrument to assess the instrument's reliability. Appropriate statistical tests were identified for each research question analysis and are described in Table 3.4.

After completing a preliminary analysis of the data, skewness and kurtosis were analyzed. The results of this analysis indicated the pretest and posttest ATP-SF sum scores, and the JSE-HPS pretest and posttest sum scores were approximately symmetrically distributed. Histograms were analyzed to review the distribution of the data for all demographic questions, as well as for the data by individual site. No distributions were identified as moderately or largely skewed. No other responses were identified as having statistically significant outliers.

There were no missing completely at random (MCAR) data because responses were forced for every individual item within each instrument (Kang, 2013). Prior to answering the research questions, all assumptions for each statistical test were met. All data were at the interval level minimally, observations between groups were independent, and data were normally distributed (Kellar & Kelvin, 2013). No statistically significant differences were identified between groups on the pretest ATP-SF or the pretest JSE-HPS.

Box plot analysis was performed to identify any outliers in the pretest and posttest ATP-SF scores, and in the pretest and posttest JSE_HPS scores. There were no significant outliers in the pretest ATP-SF scores or in the pretest and posttest JSE-HPS scores. Two outliers were identified in the video ATP-SF group. However, inspection of the responses did not reveal them to be statistically significant and therefore those responses were retained.

Qualitative content analysis was performed on the last question of the demographic survey. This open-ended question asked participants to share their personal experiences with

poverty. Responses to this question were analyzed to identify any shared experiences among respondents.

Table 3.4

Description of Research Question Analysis

Research Question	Data Analysis	Rationale for Analysis
RQ1: What is the effect of a SDOH video case study versus a SDOH paper case study on attitudes toward poverty in prelicensure nursing students?	Analysis of covariance (ANCOVA)	Examined the effect of the SDOH case study type while controlling for the pretest data and the variable of previous work or volunteer experience with persons living in poverty.
RQ2: What is the effect of a SDOH video case study versus a SDOH paper case study on empathy in prelicensure nursing students?	Analysis of covariance (ANCOVA)	Examined the effect of the SDOH case study type while controlling for the pretest data and the variable of previous work or volunteer experience with persons living in poverty.
RQ3: What is the difference in empathy and attitudes toward poverty in prelicensure nursing students before and after participating in a SDOH video case study versus a SDOH paper case study?	Multivariate analysis of variance (MANOVA)	Examined the differences in the effect of the SDOH case study type on empathy and attitudes toward poverty.
RQ4: What is the difference in gender identity and empathy in prelicensure nursing students before and after participating in a SDOH video case study versus a SDOH paper case study?	Multivariate analysis of variance (MANOVA)	Examined the differences in the effect of the SDOH case study type on gender identity and empathy.

Collaboration Specific to the Methodology

This was a collaborative study between three researchers: Katherine Giannettino (KG), Elizabeth Saska (ES), and Clarissa Swope (CS). The individual responsibilities of the authors were as follows:

- KG obtained approval from the dean of the school of nursing at Site A; she was also responsible for leading the faculty debriefing training.
- ES obtained approval from the dean of the school of nursing at Site B and was responsible for obtaining IRB approval at this site; she was also responsible for inputting the surveys into Qualtrics.
- CS obtained IRB approval from Teachers College and permission from the dean of Site C.
- All investigators collaborated to investigate funding opportunities, create the demographic survey, identify the video case and transcribe to paper, and choose the structured debriefing questions.

Chapter Summary

The methods used to study attitudes toward poverty, empathy, and differences between empathy and gender identity in sophomore-level baccalaureate nursing students were described in this chapter. The intervention and comparison used in this study were described in detail. The study instruments, ATP-SF, JSE-HPS, and demographic survey were discussed. Additionally, the process of sampling, faculty preparation, data collection, and data analysis were described. Delineation of PI roles and responsibilities were outlined. In Chapter 4, study findings are presented.

Chapter 4: Findings

The purpose of this study was to explore the effects of a SDOH classroom activity on attitudes toward poverty in prelicensure nursing students as part of a larger study. Attitudes toward poverty were explored collaboratively among the three PIs. This chapter provides the results of one PI who examined the effects of a SDOH classroom activity on empathy and gender identity in prelicensure nursing students in addition to attitudes toward poverty.

The research questions, beginning with the collaborative question, were:

1. What is the effect of a SDOH video case study versus a SDOH paper case study on attitudes toward poverty in prelicensure nursing students? (Collaborative)
2. What is the effect of a SDOH video case study on empathy in prelicensure nursing students?
3. What is the difference between empathy and attitudes toward poverty in prelicensure nursing students before and after participation in a SDOH video case study?
4. What is the difference in empathy by gender identity in prelicensure nursing students before and after participating in a SDOH case study?

In this chapter, the results from the study are presented answering the collaborative and individual research questions. A description of the total and site-specific sample is presented first, followed by the findings addressing the collaborative research. Individual research questions are then discussed.

Sample Demographic Statistics

Total Sample Demographics

A complete description of demographics for the total sample of participants (N =123) is presented in Table 4.1. The youngest participant was 18 and the oldest was 55, with a mean age of 20.77 (SD = 4.02). Most of the participants were White Caucasian (69.92%). Participants were given the option to identify their gender outside of the binary construct of male or female. However, nearly all participants identified as female (92.68%) while the remaining 7.32% identified as male. One participant identified as being a United States Veteran or currently serving in the United States military. Regarding political affiliation, fewer students identified as Democrat (n = 21, 17.1%) than as Republican (n = 36, 29.3%).

Participants were also asked to list the zip code of their primary residence for the last 5 years to provide additional insight into their background. Analysis of the zip codes revealed participants primarily resided in eight states: Arizona (n = 1), Connecticut (n = 9), Illinois (n = 5), Massachusetts (n = 14), Missouri (n = 16), New Jersey (n = 48), New York (n = 28), and Rhode Island (n = 2). Within these states, multiple counties were identified, except Arizona and Rhode Island. Six counties each were identified in Connecticut and Massachusetts; four counties were identified in Illinois; thirteen counties in Missouri, ten counties in New Jersey; and eleven counties in New York.

Table 4.1

Total Sample Demographics (*N* = 123)

Race	*n*	Percentage
Asian	7	5.69
Black/African American	9	7.32
White or Caucasian	86	69.92
Other	8	6.50
More than one race selected.	3	2.44
Prefer not to answer.	10	8.13
Ethnicity	***n***	**Percentage**
Hispanic	10	8.13
Latino	3	2.44
Spanish	1	.81
More than one ethnicity.	13	10.57
Not Hispanic, Latino, or Spanish.	96	78.05
Gender	***n***	**Percentage**
Female	114	92.68
Male	9	7.32
Religious Affiliation	***n***	**Percentage**
Buddhist	1	.81
Catholic	76	61.79
Christian	27	21.95
Islamic	4	3.3
Jewish	2	1.63
Other	2	1.63
I do not identify with a religious group.	11	8.9
Political Affiliation	***n***	**Percentage**
Democrat	21	17.07
Independent	26	21.14
Republican	36	29.27
Other	1	.81
No Political Affiliation	39	31.71
First Generation College Student	***n***	**Percentage**
Yes	45	36.59
No	78	63.41

Table 4.1 (continued)

Previous or Current Experience Working in Health Care	*n*	Percentage
Yes	40	32.52
No	83	67.48
Work or Volunteer Experience with Individuals Living in Poverty	***n***	**Percentage**
Yes	36	29.27
No	87	70.73
Personal Experience with Poverty	***n***	**Percentage**
Yes	18	14.63
No	105	85.37

Site Demographics

An analysis of the demographics by each site was conducted to identify any significant differences. No significant differences between the three sites were identified. Table 4.2 provides a complete description of the demographic variables for each site. At Site A, the mean age of participants was 22.53, and ranged from 19 to 55 with 32.5% who reported an age of 20, 17.5% who reported an age of 21, and only one participant reported 55. The mean age for Site B was 19.4, with a range of 18 to 21, with two participants who reported 18, 54.8% reported 19, and 40.3% reported an age of 20. At Site C, the mean age of participants was 21.48, with an age range of 18-36 with 33.3% who reported an age of 20, 28.6% who reported 21, and one participant who reported 36.

Table 4.2

Demographics by Site and Total Sample $N = 123$

Site	Race	*n*	*Percentage by Site*	*Percentage by Total Sample*
Site A ($n = 40$)	Asian	5	12.50	4.07
	Black African American	6	15	4.88
	White or Caucasian	12	30	9.76
	Other	6	15	4.88
	More than one race selected.	3	7.50	2.44
	Prefer not to answer.	8	20	6.50
Site B ($n = 62$)	Asian	1	1.61	.81
	Black African American	1	1.61	.81
	White Caucasian	56	90.32	45.5
	Other	2	3.23	1.63
	Prefer not to answer.	2	3.23	1.63
Site C ($n = 21$)	Asian	1	4.8	.81
	Black African American	2	9.52	1.63
	White Caucasian	18	85.71	14.63
	Ethnicity	*n*	*Percentage by Site*	*Percentage by Total Sample*
Site A ($n = 40$)	Hispanic	7	17.50	5.69
	Latino	1	2.50	.81
	More than one selected.	13	32.50	10.57
	Not Hispanic, Latino, or Spanish.	19	47.50	15.45
Site B ($n = 62$)	Hispanic	3	4.84	2.44

Table 4.2 (continued)

	Ethnicity	*n*	*Percentage by Site*	*Percentage by Total Sample*
	Latino	2	3.23	1.63
	Spanish	1	1.61	.81
	Not Hispanic, Latino, or Spanish.	56	90.32	45.53
Site C (*n* = 21)	Not Hispanic, Latino, or Spanish.	21	100	17.07
	Gender	*n*	*Percentage by Site*	*Percentage by Total Sample*
Site A (*n* = 40)	Female	37	92.50	30.08
	Male	3	7.50	2.44
Site B (*n* = 62)	Female	57	91.94	46.34
	Male	5	8.06	4.07
Site C (*n* = 21)	Female	20	95.24	16.26
	Male	1	4.76	.81
	Religious Affiliation	*n*	*Percentage by Site*	*Percentage by Total Sample*
Site A (*n* = 40)	Catholic	22	55	17.89
	Christian	13	32.50	10.57
	Islamic	3	7.50	2.44
	Jewish	1	2.50	.81
	I do not identify with a religious group.	1	2.50	.81
Site B (*n* = 62)	Catholic	46	74.19	37.4
	Christian	8	12.90	6.50
	Jewish	1	1.61	.81
	Other	1	1.61	.81
	I do not identify with a religious group.	6	9.68	4.88
Site C (*n* = 21)	Buddhist	1	4.76	.81
	Catholic	8	38.10	6.5

Table 4.2 (continued)

	Religious Affiliation	*n*	*Percentage by Site*	*Percentage by Total Sample*
	Christian	6	28.57	4.88
	Islamic	1	4.76	.81
	Other	1	4.76	.81
	I do not identify with a religious group.	4	19.05	3.25
Site	Political Affiliation	*n*	*Percentage by Site*	*Percentage by Total Sample*
Site A (*n* = 40)	Democrat	14	35	11.4
	Independent	5	12.50	4.07
	Republican	5	12.50	4.07
	Other	1	2.50	.81
	No Political Affiliation	15	37.50	12.20
Site B (*n* = 62)	Democrat	5	8.06	4.07
	Independent	21	33.87	17.07
	Republican	20	32.26	16.26
	No Political Affiliation	16	25.81	13.01
Site C (*n* = 21)	Democrat	2	9.52	1.63
	Republican	11	52.38	8.94
	No Political Affiliation	8	38.10	6.50
	First Generation College Student	*n*	*Percentage by Site*	*Percentage by Total Sample*
Site A (*n* = 40)	Yes	29	72.5	23.58
	No	11	27.5	8.94
Site B (*n* = 62)	Yes	10	16.13	8.13
	No	52	83.87	42.28
Site C (*n* = 21)	Yes	6	28.57	4.88
	No	15	71.43	12.20

Table 4.2 (continued)

	Previous or Current Experience in Health Care	*n*	*Percentage by Site*	*Percentage by Total Sample*
Site A (*n* = 40)	Yes	15	37.50	12.20
	No	25	62.50	20.33
Site B (*n* = 62)	Yes	17	27.42	13.82
	No	45	72.58	36.59
Site C (*n* = 21)	Yes	8	38.10	6.50
	No	13	61.90	10.57
	Personal Experience with Poverty	*n*	*Percentage by Site*	*Percentage by Total Sample*
Site A (*n* = 40)	Yes	9	22.50	7.32
	No	31	77.50	25.20
Site B (*n* = 62)	Yes	7	11.29	5.69
	No	55	88.71	44.72
Site C (*n* = 21)	Yes	2	9.52	1.63
	No	19	90.48	15.45
	Volunteer or Work Experience with Individuals Living in Poverty	*n*	*Percentage by Site*	*Percentage by Total Sample*
Site A (*n* = 40)	Yes	10	25	8.13
	No	30	75	24.39
Site B (*n* = 62)	Yes	18	29.03	14.63
	No	44	70.97	35.77
Site C (*n* = 21)	Yes	8	38.10	6.50
	No	13	61.90	10.57

One significant difference was identified between the intervention and comparison groups. In the intervention group 41.7% of the participants reported having volunteer or work experience with poverty, while only 20% of the participants in the comparison group reported having this experience. The difference identified between these two groups will be addressed during further data analysis presented in this chapter.

Research Question 1 (Collaborative)

This research question asked, "What is the effect of a SDOH video case study versus a SDOH paper case study on attitudes toward poverty in prelicensure nursing students?" A sample of 98 paired responses were analyzed to answer this collaborative research question. The ATP-SF was used to assess attitudes toward poverty.

Preliminary analysis had revealed a significant difference between the intervention and comparison groups based on experience with poverty through work or volunteering. Therefore, to answer this research question, an analysis of covariance (ANCOVA) was used to analyze the posttest ATP-SF scores while looking at the type of case study and controlling for the pretest ATP-SF scores and the variable of experience with poverty through work or volunteering. The findings of this analysis are presented in Table 4.3. The adjusted R^2 for this analysis revealed that approximately 34% of variance in the posttest ATP-SF scores is explained by pretest ATP-SF scores, the case study type, and experience with poverty through work or volunteering. There was no statistically significant difference in the posttest ATP-SF scores between the SDOH video and paper case studies on posttest ATP-SF scores when controlling for the pretest ATP-SF scores and experience with poverty through work or volunteering, $F(1,94) = .76$, $p = .39$. A statistically significant effect on posttest ATP-SF scores based on pretest ATP-SF scores while controlling for experience with poverty through work or volunteering was identified, $F(1,94) =$

50.97, p <.001. The partial Eta squared indicates that 35% of the variance in the posttest ATP-SF scores is explained by the pretest ATP-SF scores, and 0% is explained by participants having previous experience working or volunteering with persons living in poverty.

Table 4.3

Test of Between-Subjects Effects for ATP-SF

Dependent Variable: Posttest ATP Sum

Source	Type III Sum of Squares	df	Mean Square	*F*	Sig.	Partial Eta Squared
Corrected Model	3466.04[a]	3	1155.41	17.67	<.001	.36
Intercept	1485.09	1	1485.09	22.71	<.001	.20
Case Study	48.07	1	48.07	.76	.39	.01
Experience	.20	1	.20	.003	.96	.00
Pretest ATP-SF	3333.23	1	3333.23	50.97	<.001	.35
Error	2147.08	94	65.39			
Total	618233.00	98				
Corrected Total	9613.32	97				

a. R Squared = .361 (Adjusted R Squared = .340)

Research Question 2

Research Question 2 asked, "What is the effect of a SDOH video case study versus a SDOH paper case study on empathy in prelicensure nursing students?" To answer this research question, the JSE-HPS instrument was used to measure empathy. Of the 98 participants who completed the pretest and posttest ATP-SF survey, 96 of those participants completed the JSE-HPS pretest and posttest.

This research question was answered by using an ANCOVA to analyze the posttest JSE-HPS scores while looking at the type of case study and controlling for the pretest JSE-HPS scores and the variable of experience with poverty through work or volunteering. The findings of this analysis are presented in Table 4.4. The adjusted R^2 for this analysis revealed that

approximately 35% of variance in the posttest JSE-HPS scores is explained by the case study type, experience with poverty through work or volunteering, and pretest JSE-HPS scores. A statistically significant difference in posttest JSE-HPS scores between the SDOH video and paper case studies was identified when controlling for the pretest JSE-HPS score and experience working or volunteering with persons living in poverty, $F(1,93) = 4.39$, $p = .04$. The partial Eta squared indicates that the case study type explains 5% of the variance in posttest JSE-HPS scores. A statistically significant effect in posttest JSE-HPS scores by pretest JSE-HPS scores was found when controlling for the case study type and experience working or volunteering with persons living in poverty, $F(1,93) = 43.77$, $p < .001$. The partial Eta squared indicates that 32% of the variance in the posttest JSE-HPS scores is explained by the pretest JSE-HPS scores.

Table 4.4

Test of Between-Subjects Effects for JSE-HPS

Dependent Variable: Posttest JSE-HPS Sum

Source	Type III Sum of Squares	df	Mean Square	*F*	Sig.	Partial Eta Squared
Corrected Model	6272.31[a]	3	2090.77	17.70	<.001	.37
Intercept	2195.39	1	2195.39	19.45	<.001	.17
Case Study	518.07	1	518.07	4.39	.04	.05
Experience	41.25	1	41.25	.35	.56	.004
Pretest JSE-HPS	5169.20	1	5169.20	43.77	<.001	.32
Error	10866.35	93	118.11			
Total	1113035.00	96				
Corrected Total	17138.66	95				

a. R Squared = .364 (Adjusted R Squared = .350)

Research Question 3

Research Question 3 asked, "What is the difference in empathy and attitudes toward poverty in prelicensure nursing students before and after participating in a SDOH video case study versus a SDOH paper case study?"

A multivariate analysis of variance (MANOVA) was performed to assess the differences between JSE-HPS pretest and posttest scores and ATP-SF pretest and posttest scores between the intervention and comparison groups. The findings of this MANOVA revealed that there were no statistically significant differences in pretest and posttest JSE-HPS and ATP-SF scores between the intervention and comparison groups, Pillai's Trace $F(4,91) = 1.72$, $p = .15$.

Research Question 4

Research Question 4 asked, "What is the difference in empathy by gender identity in prelicensure nursing students before and after participating in a SDOH video case study versus a SDOH paper case study?"

To answer this research question, participants were given six options to report their gender identity: male, female, transgender male, transgender female, non-binary, and prefer not to answer. Only seven participants reported their gender identity as male, while 89 reported identifying as female. The other options were not chosen. Of the seven male participants three participated in the intervention and four participated in the comparison group. Although the sizes of the two groups were not equal, statistical analysis was performed to answer the research question. However, it must be noted that the small and unequal sample sizes increase the risk of a Type II error.

To identify if there were any significant differences between pretest and posttest JSE-HPS scores based on gender identity and intervention or comparison group, a MANOVA was conducted. The findings of this MANOVA revealed that there were no statistically significant differences in pretest and posttest JSE-HPS scores based on gender identity, Pillai's Trace $F(2,91) = 1.78$, $p = .18$, nor on the interaction of gender identity and case study type, Pillai's Trace $F(2,91) = .23$, $p = .80$.

Ancillary Findings

ATP-SF

The ANCOVA findings used to answer Research Question 1 indicated no statistically significant effect based on case study type but did reveal a statistically significant effect on posttest ATP-SF scores based on pretest ATP-SF. A paired *t* test was conducted to further examine the differences between the total pretest and posttest ATP-SF scores. Paired *t* test results revealed a statistically significant difference between the total pretest ATP-SF and posttest ATP-SF scores, $t(97) = -2.40$, $p = .02$.

ATP-SF Subscale Analysis

A review of the literature indicated that there might be differences based on ATP-SF subscales. Additional analyses were performed to gain further insight on the effect of a SDOH case study on ATP-SF. The ATP-SF consists of three subscales: Personal Deficiency, Stigma, and Structural Perspective. The results from this additional analysis indicate that there was a statistically significant effect on one of the three subscales of the ATP-SF.

A paired samples *t* test was conducted to examine the difference in pretest and posttest ATP-SF subscale scores (Table 4.5). The results indicate no statistically significant difference for subscale 1; Personal Deficiency pretest ($M = 27.87$; $SD = 3.97$) and posttest ($M = 28$; $SD = 3.62$); [$t(97) = -.378$, $p = .71$]. There was a statistically significant difference for subscale 2; Stigma pretest ($M = 27.88$; $SD = 5.43$) and posttest ($M = 29.8$; $SD = 5.6$); $t(97) = -3.77$, $p < .001$. There was no statistically significant difference for subscale 3; Structural Perspective pretest ($M = 20.9$; $SD = 3.76$) and posttest ($M = 21.01$; $SD = 2.84$); $t(97) = -.26$, $p = .80$.

Table 4.5

Paired Sample t test ATP-SF Pretest Sum vs ATP-SF Posttest Sum by Subscale

		Pretest ATP-SF sum		**Posttest ATP-SF sum**			
Subscale	*n*	Mean	Std. Deviation	Mean	Std. Deviation	*t*	Two-Sided *p*
Personal Deficiency	98	27.87	3.97	28	3.62	-.378	.71
Stigma	98	27.88	5.43	29.8	5.6	-3.77	<.001
Structural Perspective	98	20.9	3.76	21.01	2.84	-.258	.80

Personal Experience with Poverty

While the research questions focused on differences in the effect of a video and paper SDOH case study, additional analysis was conducted to explore the demographic characteristics. Some of the literature indicated that questions concerning participants' personal experience with poverty or financial hardships were assessed to gain a better understanding of the relationship between demographic characteristics and attitudes toward poverty (Alexander et al., 2020; Noone et al., 2012; Reutter et al., 2004; Sword et al., 2004; Vilem, 2015). In this study, participants who answered yes to having a personal experience with poverty were invited to then answer an open-ended question in the demographics section of the survey. Twenty responses were received to this open-ended question. Five shared experiences were identified among the 20 participants who responded: job loss, difficulty paying medical bills, living in a single-parent household, requiring government assistance, and loss of home. These experiences are presented in Table 4.6.

Table 4.6

Personal Experiences Qualitative Content Analysis (n = 20)

Shared Experiences	Number of Participants	Direct Quote Example
Job Loss	3	"A few years ago my mother and father got a divorce due to my father losing his job due to drinking on the job. Following the loss of his job we lost our home and were forced to find a quick solution. Ever since my mother and I have been on our own."
Difficulty Paying Medical Bills	2	"I had to stop schooling due to not being able to pay medical bills and work to pay off collection debt that have accumulated."
Living in a Single-Parent Household	4	"With only one parent, living comfortably is not always easy. I am not poor to the point where living can not be sustained, but I can not go on without being cautious of spending."
Requiring Government Assistance	3	"I have experience not a severe level of poverty but enough to cut back on expenses and using food stamps to obtain food but since it's only limited amount of money, there would be day where we wouldn't have enough to feed ourselves (my family and I) and my dad is on disability so not working which is affecting the household bills. It's very hard to pay the bills while having food to help us last a month."
Loss of Home	3	"My families house went into foreclosure after a period of financial struggle when my father had cancer."

Chapter Summary

In this chapter, the research findings from the study were presented. Descriptive statistics for demographic variables for the total sample and each site were first discussed to state the

similarities and differences among the groups. The main aim of the study was to identify the difference in the effect of a video or a paper SDOH case study on attitudes toward poverty in prelicensure nursing students. The secondary aim was to determine the difference in the effect of the video and paper SDOH case study on empathy. The difference in the effect these case studies had on empathy and attitudes toward poverty was the third aim. Finally, the last aim of this study was to examine the difference in gender identity and empathy concerning the effect of these case studies. The research questions were answered using ANCOVAs and MANOVAs. Ancillary analyses of the data were also presented. In the following chapter, a discussion of these findings will be presented in the context of the existing literature and the theoretical and conceptual framework along with limitations of the study and implications for nursing education, nursing practice, and future research.

Chapter 5: Discussion of Findings, Implications, and Conclusions

The main purpose of this study was to explore the effects of a classroom activity on empathy, attitudes toward poverty, and empathy and gender identity. This study examined the effects of a SDOH video case study versus a paper case study highlighting poverty, on empathy in prelicensure nursing students, their attitudes toward poverty, and the difference in the effects on empathy and attitudes toward poverty. This study also examined differences in the effects of the case study on empathy and gender identity in prelicensure nursing students, acknowledging gender identity as a non-binary construct. The SDOH case study was implemented in a sophomore-level nursing course before students have exposure to clinical experiences. Research on accessible SDOH teaching strategies is needed to implement effective learning activities throughout the nursing curriculum.

The AACN (2021) encourages nurses to provide holistic and compassionate, individualized care. Exploring the differences in empathy and attitudes toward poverty in prelicensure nursing students can help nurse educators gain a better understanding of teaching strategies that can improve affective domain skills. Providing person-centered and compassionate care requires nurses to recognize their biases and develop empathy for individuals (ANA, 2021). Nurse educators are charged with equipping future generations of nurses with these skills and weaving SDOH into the nursing curriculum to improve patient outcomes. The literature reviewed for this study demonstrated the use of role-play, as well as virtual and standardized simulation teaching strategies. These teaching strategies may not be accessible to all undergraduate nursing programs. Every academic institution has different access to funding, available faculty for group instructional methods, and simulation resources.

This chapter presents a discussion of the findings from the study and the implications for nursing education and future research. The findings will be discussed in the context of Constructivism and the concept of empathy. Lessons learned and limitations of the study will also be presented.

Discussion of Research Findings

As part of a larger study, the main goal of this research was to determine the difference in the effect of a SDOH video or paper case study on attitudes toward poverty in prelicensure nursing students. Secondly, this research aimed to identify difference in the effect of the case studies on empathy. The third goal was to determine the difference of the effect of the video or paper SDOH case studies between attitudes toward poverty and empathy. Lastly, this study aimed to identify the difference between gender identity and empathy before and after participating in a SDOH case study. Findings in relation to the research questions will be discussed, beginning with a discussion of the final paired sample demographics.

Sample

The final paired sample included 98 participants for the analysis of attitudes toward poverty and 96 participants for the analysis of empathy. Participants were undergraduate sophomore-level nursing students from two Northeastern and one Midwestern nursing program. The age range of participants was 18 to 55 years old, with the average age of 21 years old. The majority of the sample were White Caucasian females. These demographics align with the *National League for Nursing's 2022-2023 Annual Survey of Schools of Nursing Highlights* which reported that 85.2% of students in basic RN programs are female, 54% are under the age of 25, and nearly 59% are White (NLN, 2023).

In studies similar to this one, researchers asked participants demographic questions concerning their personal experiences with poverty and financial status (Alexander et al., 2020; Noone et al., 2012; Reutter et al., 2004; Sword et al., 2004; Vilem, 2015). The sample in this study were asked to report any personal experiences with poverty, the zip code where they had resided for the last 5 years, and if they had any work or volunteer experience with persons living in poverty. Only having work or volunteer experience with persons living in poverty was significantly different between the intervention and comparison groups. However, this variable did not have a significant impact on their attitudes toward poverty or empathy when controlling for the variable using an ANCOVA test. These findings contrast with the study by Alexander et al. (2020) who found that participants had significantly higher levels of empathy if they reported not having experience volunteering with persons living in poverty. When assessing relationships between participants' attitudes toward poverty and their reported financial security, Vliem (2015) found no correlation. In this study, correlations between the demographic variables and attitudes toward poverty and empathy were not analyzed.

Attitudes Toward Poverty

The ATP-SF data were analyzed to examine the difference in the effects of a SDOH video or paper case study on prelicensure nursing students' attitudes toward poverty. Results revealed that the type of SDOH case study did not have a statistically significant effect on attitudes toward poverty. These findings are similar to Menzel et al. (2014), who found no significant difference in attitudes toward poverty between an experimental group who participated in a virtual poverty simulation and a control group who completed an online self-study. However, studies that used role-play scenarios and service-learning experiences as an

experimental intervention did find statistically significant differences between groups (Noone et al., 2012; Vliem, 2015).

The literature revealed several single-group studies that found statistically significant differences in attitudes toward poverty from pretest to posttest (Gillis et al., 2023; Kuehn et al., 2020; Meaux et al., 2019; Tillman et al., 2020). In the analysis of the total pretest and posttest ATP-SF scores, the results from this study revealed a statistically significant difference, indicating that after participating in a SDOH case study and faculty-led structured debriefing, attitudes toward poverty became statistically significantly more positive. These findings show that participants' perspective shifted more toward an attitude that poverty is a result of structural economic deficits rather than a result of personal behavior.

The ATP-SF has three subscales: Personal Deficiency, Stigma, and Structural Perspective (Yun & Weaver, 2010). While analyzing the effect of a SDOH classroom activity on these subscales was not a direct research question, the findings may help gain a better understanding of participants' attitudes toward poverty. No statistically significant effect was found for the subscales of Personal Deficiency or Structural Perspectives. There was a significant effect found for the Stigma subscale. An increase in the Stigma subscale scores signifies that participants' attitudes have shifted more toward a belief in how society stigmatizes people experiencing poverty. A significant change in the Stigma subscale was found in studies that used the ATP-SF (Murray et al., 2022; Tillman et al., 2020; Wise et al., 2023).

There are possible reasons for the lack of a statistically significant difference between the intervention and comparison groups, and the presence of a statistically significant difference between total pretest and posttest ATP-SF scores, related to the study design. Both groups received the same faculty-led structured debriefing. According to Jeffries (2021), debriefing

provides an opportunity for learners to reflect on experiences and make connections between content and knowledge, and to understand their thought processes. In a mixed-methods study, Phan et al. (2020) used semi-structured debriefing methods to assess the effects of a health equity simulation and identified themes of perceived change in attitudes about working with marginalized populations, and an increased awareness of SDOH and health equity. Further investigation is needed to determine if the more positive attitudes toward poverty found in the posttest in this study were a result of the debriefing or from the general exposure to the lived experiences of individuals living in poverty.

Participants in this study were exposed to the real-life experiences of people living in poverty. They read or watched one single mother with a master's degree in education describe her struggles to find employment and provide for her family, and another family share how losing their business also resulted in losing their home and financial stability. One young man in the case study shared how his grandmother struggles to afford food that is healthy, nutritious, and needed for his prediabetes. It is possible that whether viewing or reading about these experiences, participants were able to gain a better understanding of how individuals find themselves in impoverished situations and how hard they must work to find the means to survive.

Another possible explanation for the lack of significance between the intervention and comparison group is the Hawthorne effect. When participants are aware of being in a study, their behavior may change due to their beliefs about the expectations of the researchers (Polit & Beck, 2017). The participants in this study were made aware that they were participating in a study and classroom activity concerning individuals experiencing poverty. With this awareness and having

exposure to the pretest, the participants may have answered the posttest survey based on what they perceived the researchers' expectations to be.

Empathy

The second research question examined the difference in the effects of a SDOH video or paper case study on empathy in prelicensure nursing students. Empathy was assessed using the JSE-HPS survey. A statistically significant difference in the effect on empathy was found based on the case study type, when controlling for pretest and experience working or volunteering with individuals living in poverty. However, findings also revealed that while the type of SDOH case study had an effect on empathy, the explanation for this effect was small. The analysis demonstrated that the variance in posttest JSE-HPS scores was more statistically significantly explained by pretest JSE-HPS scores when controlling for the case study type and experience working or volunteering with individuals living in poverty. These findings suggest that the participants' empathy level prior to participating in a SDOH case study and faculty-led structured debriefing was more influential on their empathy after, than the type of case study they received. Still, the effect of the pretest empathy only had a small to medium effect on the variance in posttest empathy levels.

There are possible explanations for the results of this study's analysis. The pretest JSE-HPS mean scores indicated that participants began the study with fairly high levels of empathy. Because of this, it may have been difficult for participants to score higher on the posttest analysis. This ceiling effect makes it difficult to adequately measure a change in pretest to posttest empathy levels (Polit & Beck, 2016). Additionally, in this study, participants passively watched a SDOH video or read the transcript and then participated in faculty-led structured debriefing. The small effect of the case study type on the variance in posttest empathy is possibly

explained by the lack of experiential learning that occurred and the similarity in the debriefing. In comparing the results of this study's findings to other research concerning empathy, it may suggest that experiential learning activities that fully engross learners in making decisions and engage in experiences are needed to create a statistically significant effect on empathy. Statistically significant changes in empathy were found in studies that provided learners with experiential hands-on learning opportunities such as standardized patient simulations, wearing an Empathy Belly Simulator, and virtual simulations (Arrogante et al., 2022; Deprey & Kobiske, 2023; Patterson et al., 2020; Thomas et al., 2020; Yu et al., 2021). Lastly, the concept of empathy applied to this study may offer an explanation that empathy is more of an innate human trait than an acquired skill.

Empathy and Attitudes Toward Poverty

Research Question 3 explored the difference in empathy and attitudes toward poverty before and after participating in a SDOH video or paper case study. Results of the ATP-SF and JSE-HPS were analyzed to determine the answer to this question. The analysis found no statistically significant differences in the empathy and attitudes toward poverty based on the type of SDOH case study. There is limited nursing education research examining the difference in empathy and attitudes toward poverty. Alexander et al. (2020) analyzed the difference in empathy and attitudes toward poverty based on demographic variables, such as personal experience with poverty and age, but they did not evaluate the difference between the two variables themselves.

The lack of statistical significance in the analysis of this study's data may be attributed to the lack of statistically significant differences found in the effect of case study type on empathy scores or attitudes toward poverty scores. Additionally, in the landmark research by Batson et al.

(1997), it was determined that increased empathy was significantly associated with more positive attitudes toward the group of people in focus. Based on this known relationship, it is not surprising that no statistically significant differences in empathy and attitudes toward poverty were found in this study. The results of this study support the findings from Batson et al. (1997) in that empathy and attitudes are closely related, therefore, no significant difference between the two variables should be found in this study because the participants had relatively high levels of empathy and positive attitudes toward poverty.

Empathy and Gender Identity

The final research question examined the difference in empathy by gender identity before and after participating in a SDOH video or paper case study. As discussed in Chapter 2, prior research has acknowledged gender as a binary construct of male and female. In alignment with DEI initiatives from the AACN (2021), this study provided options on the demographics survey for participants to identify as male, female, transgender male, transgender female, non-binary, or to not specify their gender identity. Only seven participants identified as male, and the remaining 89 identified as female. The other options were not chosen. These percentages are congruent with those reported by the NLN (2023), which reported only 0.1% of students in basic RN programs in the United States who identify as transgender, genderqueer, or non-binary, and 14.2% who identify as male.

The unequal sample sizes of male and female participants pose a significant threat to the internal validity of the findings. Type II errors are described as failing to identify an effect when one truly does exist or incorrectly accepting the null hypothesis (Polit & Beck, 2017). Statistically significant, unequal sample sizes increase the risk of a Type II error when analyzing

the data. Therefore, the findings from the analysis to answer this research question should not be considered valid.

No statistically significant differences in gender identity and empathy based on the type of SDOH case study were found in this study. The findings of this study are not like those of previous research. In multiple studies, results indicated that female participants had greater empathy than male participants (Deprey & Kobiske, 2023; Fjortoft et al., 2011; Hojat & Gonnella, 2015; Hojat, 2016; Strekalova et al., 2019; Ward et al., 2009). Based on previous research and the known threat to validity resulting from unequal sample sizes, the results from this study concerning the differences in empathy and gender identity should not be interpreted as definitive.

Conceptual and Theoretical Insights

Empathy

Conceptually, empathy is a learned behavior and an innate human trait (Alligood, 1992; Kunyk & Olson, 2001). Empathy is the ability for one to understand another person's experiences, concerns, and perspectives (Hojat et al., 2016). In this study, the pretest aimed to identify the levels of empathy before participating in a SDOH case study. Given Kalisch (1971) determined that empathy is a cognitive skill that can be taught and learned, the SDOH video and paper case study were used in this study to expose students to the lived experiences of people in poverty. The pretest analysis determined that participants had fairly high levels of empathy as an innate capacity, and this had a large effect on their posttest empathy level. The case study type only had a small effect on posttest empathy level. Therefore, whether participants watched the SDOH video or read the paper case study, there was no significant difference in the effect on empathy.

This study's research findings may suggest that the concept of empathy was incorrectly operationalized in this study. This study aimed to assess empathy as an acquired skill. It is possible that the SDOH classroom activity and the JSE-HPS in this study targeted the innate human trait of empathy. This could be an explanation for the significant variance in posttest empathy explained by pretest empathy. Support for this hypothesis is found in the evidence discussed earlier, which indicated empathy can be a learned skill with experiential teaching strategies (Arrogante et al., 2022; Deprey & Kobiske, 2023; Patterson et al., 2020; Thomas et al., 2020; Yu et al., 2021).

Alligood (1992) describes the acquired skill of empathy as clinical empathy and further describes this as the application to clinical practice. The intervention and comparison used in this study did not allow participants to make decisions. Additionally, the JSE-HPS did not assess participants' ability to apply empathetic actions into practice. Therefore, an experiential teaching strategy, such as simulation or role-play, and an instrument to assess participants' actions may provide a better analysis of empathy as an acquired skill.

Constructivism

Participants witnessed the experiences of people living in poverty through either a video or paper case study. They were then guided by faculty through debriefing questions. Assimilation and accommodation are key components of constructivism (Billings & Halstead, 2020). Through the lens of constructivism, the participants were able to take the knowledge gained from what they witnessed in the case study, and discussed in the debriefing, and apply it to previous attitudes toward poverty or empathy. In this application, they may have found congruency with their previous beliefs or accommodated their beliefs based on the new information. The findings of this study suggest that a constructivist approach to improving

attitudes toward poverty is effective. However, an experiential learning theory may be a better approach when attempting to influence empathy.

Lessons Learned

Many lessons were learned in the implementation of this study. Consideration of the timing of the intervention and comparison is a significant challenge when conducting a multi-site study. The curricula and semester schedules varied at each site. Ideal placement of the intervention and comparison was based on the content covered in the course so as to make it applicable. Course exam schedules and faculty availability were also significant factors that the PIs had to consider when deploying this study. The PIs were purposeful about not administering the pretest or the intervention, comparison, and posttest before or after an exam.

The nature of this study being a collaborative dissertation meant that multiple surveys were used to address collaborative and individual variables of interest. This resulted in lengthy surveys for participants to complete. One Qualtrics survey was used, which allowed the study to be deployed at different times that suited each specific site's schedule and allowed data to be pulled into one dataset. However, the quantity of data was a challenge for the PIs to navigate at first. Extensive review, cleaning, and organizing of data had to be done before analysis could begin and was a very cumbersome process. Had this not been research for a dissertation, the use of one instrument and demographic survey would have been much simpler for researchers and study participants.

Valuable experiences were also gained concerning collaborative research. Regular communication was a necessity for successful progress during the study. The PIs developed a matrix to identify the roles and responsibilities of each PI. Meetings were set regularly to work collaboratively and address any questions or concerns, as well as set dates for the completion of

tasks. Technology was an incredibly valuable collaboration resource. The PIs communicated via email, edits and comments on documents, and through live Zoom© meetings. The PIs were also able to share documents through secure platforms such as SPSS, Microsoft OneDrive, and Google Drive. Without constant communication and the assigned individual responsibilities used to complete tasks, this study would not have been successfully completed.

Implications for Nursing Education and Nursing Practice

The findings of this study add evidence of accessible teaching strategies for SDOH and attitudes toward poverty to the nursing education literature. The pretest-posttest quasi-experimental design executed at three different nursing schools located in different states provides strength to the findings of this study. The NLN highlighted the lack of integration of SDOH throughout the curriculum (2019). This study was intentionally conducted in sophomore-level nursing courses since traditionally SDOH content is primarily addressed in senior-level community or population health courses.

Previous studies have cited the use of teaching strategies such as service learning, CAPS, role play, and virtual simulations to improve attitudes toward poverty (Delpier et al., 2023; Gillis et al., 2023; Lowey, 2021; Meaux et al., 2019; Menzel et al., 2014; Noone et al., 2012). These teaching strategies are not accessible to all nursing programs due to limited faculty availability, funding, additional training needed to facilitate, and possibly insufficient service-learning clinical sites. The faculty who facilitated the Second Life® scenario for Menzel et al. (2014) faced technical difficulties when maneuvering the avatars and multitasking the avatar navigation and text communication.

The results of this study provide evidence that using free case studies and guided debriefing can improve attitudes toward poverty. The video used in this study was free and

accessible from YouTube. The results also suggest that a paper case study is equally effective in addressing attitudes toward poverty. Therefore, this teaching strategy is accessible, easy to use, and cost-effective. Nurse educators can begin to employ SDOH case studies depicting the lived experiences of real-life individuals and debriefing exercises in any nursing course throughout the curriculum.

The *Future of Nursing 2020-2030* report identified engaging and addressing SDOH on poor health outcomes as a desired outcome for achieving health equity through nursing (Flaubert et al., 2021). Nurses must be prepared to provide person-centered care without bias to all patients. Nurse educators are tasked with introducing SDOH to students to prepare them to care for their future patients with complex social, economic, and environmental factors that affect their health (Flaubert et al., 2021). This study's results support the use of a classroom teaching strategy to improve attitudes toward poverty, and therefore increasing new graduate nurses' capacity for providing compassionate care to persons experiencing poverty.

Recommendations for Future Research

This study provided valuable evidence for an accessible SDOH teaching strategy. No effect of the type of case study was found on attitudes toward poverty, and only a small effect found on empathy. This may be due to having only one short exposure to SDOH. A replicated study should include a repeated measures design to examine the effects of repeated exposure to a SDOH class teaching strategy over time. Additionally, research is needed to determine the effects of this SDOH classroom activity over time. In a longitudinal study, Murray et al. (2022) found improvement in attitudes toward poverty concerning the Stigma and Structural Perspectives subscales immediately following an intervention but after testing again 1 and 6 months later only the improved scores related to Stigma remained significantly increased. This

study could be replicated with a longitudinal design like that of Murray et al. (2022) including additional posttests at least 1 month after the intervention and comparison.

Attitudes toward poverty were significantly improved in this study, but the effect of case study type did not have a significant effect on attitudes toward poverty or empathy. The debriefing for the intervention and comparison groups was identical. This study should be replicated to assess the effects of the SDOH video vs paper case study before debriefing. Posttest surveys could be given to participants before they participate in the structured debriefing. It is also possible that the participants' individual learning styles affected the findings. Preferred learning styles were not assessed in this study but could prove to be beneficial in future studies to align interventions with how the participants learn best. However, this could be difficult in application to a real-life setting as classroom activities are not typically catered to students' individual needs. Therefore, a variety of instructional methods could also be used and assessed over time, like that described by Decker et al. (2017).

Open-ended questions and demographic information were gathered concerning the participants' personal and work or volunteer experiences with poverty. Future research is needed to determine the correlation between these variables and attitudes toward poverty and empathy. Additionally, a mixed-methods design would help gain additional meaning from open-ended responses and provide an enhanced perspective on why participants' attitudes toward poverty were impacted, and their empathy was not affected.

This study may not have correctly operationalized the concept of empathy. Future research should continue to explore empathy as an acquired skill using an experiential learning theory and teaching strategy, such as simulation. An instrument is needed that assesses participants' ability to demonstrate empathy as a skill, through interactions with patients and or

simulated patients. The analysis of the difference in gender identity and empathy was not valid in this study due to unequal sample sizes. However, previous research has found significant differences in gender identity and empathy. Future research should focus on attempting to gather equal samples of participants of various gender identities to evaluate the difference in the effects of an experiential teaching strategy on empathy and gender identity.

Limitations

Several limitations are noted in this study. First, a convenience sample of students who agreed to participate in this study is not necessarily representative of nursing students nationwide. Three sites were used with unidentical curricula. The varied curricula may have had effects on the study results. Attrition is also a noted limitation. The paired data were limited due to some participants not completing both the pretest and posttest. Randomization of participants into the intervention and comparison groups did not occur at Sites A and B. This lack of randomization places the study at risk for an alternative explanation for the results. The unequal samples between male and female participants were already discussed as a limitation to analyzing the data for Research Question 4. One intervention and comparison were administered to participants, and only one time. The lack of repeated exposure may not have been powerful enough to have an effect on participants' empathy, or to have an effect on attitudes toward poverty and empathy over time. Only one posttest was collected immediately after completing the intervention or comparison. This limits the study's findings in determining the effects of the intervention and comparison over time. The varied direction of the rating scales of each instrument may have caused confusion for participants, resulting in responses that were not valid. The length of the surveys may have also led to possible participant fatigue. It may be better to administer long surveys in two parts to prevent fatigue. Lastly, the outcome variables

were measured with self-report instruments. Participants may have selected options on the survey that they perceived to be desired by the researchers, or what they would consider socially acceptable.

Chapter Summary

The main goal of this study was to examine the effect of a SDOH video or paper case study on attitudes toward poverty in prelicensure nursing students. The second and third purpose were to examine the effect on empathy and the difference in the effect on empathy and attitudes toward poverty. Lastly, this study aimed to determine the difference in gender identity and empathy before and after participating in a SDOH video or paper case study.

This chapter discussed the findings of the research in relation to the research questions. Attitudes toward poverty were more positive after participants completed a SDOH case study and debriefing. This effect was evident even after controlling for confounding variables. There was no difference in the effect based on whether they participated in the video or paper case study format. The SDOH video and paper case study had no significant impact on empathy in prelicensure nursing students, nor was there a statistically significant effect in the difference between empathy and attitudes toward poverty. A valid response to the final research question was unable to be determined due to unequal samples of male and female participants.

The findings from this research provide a contribution to nursing education for an accessible and effective SDOH classroom teaching strategy. Despite the limitations of this study, the multi-site quasi-experimental pretest posttest design is a significant strength and sets an example for the rigor that is needed in nursing education research. The PIs in this study learned valuable lessons in conducting a multi-site study and collaboration. Recommendations for future research were provided based on the experiences and findings from this study.

References

Alexander, K., Clary-Muronda, V., Smith, J. M., & Ward, J. (2020). The relationship between past experience, empathy, and attitudes toward poverty. *Journal of Nursing Education, 59*(3), 158-162. https://doi.org/10.3928/01484834-20200220-07

Alligood, M. R. (1992). Empathy: The importance of recognizing two types. *Journal of Psychosocial Nursing and Mental Health Services*, *30*(3), 14-17. https://doi.org/10.3928/0279-3695-19920301-06

American Association of Colleges of Nursing. (2021, April 6). *The essentials: Core competencies for professional nursing education.* https://www.aacnnursing.org/Portals/42/AcademicNursing/pdf/Essentials-2021.pdf

American Association of Colleges of Nursing. (2022, January 11). *Data spotlight: The impact of insufficient clinical sites on baccalaureate program admissions.* https://www.aacnnursing.org/news-data/all-news/january-2022-data-spotlight-impact-of-insufficient-clinical-sites-on-baccalaureate-program-admissions

American Nurses Association. (2017, January). *American Nurses Association: Ethics and human rights statement*. https://www.nursingworld.org/~4aef79/globalassets/docs/ana/ethics/anastatement-ethicshumanrights-january2017.pdf

American Nurses Association. (2018). The nurse's role in addressing discrimination: Protecting and promoting inclusive strategies in practice settings, policy, and advocacy. *OJIN: The Online Journal of Issues in Nursing*, *24*(3). https://doi.org/10.3912/OJIN.Vol24No03PoSCol01

American Nurses Association. (2021, February). *Care coordination and registered nurses' essential role*. https://www.nursingworld.org/practice-policy/nursing-excellence/official-position-statements/id/care-coordination-and-registered-nurses-essential-role/

American Nurses Association. (2024, February 21). *Nurturing leadership: 4 key strategies for reflective practice in nursing.* https://www.nursingworld.org/content-hub/resources/nursing-leadership/reflective-practice-in-nursing/

Arrogante, O., Velarde-García, J., Blázquez-González, P., & Nieves Moro-Tejedor, M. (2022). The effects of high-fidelity simulation training on empathy and attitudes toward older people among undergraduate nursing students: A quasi-experimental study. *Nurse Education in Practice, 64*, 103441. https://doi.org/10.1016/j.nepr.2022.103441

Atherton, C. R., Gemmel, R. J., Haagenstad, S., Holt, D. J., Jensen, L. A., O'Hara, D. F., et al. (1993). Measuring attitudes toward poverty: A new scale. *Social Work Research and Abstracts, 29*(4), 28-30. https://doi.org/10.1093/swra/29.4.28

Batson, C. D., Polycarpou, M. P., Harmon-Jones, E., Imhoff, H. J., Mitchener, E. C., Bednar, L. L., Klein, T. R., & Highberger, L. (1997). Empathy and attitudes: Can feeling for a member of a stigmatized group improve feelings toward the group?. *Journal of Personality and Social Psychology, 72*(1), 105. https://psycnet.apa.org/doi/10.1037/0022-3514.72.1.105

Batson, C. D., Chang, J., Orr, R., & Rowland, J. (2002). Empathy, attitudes, and action: Can feeling for a member of a stigmatized group motivate one to help the group?. *Personality and Social Psychology Bulletin, 28*(12), 1656-1666. https://doi.org/10.1177/014616702237647

Billings, D.M., Halstead, J.A. (2020). *Teaching in nursing: A guide for faculty* (6th ed.) Elsevier.

Brandon, A. F., & All, A. C. (2010). Constructivism theory analysis and application to curricula. *Nursing Education Perspectives*, *31*(2), 89-92. https://doi-org.ezproxy.cul.columbia.edu/10.1093/swra/29.4.28

Bandy, J. (2011). *What is service learning or community engagement.* Center for Teaching, Vanderbilt University. https://cft.vanderbilt.edu/guides-sub-pages/teaching-through-community-engagement/

Brunero, S., Lamont, S., & Coates, M. (2010). A review of empathy education in nursing. *Nursing Inquiry*, *17*(1), 65-74. https://doi.org/10.1111/j.1440-1800.2009.00482.x

Cambridge Dictionary. (2023). *Empathy: Definition in the Cambridge English Dictionary*. https://dictionary.cambridge.org/us/dictionary/english/empathy

Centers for Disease Control and Prevention. (2022). *Adolescent and school health: Terminology*. https://www.cdc.gov/healthyyouth/terminology/sexual-and-gender-identity-terms.htm

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.

Cohen, J. (1992). Statistical power analysis. *Current Directions in Psychological Science*, *1*(3), 98–101. https://doi.org/10.1111/1467-8721.ep10768783

Creamer, J., Shrider, E.A., Burns, K., & Chen, F. (2022, September 13). *Poverty in the United States: 2021*. United States Census Bureau. https://www.census.gov/library/publications/2022/demo/p60-277.html

Decker, K. A., Hensel, D., Kuhn, T. M., & Priest, C. (2017). Innovative implementation of social determinants of health in a new concept-based curriculum. *Nurse Educator, 42*(3), 115–116. https://doi.org/10.1097/nne.0000000000000330

Delpier, T., Nelson, L., Crum, M., Klett, M., Smith, K., Crabb, J., & Puncochar, J. (2023). Comparison of students' attitudes towards poverty following an interdisciplinary poverty simulation. *Journal of Higher Education Theory and Practice, 23*(5). https://doi.org/10.33423/jhetp.v23i5.5921

Deprey, S. M., & Kobiske, K. (2023). Dementia simulation impact on empathy of nursing and physical therapy students: A quantitative study. *Clinical Simulation in Nursing, 81*, 101412. https://doi.org/10.1016/j.ecns.2023.03.005

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, phone, mail, and mixed-mode surveys: The tailored design method* (4th ed.). Wiley.

DiNitto, D. M. (2000). *Social welfare: Politics and public policy* (5th ed.). Allyn & Bacon.

Fjortoft, N., Van Winkle, L. J., & Hojat, M. (2011). Measuring empathy in pharmacy students. *American Journal of Pharmaceutical education, 75*(6), 109. https://doi.org/10.5688/ajpe756109

Flaubert, J.L., Menestrel, S.L., Williams, D.R., & Wakefield, M.K. (2021). *The future of nursing 2020-2030: Charting a path to achieve health equity*. National Academies Press (US). https://www.ncbi.nlm.nih.gov/books/NBK573919/

Gillis, L. J., Blackwell, L. M., & Taylor-Garza, A. (2023). Virtual poverty simulation: Effect on attitudes toward poverty in nursing students. *Journal of Nursing Education, 62*(11), 642–646. https://doi.org/10.3928/01484834-20230906-06

Harrison, E. (2012). How to develop well-written case studies: The essential elements. *Nurse Educator, 37*(2), 67-70. http://doi.org/ 10.1097/NNE.0b013e3182461ba2

Healthcare.gov. (n.d.). *Federal poverty level (FPL).* https://www.healthcare.gov/glossary/federal-poverty-level-fpl/

Hekel, B. E., Pullis, B. C., Edwards, A. P., & Alexander, J. (2023). Teaching social determinants of health through an unfolding case study. *Nurse Educator*, *48*(3), 137. http://doi.org/10.1097/NNE.0000000000001333.

Hirschey, R., Tan, K.R., Petermann, V.M., and Bryant, A.L. (2021). Healthy lifestyle behaviors: Nursing considerations for social determinants of health. *Clinical Journal of Oncology Nursing*, *25*(5), 42-48. http://doi.org/10.1188/21.CJON.S1.42-48

Hojat, M., Mangione, S., Nasca, T. J., Cohen, M. J., Gonnella, J. S., Erdmann, J. B., Veloski, J., & Magee, M. (2001). The Jefferson Scale of Physician Empathy: Development and preliminary psychometric data. *Educational and Psychological Measurement*, *61*(2), 349-365. https://doi-org.ezproxy.cul.columbia.edu/10.1177/00131640121971158

Hojat, M., & Gonnella, J. S. (2015). Eleven years of data on the Jefferson Scale of Empathy-Medical Student Version (JSE-S): Proxy norm data and tentative cutoff scores. *Medical Principles and Practice, 24*, 344-350. https://doi.org/10.1159/000381954

Hojat, M. (2016*). Empathy in health professions education and patient care*. Springer International.

Hojat, M., DeSantis, J., Shannon, S. C., Speicher, M. R., Bragan, L., & Calabrese, L. H. (2020). Empathy as related to gender, age, race and ethnicity, academic background and career interest: A nationwide study of osteopathic medical students in the United States. *Medical Education, 54*(6), 571-581. https://doi.org/10.1111/medu.14138

Hojat, M., Maio, V., Pohl, C. A., & Gonnella, J. S. (2023). Clinical empathy: Definition, measurement, correlates, group differences, erosion, enhancement, and healthcare outcomes. *Discover Health Systems, 2*(1), 1–17. https://doi.org/10.1007/s44250-023-00020-2

Houle S. (2015). An introduction to the fundamentals of randomized controlled trials in pharmacy research. *The Canadian Journal of Hospital Pharmacy, 68*(1), 28–32. https://doi.org/10.4212/cjhp.v68i1.1422

Hunter, J. L., & Krantz, S. (2010). Constructivism in cultural competence education. *Journal of Nursing Education*, *49*(4), 207-214. https://doi.org/10.3928/01484834-20100115-06

INACSL Standards Committee. (2016). Healthcare simulations of best practice: Debriefing. *Clinical Simulation in Nursing, 12*, S21-S25. https://doi.org/10.1016/j.ecns.2016.09.008

Jeffries, P.R. (2021). *Simulation in nursing education: From conceptualization to evaluation.* National League for Nursing

Juan, S., & O'Connell, K. A. (2024). A systematic review of the application of simulation to promote empathy in nursing education. *Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare*, *19*(6), 379-387. https://doi.org/10.1097/sih.0000000000000775

Kalisch, B. J. (1971). An experiment in the development of empathy in nursing students. *Nursing Research, 20*(3), 202–210. https://doi.org/10.1097/00006199-197105000-00003

Kang, H. (2013). The prevention and handling of the missing data. *Korean Journal of Anesthesiology, 64*(5), 402-406. http://dx.doi.org/10.4097/kjae.2013.64.5.402

Kellar, S.P. and Kelvin, E.A. (2013). *Munro's statistical methods for health care research* (6th ed.). Wolters Kluwer; Lippincott Williams & Wilkins.

Killion, C. M., Sfiligoj, R., & Williams, E. A. (2022). Caring for the poor: Lessons learned from a simulation on social determinants of health. *Applied Nursing Research*, 67. https://doi.org/10.1016/j.apnr.2022.151623

Kruse, J. A., & El-Khoury, H. (2022). A poverty simulation to enhance nursing student knowledge, skills, and attitudes toward people living in poverty. *Nursing Forum*, *57*(5), 851–859. https://doi.org/10.1111/nuf.12739

Kuehn, M. B., Grosch Mendes, C. M., Fukunaga Luna Victoria, G. M., Nemetz, E., & Rigos, Z. C. P. (2020). A poverty simulation's impact on nursing and social work students' attitudes towards poverty and health. *Creative Nursing*, *26*(4), 256–262. https://doi.org/10.1891/CRNR-D-20-00051

Kunyk, D., & Olson, J.K. (2001). Nursing theory and concept development or analysis: Clarification of conceptualizations of empathy. *Journal of Advanced Nursing, 35*(3), 317-325. https://doi.org/10.1046/j.1365-2648.2001.01848.x

Licciardone, J.C., Tran, Y., Ngo, K., Toledo, D., Peddireddy, N., and Aryal, S. (2024). Physician empathy and chronic pain outcomes. *JAMA Network Open, 7*(4), e246026.

Liu, W. (2023). Effect of unfolding case-based learning on clinical judgment among undergraduate nursing students. *Nurse Educator, 00*(0), 1-6 https://*doi:10.1097/NNE.0000000000001526*

Lowey, S. E. (2021). Impact of a simulation workshop on nursing students' attitudes toward poverty. *Journal of Nursing Education*, *60*(8), 462-465. https://doi.org/10.3928/01484834-20210722-09

Meaux, J. B., Ashcraft, P. F., & Gillis, L. (2019). The effect of the poverty simulation on BSN student attitudes toward poverty and poor people. *Nurse Education Today*, *83*, 104192-104192. https://doi.org/10.1016/j.nedt.2019.08.010

McLeod, S. (2024, February 1). *Constructivism learning theory & philosophy of education*. SimplyPsychology. https://www.simplypsychology.org/constructivism.html#Types-of-Constructivism

Menzel, N., Willson, L. H., & Doolen, J. (2014). Effectiveness of a poverty simulation in Second Life®: Changing nursing student attitudes toward poor people. *International Journal of Nursing Education Scholarship*, *11*(1), 39-45. https://doi.org/10.1515/ijnes-2013-0076

Morgan, L., McNiel, P., & Koplitz, J. (2023). Understanding poverty through virtual simulation: Implications for student clinical practice. *International Journal of Nursing Education Scholarship*, *20*(1), 20220105. https://doi.org/10.1515/ijnes-2022-0105

Mullaly, B. (2007). *The new structural social work* (3rd ed.). Oxford University Press.

Murray, P. M., Sepulveda, A., & Baird, J. (2022). Longitudinal impact of a poverty simulation on healthcare practitioners' attitudes towards poverty. *Journal of Pediatric Nursing*, *64*, 24–30. https://doi.org/10.1016/j.pedn.2022.01.016

National League for Nursing. (2005). *Student satisfaction and self-confidence in learning*. https://www.nln.org/docs/default-source/uploadedfiles/default-document-library/instrument-2-satisfaction-and-self-confidence-in-learning.pdf?sfvrsn=6ef5d60d_0

National League for Nursing. (2015). *Debriefing across the curriculum: A living document from the National League for Nursing.* https://www.nln.org/docs/default-source/uploadedfiles/professional-development-programs/nln-vision-debriefing-across-the-curriculum.pdf

National League for Nursing. (2019). *A vision for integration of the social determinants of health into nursing education curricula: A living document from the National League for*

Nursing. https://www.nln.org/docs/default-source/uploadedfiles/default-document-library/social-determinants-of-health.pdf?sfvrsn=aa66a50d_0

National League for Nursing. (2023). *NLN annual survey of schools of nursing highlights 2022-2023: Nursing students.* https://www.nln.org/docs/default-source/research-statistics/nln-annual-survey-2022-2023.pdf?sfvrsn=27acdd97_3

National League for Nursing. (2023). *Public policy agenda 2023-2024.* https://www.nln.org/docs/default-source/default-document-library/2023-2024-nln-public-policy-agenda.pdf?sfvrsn=6a1bd3ac_3

Noone, J., Sideras, S., Gubrud-Howe, P., Voss, H., & Mathews, L. R. (2012). Influence of a poverty simulation on nursing student attitudes toward poverty. *Journal of Nursing Education*, *51*(11), 617-622. https://doi.org/10.3928/01484834-20120914-01

Noone, J. (2022). Preparing nurse educators to teach social determinants of health using backward design. *Journal of Nursing Education, 61*(9), 511–515. https://doi.org/10.3928/01484834-20220705-05

Palaganas, J. C., Fey, M., & Simon, R. (2016). Structured debriefing in simulation-based education. *AACN Advanced Critical Care*, *27*(1), 78-85. https://doi.org/10.4037/aacnacc2016328

Patterson, J., Duke, G., Stocks, E., & Hermanns, M. (2020). Simulation to enhance empathy of nursing students toward patients with alcohol use disorder. *Nurse Educator, 45*(6), 331–335. https://doi.org/10.1097/nne.0000000000000804

Peplau, H. (1952). *Interpersonal relations in nursing.* GP Putnam's Sons.

Phan, Q., Johnson, N., Hillman, J., Geller, D., Kimble, L. & Swan, B. (2020). Assessing baccalaureate nursing students' knowledge and attitudes of social determinants of health

after a health equity simulation. *International Journal of Nursing Education Scholarship*, *17*(1), 20200024. https://doi.org/10.1515/ijnes-2020-0024

Piaget, J. (1973). *To understand is to invent: The future of education.* Grossman Publishers.

Polit, D. F., & Beck, C. T. (2016). *Nursing research: Generating and assessing evidence for nursing practice* (10th ed.). Wolters Kluwer.

Reutter, L., Neufeld, A., & Harrison, M. J. (1999). Public perceptions of the relationship between poverty and health. *Canadian Journal of Public Health, 90*(1), 13–18. https://doi.org/10.1007/bf03404091

Shadish, W.R., Cook, T.D., Campbell, D.T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Wadsworth, Cengage Learning.

Shrider, E.A. (2024). *Poverty in the United States: 2023.* United States Census Bureau. https://www.census.gov/library/publications/2024/demo/p60-283.html#:~:text=In%202023%2C%20the%20official%20poverty,and%20Table%20B%2D5).

Strekalova, Y. A., Kong, S., Kleinheksel, A. J., & Gerstenfeld, A. (2019). Gender differences in the expression and cognition of empathy among nursing students: An educational assessment study. *Nurse Education Today*, *81*, 1-6. https://doi.org/10.1016/j.nedt.2019.04.004

Sword, W., Reutter, L., Meagher-Stewart, D., & Rideout, E. (2004). Baccalaureate nursing students' attitudes toward poverty: Implications for nursing curricula. *Journal of Nursing Education, 43*(1), 13-19. https://doi.org/10.3928/01484834-20040101-05

Thomas, V., Lambert, A. W., Wang, C., & Gauthier, A. (2020). Using simulation exercises to teach nursing students the concept of empathy. *The ABNF Journal, 31*(2), 61–66.

http://ezproxy.cul.columbia.edu/login?url=https://www.proquest.com/scholarly-journals/using-simulation-exercises-teach-nursing-students/docview/2457704486/se-2

Tillman, P., Thomas, M. K., Buelow, J. R. (2020). Impact of service learning on student attitudes toward the poor and underserved. *Nurse Educator*, *45*(6), 316–320. https://doi.org/10.1097/nne.0000000000000807

University of Wisconsin-Madison. (n.d.). *How is poverty measured?.* Institute for Research on Poverty. https://www.irp.wisc.edu/resources/how-is-poverty-measured/

U.S. Department of Health and Human Services. (n.d.). *Healthy people: Poverty.* https://health.gov/healthypeople/priority-areas/social-determinants-health/literature-summaries/poverty

U.S. Department of Health and Human Services. (n.d.). *HHS poverty guidelines for 2025*. https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines#main-content

Vliem, S. (2015). Nursing students' attitudes toward poverty: Does experiential learning make a difference?. *Nurse Educator, 40*(6), 308-312. https://doi.org/10.1097/NNE.0000000000000168

Vygotsky, L. S. (1962). *Thought and language.* The MIT Press Ltd.

Wamsley, L. (2021, June 2). *A guide to gender identity terms*. National Public Radio: STLPR. https://www.npr.org/2021/06/02/996319297/gender-identity-pronouns-expression-guide-lgbtq

Ward, J., Schaal, M., Sullivan, J., Bowen, M. E., Erdmann, J. B., & Hojat, M. (2009). Reliability and validity of the Jefferson Scale of Empathy in undergraduate nursing students. *Journal of Nursing Measurement*, *17*(1), 73. https://doi.org/10.1891/1061-3749.17.1.73

Webster, D. (2010). Promoting empathy through a creative reflective teaching strategy: A mixed-method study. *Journal of Nursing Education*, *49*(2), 87-94. https://doi.org/10.3928/01484834-20090918-09

Williams, B., Brown, T., Boyle, M., & Dousek, S. (2013). Psychometric testing of the Jefferson Scale of Empathy Health Profession Students' version with Australian paramedic students. *Nursing & Health Sciences, 15*(1), 45-50. https://doi.org/10.1111/j.1442-2018.2012.00719.x

Wise, B., Sneed, K., Eby, R., Oldham, R. (2023). Interprofessional poverty simulation affects student attitudes toward poverty and interprofessional relationships. *The Internet Journal of Allied Health Sciences and Practice, 21*(1), 1-10. https://doi.org/10.46743/1540-580X/2023.2179

Witherspoon, M., Pankonien, C. A., Baldwin, J., & Hunter, C. (2023). The impact of a role-play patient simulation on nursing students as measured by the comprehensive state empathy scale. *Teaching and Learning in Nursing, 18*(3), e79–e83. https://doi.org/10.1016/j.teln.2023.04.016

Wittenauer, J., Ludwick, R., Baughman, K., & Fishbein, R. (2015). Surveying the hidden attitudes of hospital nurses' towards poverty. *Journal of Clinical Nursing, 24*(15-16), 2184–2191. https://doi.org/10.1111/jocn.12794

World Health Organization. (2023). *Social determinants of health*. https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1

Yu, J., Parsons, G. S., Lancastle, D., Tonkin, E. T., & Ganesh, S. (2021). "walking in their shoes": The effects of an immersive digital story intervention on empathy in nursing students. *Nursing Open, 8*(5), 2813–2823. https://doi.org/10.1002/nop2.860

Yun, S. H., & Weaver, R. D. (2010). Development and validation of a short form of the attitude toward poverty scale. *Advances in Social Work, 11*(2), 174-187. https://doi.org/10.18060/437

Zeller, J., Fruin, B., Newkirk, M., & Travers, E. (2024). The effect of simulation on attitudes and empathy related to persons experiencing homelessness among nursing students. *Teaching and Learning in Nursing, 19*(2), e320–e323. https://doi.org/10.1016/j.teln.2023.12.007

Appendix A

Attitude Toward Poverty Short Form

ATP 21-item Short Form

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Poor people are dishonest.	SA	A	N	D	SD
2. Poor people are different from the rest of society.	SA	A	N	D	SD
3. Children raised on welfare will never amount to anything.	SA	A	N	D	SD
4. Poor people act differently.	SA	A	N	D	SD
5. Most poor people are dirty.	SA	A	N	D	SD
6. Poor people generally have lower intelligence than nonpoor people.	SA	A	N	D	SD
7. I believe poor people have a different set of values than do other people.	SA	A	N	D	SD
8. Welfare makes people lazy.	SA	A	N	D	SD
9. An able-bodies person collecting welfare is ripping off the system.	SA	A	N	D	SD
10. Unemployed poor people could find jobs if they tried harder.	SA	A	N	D	SD
11. Poor people think they deserve to be supported.	SA	A	N	D	SD
12. Welfare mothers have babies to get more money.	SA	A	N	D	SD
13. Some "poor" people live better than I do, considering all their benefits.	SA	A	N	D	SD
14. There is a lot of fraud among welfare recipients.	SA	A	N	D	SD

15. Benefits for poor people consume a major part of the federal budget.	SA	A	N	D	SD
16. People are poor due to circumstances beyond their control.	SA	A	N	D	SD
17. Society has the responsibility to help poor people.	SA	A	N	D	SD
18. Poor people are discriminated against.	SA	A	N	D	SD
19. People who are poor should not be blamed for their misfortune.	SA	A	N	D	SD
20. If I were poor, I would accept welfare benefits.	SA	A	N	D	SD
21. I would support a program that resulted in higher taxes to support social programs for poor people.	SA	A	N	D	SD

Factor 1 = Personal Deficiency (Questions 1, 2, 3, 4, 5, 6, 7)

Factor 2 = Stigma (Questions 8, 9, 10, 11, 12, 13, 14, 15)

Factor 3 = Structural Perspective (Questions 16, 17 18, 19, 20, 21); The response to these questions should be reversed when they are calculated.

For scoring purposes, use the total sum scores and/or mean scores.

Appendix B

Jefferson Scale of Empathy for Health Professions Students

*7-point Likert scale for each item (1 = *Strongly Disagree* to 7 = *Strongly Agree*), with a possible score ranging from 20 to 140.

1. Health care providers' understanding of their patients' feelings and the feelings of their patients' families does not influence treatment outcomes.
2. Patients feel better when their health care providers understand their feelings.
3. It is difficult for a health care provider to view things from patients' perspectives.
4. Understanding body language is as important as verbal communication in health care provider – patient relationships.
5. A health care provider's sense of humor contributes to a better clinical outcome.
6. Because people are different, it is difficult to see things from patients' perspectives.
7. Attention to patients' emotions is not important in patient interview.
8. Attentiveness of patients' personal experiences does not influence treatment outcomes.
9. Health care providers should try to stand in their patients' shoes when providing care to them.
10. Patients value a health care provider's understanding of their feelings which is therapeutic in its own right.
11. Patients' illnesses can be cured only by targeted treatment; therefore, health care providers' emotional ties with their patients do not have a significant influence in treatment outcomes.

12. Asking patients about what is happening in their personal lives is not helpful in understanding their physical complaints.
13. Health care providers should try to understand what is going on in their patients' minds by paying attention to their non-verbal cues and body language.
14. I believe that emotion has no place in the treatment of medical illness.
15. Empathy is a therapeutic skill without which a health care provider's success is limited.
16. Health care providers' understanding of the emotional status of their patients, as well as that of their families is one important component of the health care provider – patient relationship.
17. Health care providers should try to think like their patients in order to render better care.
18. Health care providers should not allow themselves to be influenced by strong personal bonds between patients and their family members.
19. I do not enjoy reading non-medical literature or the arts.
20. I believe that empathy is an important factor in patients' treatment.

Appendix C

Demographics Survey

Demographics

By checking the "I agree" box, you agree to participate in this study. You also confirm that you are 18 years or older.
To agree: Check the "I agree" box below and then begin the survey. If you do not wish to participate in this study, simply close this browser window.

- ○ I agree

Demographics

Are you currently enrolled in this course for the first time?

- ○ Yes
- ○ No, I am repeating the course

Is this your first college degree?

- ○ Yes
- ○ No

What is your age?

What is the zip code of your primary residence for the last five years?

Which institution are you currently enrolled at?

- ○ Felician University
- ○ Sacred Heart University
- ○ Goldfarb School of Nursing at Barnes-Jewish College

What race(s) do you identify as:

- ○ American Indian or Alaska Native
- ○ Asian
- ○ Black or African-American
- ○ Native Hawaiian or Pacific Islander

Select all that apply:

- ☐ I am Hispanic
- ☐ I am Latino
- ☐ I am Spanish
- ☐ None of the above

Which gender do you identify as?

- ○ Male
- ○ Female
- ○ Transgender male
- ○ Transgender female
- ○ Non-binary
- ○ Prefer to self-describe below (fill in the blank)

What is your religious affiliation?

- ○ Buddhist

- ○ Catholic
- ○ Christian
- ○ Hindu
- ○ Islamic
- ○ Jewish
- ○ I do not identify with a religious group
- ○ _____ Other (fill in the blank)

What is your political affiliation?

- ○ Democrat
- ○ Independent
- ○ Republican
- ○ No political affiliation
- ○ _____ Other (fill in the blank)

Are you a United States Veteran or currently serving in the United States military?

- ○ Yes
- ○ No

Are you a first-generation college student?
(A first-generation college student is defined as someone whose parent(s) did not complete a 4-year college or university degree)

- ○ Yes
- ○ No

Do you have previous or current experience working in health care?

- ○ Yes (if yes, describe below)

- ○ No

Do you have volunteer or work experience with individuals living in poverty?

- ○ Yes (if yes, please describe)

- ○ No

Do you have personal experience with poverty? If you are comfortable, please share your personal experience(s) with poverty.

- ○ Yes (if yes, please describe)

- ○ No

Appendix D

Pilot Study of the Pretest and Posttest Surveys

(matrix-style question) Please rate the overall user-friendliness of the
Pretest
Posttest
- Very user-friendly
- Somewhat user-friendly
- Not user-friendly

(matrix-style question) Please rate the clarity of the instructions for the
Pretest
Posttest
- Easily understandable
- Somewhat understandable
- Not understandable

If you chose “somewhat understandable” or “not understandable,” please explain why here (free text)

(multiple-choice style question) How did you take the pretest?
- On a computer
- On a mobile device

(multiple-choice style question) How did you take the posttest?
- On a computer
- On a mobile device

(multiple-choice style question) The demographic survey questions on the pretest offered accurate and bias-free descriptions for me to choose from.
- Strongly agree
- Somewhat agree
- Somewhat disagree
- Strongly disagree

(multiple-choice style question) The demographic survey questions on the pretest made me uncomfortable.
- Strongly agree
- Somewhat agree
- Somewhat disagree
- Strongly disagree

(free text) If you chose “strongly agree,” or “somewhat agree,” please explain what it was about the questions that made you uncomfortable.

(free-text) How many minutes did it take you to complete the pretest?

(free text) How many minutes did it take you to complete the posttest?

(free text) Please include all other feedback here.

Appendix E

Intervention Group Case Study

Poverty Video Presentation 12.20.23.mp4

Appendix F

Fair Use Policy Related to YouTube

---------- Forwarded message ---------
From: **Torres, Arlene** <at3665@tc.columbia.edu>
Date: Mon, Oct 16, 2023 at 10:13 AM
Subject: Re: a couple quetsions
To: Dickinson, Jane <dickinson@tc.columbia.edu>

Hi Jane,

Use of the video for teaching, scholarship or research is not an infringement of copyright and is covered by fair use.
Proper attribution should also be provided.

Have a great day.

Arlene Torres
Associate General Counsel
Teachers College, Columbia University
525 West 120th Street, Box 83
New York, NY 10027
at3665@tc.columbia.edu | p: (212) 678-3566

Appendix G

Comparison Group Case Study

Scenario #1

Growing Up in Poverty in the USA: Marcell's Story

UNICEF

© 2023 Google

The following case study depicts real-life individuals living in poverty.

Marcell Jenkins is a 12-year-old, Black male living in New Jersey.

Setting: Marcell sitting at the kitchen table.

Marcell: *My name is Marcell Jenkins. I am twelve years old and I live in the United States of America.*

Setting: Marcell is seen walking through an empty overgrown lot in an urban area.

Marcell: *As I get older I don't know exactly what I would like to be. I could go and be a very smart young man but make one mistake and I could become a homeless man. So I'm just trying to see what life deals me.*

Setting: Marcell sitting at the kitchen table.

Marcell: *If it were my birthday tomorrow and I could have anything I wanted…I'd honestly say…money.*

Setting: Marcell and his grandmother walking down the street.

Marcell's grandmother: *The air freshener a dollar. That's more my speed.*

Setting: Marcell and his grandmother shopping in a thrift store.

Marcell: *I don't really have a problem going to a flea market or a second hand store. It's not like someone asks you, "would you like to have this shirt?" and you say "No because that's used." I might say, "Yes", and wash it several times to make sure it's clean and I'll wear it like it's brand new.*

Setting: Marcell and his grandmother walking through aisles of used clothing at the thrift store. Marcell is holding up a shirt.

Marcell's grandmother: *You should be able to wear that*

Marcell: *Yeah, and then put on my black jeans.*

Marcell's grandmother: *Always jeans, no dress pants?!*

Marcell: *That's all I have…Mom, that's all I have…remember?*

Marcell (narration): *My parents, they were in the streets on drugs and they weren't fit to be parents. So, I had to come and live with my grandmother. Every night, I go in her room and give her a kiss goodnight and say, "Good night and I love you", because I don't know if she's gonna wake up tomorrow. I constantly worry about my grandmother, because she's done so much for me.*

In Camden, it's challenging because people are losing their jobs, people are getting laid off. That is not fair. These people might just be living off of one welfare check a week, one welfare check a month. Where you can't survive off of this money. I would change it that more and more jobs would be in Camden.

I'd like to change the violence and the drug use in this community because some kids are being sucked in at a young age. You could be ten years old and just playing outside and some guy will tell you, "Would you like to sell this stuff for me?", and you don't know what's right and wrong. You have to think that your life is on the line everyday. This kid just got shot. They might have just been in the way as a four-year-old little kid playing outside…could be in the crossfire and get killed.

Setting: Marcell's Grandmother's Kitchen

Marcell (narration): *At school, lunch is something different everyday: burgers, tacos, a little bit of everything. It's harder to eat healthy than to eat junk because junk is something that's always going to be there. Eating healthy, you have to pay, sometimes your parents have to pay more cause this one year, I had a diet for school. I was going on a diet all year for school. My grandma paid, altogether paid a hundred dollars extra than she usually did, because she had to go buy no sodium lunch meat, no sodium cheese, special chips that didn't have any salt in them and special things. I'm on medicine. I weigh as much as a grown man, maybe even more, and I'm having health problems. They're watching me cause I'm borderline diabetes and they're trying to keep me out of trouble, and that's why right now, I'm getting more active with my friends.*

Setting: Marcell walking on an overpass, looking through a chainlink fence

Marcell (narration): *Some of the downside of being a twelve year old in this country is that if you make one wrong mistake, that can be on, that can be something that will follow you for the rest of your life. A lot of things aren't… aren't really attainable. The good thing about me being twelve years old and an American citizen is that the world is sitting there waiting for me to come and change something, for me to come and do something good.*

Scenario #2

America's Poor Kids

Real Stories

The following case study depicts real-life individuals living in poverty:

Tom Davis, his wife, Classy, and their three children (Joshua, Jaylin and Johnny) are a Black family living in Iowa.

Jasmine: *My name is Jasmine and I am 9-years-old and I live with my brothers Joshua, Jaylin, and Johnny.*

Johnny: *My name is Johnny Davis. I am 13-years-old, finna be 14 in three months.*

Setting: Children playing on oversized rubber tire in urban playground

Narrator: *Johnny and Jasmine have been living in a Salvation Army shelter for homeless families in Davenport, Iowa for the last three months.*

Johnny: *My dad had got a business and he was making about a good $5,000 a month. We had good and fancy things. We had like a three-bedroom house, our living room had a 32-inch flatscreen TV in there, my mom's and dad's room had a 42-inch flat screen TV in there… and that's the TV we watched the Superbowl on.*

Narrator: *When the recession hit, the family's home-improvement business folded, and they soon struggled to pay the rent. They clung on to their house for as long as possible, but that meant that when the time finally came, the kids had just a few days to pack up everything and leave.*

Johnny: *Anything that could fit in a bag or a suitcase, you could take it. Like this TV, the yellow one in the living room, that only made it because you could fit it in my bag. If it couldn't fit in my bag, that would've been left behind too.*

Setting: Playground

Tom Davis: *I won't say that I hide the fact that I'm homeless, but it's not something once again that you just want to come out and broadcast and say 'well, hey, you know, I'm homeless.' That's the same as somebody with let's say HIV or AIDS, they don't come out and tell you 'hey, you know, I'm sick.' You know, because you will be treated differently. And it's the same as somebody that's homeless.*

Jasmine: *I'm poor and…because I live in a shelter.*

Johnny: *You don't want a lot of people to find out that you live here, because people will make fun of it and it can really haunt you after a while. You start to have no friends, people tease you about it and stuff like that.*

Jasmine: *It makes me feel like I just wish I never lived here.*

Setting: The family is standing in line waiting for a meal at the shelter.

Johnny: *It's a kid at the school who looks dressed worser than me, but he has his own house, though. He got a house to call home, he don't have to go sit down with thousands of people to eat dinner. He can run to his refrigerator and open it up, and I can't do that. I have to wait until a certain time and I have to eat. Cause if I don't eat, I will starve all night until the next morning.*

Setting: Children playing on oversized rubber tire in urban playground

Narrator: *One of the many downsides of life in the shelter is that sickness spreads between families all too easily.*

Setting: Jasmine and Classy are seen at the doctor's office

Classy: *Everybodys been been having the runs, stomach aches, whole nine yards. She just, we was going out to take her to school this morning and she just threw up all in the hallway.*

Narrator: *Although Jasmine's dad has now managed to get a job at minimum wage. His employer does not cover the family for medical insurance. Almost one in seven Americans are now without health insurance, more than ever before. Without cover, the family has to find clinics and pharmacies that will treat people on basic state medicaid.*

Setting: Class is sitting on her children's bunk beds in their apartment.

Classy: *A lot of places don't take Iowa medicaid 'cause they know it's from public aid, it's public assistance, low income, no income. So, a lot of places won't take you. And then a lot of them say they don't take new patients. So, then what do you do? Go to the emergency room. Then you end up with another bill*.

Setting: Johnny is wiping down a plastic covered mattress.

Narrator: *The latest problem is that Johnny has caught a highly contagious skin infection, so the family's rooms have to be completely disinfected.*

Johnny: *Okay, it was getting even worse. So we said that we were fittin' to go to the hospital.Then that's when Josh got sick so we really had to go to the hospital.*

Classy: *So now he has to be quarantined off from the rest of the family.*

Tom: *So, now you gotta sleep on the fire escape, ha ha ha. No, but you just.. make sure you don't touch anybody.*

Setting: Classy is administering oral medication to Johnny.

Classy: *I'm watching you.*

Narrator: *When he was first infected, there was no choice but to go to the emergency room of the local hospital.*

Johnny: *Don't touch it.*

Classy: *The discharge lady came in asking questions about the medicaid and whatever.. And she was like, "Oh, I guess I'll have to look it up. But if I can't find it, we'll have to bill you." Yeah, so, there's another bill coming. That's life though, what can you do? Roll with the punches, right?*

Setting: Classy is sweeping the floors; the family sees a live mouse stuck on a glue trap. The children are yelling in the background.

Classy: *"Cause he's stuck, he's stuck, he just got stuck"*

Jasmine: *He's not big at all. He's so small.*

Setting: Johnny sitting on the bunk beds

Johnny: *The building is kinda old, the mice been here for a long time before we been here; of course they're gonna get in here. Um. We just…my dad just said any mouse that comes in here we're taking them out, like, they're not gonna stay for long. They gonna know not to come in this room.*

Setting: Classy is sitting on her children's bunk beds in their apartment.

Classy: *As a mother, you always got different thoughts going through your head and mind, wishing that you could change things, and wishing things was different. But, what are you to do? You can't keep beating yourself up about it, but at the same time, it's just hard. Having a family is hard, maintaining a family is hard, keeping us indoors is hard.* (Tears stream down Classy's face.)

Setting: The children are playing and giggling in their bedroom. The children's parents are sitting in the living room watching television. Johnny brings them his report card.

Johnny: *Guess what I got on my grades?*

Classy: *What…. Oh, oh!*

Tom: *That's good.*

Johnny's mother gives him a high-five.

Mom: *One for the Davis team!*

Tom: *That saved you from 70 lashes, didn't it?* (Tom, Classy, and Johnny laugh) *So did you do good?*

Johnny's father gives him a high-five.

Johnny: *I got two As, two Bs, and two Cs.*

Tom: *Oh wow!*

Classy: *That's what's up, Johnny!*

Johnny's mom gives him another high-five.

Tom: *Now I'm gonna have to get you a skateboard*

Setting: Johnny playing video games on the floor of the living room

Johnny: *Grades is my only way out of here. If my grades are not good, I know I can't go to universities like it's my dream is to go. I know if my grades are not good, I can't play football like I want to. If I don't succeed doing what I have to do in school and making good grades, I will fail. I'm gonna live this life. Life of shelters, going through hard times, can't feed my kids, trying to figure out where I'm going to lay my head every night.*

Scenario #3

Suburb in Wealthy Illinois County Sees Unexpected Rise In Poverty

PBS NewsHour

The following case study depict real-life individuals living in poverty:

Catherine Aravosis is a middle-aged caucasian woman living in Illinois with her two children.

Setting: Catherine and her two children in the kitchen of their townhouse.

Narrator: *In this Wheaton housing complex, 11 of the townhomes are in foreclosure. After almost two years of trying, 43-year-old Catherine Aravosis was finally able to renegotiate her mortgage and save her*

home. But she and her two children live far below the poverty line. Aravosis had a middle-class upbringing. Her father was a college professor, and in 2008, she got her second master's degree, this one in elementary education. But because of cuts in state education funding, she hasn't been able to find a full-time teaching job. Last year, she made $11,000 as a substitute teacher. Far less than what she needs to support her two children.

Catherine: *It has been hard for me because I want to provide for them in a way that my parents provided for me. I never knew what my parents made. I never had to worry about a thing. We just lived a really stable, typical middle-class existence. And for my children, they don't have that sense of security that I had. They know when I'm stressed, and that hurts.*

Setting: Catherine at the local food bank, filling up a shopping cart with food; Catherine having dinner with her children in the kitchen of their home.

Narrator: *Aravosis is part of the newly poor demographic that accounts for much of the rise in poverty in the suburbs. Ten years ago, she and her husband, an architect, were earning a six figure income and living in a five bedroom home in Wheaton. They divorced in 2004. Her former husband's architectural commissions dried up in 2008, and he has had trouble making child support payments. Aravosis tried to get Medicaid for her children but the state threatened to take her former husband's architect license because of lack of child support, and she backed off.*

Catherine: *It's those days that you get up and you really don't know what you're going to give your kids for dinner. And it can be a full time job, finding out how am I gonna get glasses, her prescription that is a year old. And where am I gonna, you know, how am I gonna get her the shots she needs? She's going to sixth grade. Not having the health insurance, not having the basic things that people take for granted, being able to get their kid to the doctor. Um, you know, when they come home and say "we need $5 for*

school." There's always something. And sometimes you have to say, "I don't have it, I just don't have it, I'm sorry".

Setting: Catherine having dinner with her children in the kitchen of their home.

Narrator: *Today, dinner comes from the local food pantry. She cooks in her crockpot or microwave since she can't afford to repair her broken stove. Like many of the suburban poor, Aravosis never thought she would need help buying food.*

Catherine: *I didn't expect to be using the food pantry, especially not on a regular basis. But, you know, I'm working, and I'm not making enough money to make ends meet. So, it's very humbling, but I swallowed my pride and I went to the People's Resource Center, and I asked for help.*

Setting: Catherine at the local food bank, filling up a shopping cart with food, making conversation with the staff at the food bank.

Narrator: *Aravosis can fill up a shopping cart, once a week at the People's Resource Center. The number of people using this food pantry in Wheaton has gone up by 200% in the last five years. There was a 30% jump in 2008 alone. But having to accept help has changed the way she thinks of herself.*

Catherine: *I always thought of myself as middle-class. I had a middle-class upbringing. I had middle-class expectations. But the reality is that I'm not living a middle-class lifestyle anymore. So, no, I don't think so. I think I've fallen out of the middle class.*

Setting: Catherine putting bags of food from the food bank into the trunk of her car.

Narrator: *Like many in her situation, she doesn't see much hope of things improving. And while she wants to stay in Wheaton, life in suburbia is far different than she ever imagined it would be.*

References

PBS NewsHour. (2011, December 30). *Suburb in wealthy Illinois county sees unexpected rise in poverty* [Video]. YouTube. https://youtu.be/T9ZFoI0CNqU?si=n7GDq36XW6OhSms2

Real Stories. (2017, June 28). *America's poor kids (child poverty documentary)* [Video]. YouTube. https://youtu.be/oOOkfVxkusc?si=oLi7Ml5h6yXYmC3M

UNICEF. (2011, March 17). *Growing up in poverty in the USA: Marcell's story* [Video]. YouTube. https://youtu.be/98qDo59j0VM?si=mCYbEacZZ95jtThF

Appendix H

Subject Matter Expert Survey

These questions refer to the **video case study**:

The video case study is an **accurate representation** of individuals experiencing poverty.

a. Strongly agree

b. Somewhat agree

c. Somewhat disagree

d. Strongly disagree

The video case study **promotes stereotypes**.

a. Strongly agree

b. Somewhat agree

c. Somewhat disagree

d. Strongly disagree

The video case study c**hallenges stereotypes**.

a. Strongly agree

b. Somewhat agree

c. Neither agree nor disagree

d. Somewhat disagree

e. Strongly disagree

The video case study **demonstrates the relationship between poverty and health**.

a. Strongly agree

b. Somewhat agree

c. Somewhat disagree

d. Strongly disagree

Did you have any other feedback about the video case study? (free text box)

These questions refer to the **paper case study**:

The paper case study **provides an accurate transcript** of the video case study.

a. Strongly agree

b. Somewhat agree

c. Somewhat disagree

d. Strongly disagree

The paper case study **provides relevant details** from the videos.

a. Strongly agree

b. Somewhat agree

c. Somewhat disagree

d. Strongly disagree

The paper case study is **free from grammatical errors**.

a. Strongly agree

b. Somewhat agree

c. Somewhat disagree

d. Strongly disagree

Did you have any other feedback about the video case study? (free text box)

Appendix I

Debriefing Questions

Structured debriefing questions:

1. Initial reactions
    a. What stood out to you from the scenarios?
2. What were some of the challenges that the individuals were facing?
3. How might these challenges impact the individuals' health?
4. What are some of the personal strengths of these individuals?
5. How might a nurse's personal values affect person-centered care?

Appendix J

Faculty Training Guide

SDOH Classroom Activity Faculty Training

Guide Spring 2024

Katherine Giannettino, MSN, CNE,

CNE Elizabeth Saska, MSN, RN, CEN,

CNE

Clarissa Swope, MSN, RN
Teachers College, Columbia University

Dear faculty member,

First, we would like to sincerely thank you for participating in our dissertation research study. We know your schedule is busy, and we appreciate your time and attention to this intervention. This study would not be possible without you.

This multi-site research will evaluate the effects of a Social Determinants of Health (SDOH) classroom activity on the attitudes toward poverty, empathy, beliefs about the relationship between health and poverty, and satisfaction with learning in sophomore-level prelicensure nursing students.

The intervention group will watch a 16-minute video case study, while the comparison group will receive a transcript of the video as a written case study. The students will participate in a case study debriefing as part of the classroom activity. Students who agree to participate will complete a survey prior to the scheduled intervention/comparison. Immediately following the intervention/comparison, these students will complete a post-survey.

As the classroom instructor, you are responsible for delivering the classroom activity; however, you are not responsible for participant recruitment, obtaining participant consent, administering the pretest and/or posttest, and distributing participant incentives.

The scheduled faculty training aims to ensure that everyone understands what is expected of them and that the classroom activities are delivered in the same format across all three institutions. The live training will allow you to ask questions and for us to share the expectations for the classroom activity.

Please review the training guide and let us know if you have any questions. We look forward to meeting with you for the mandatory synchronous training on March 20th, 2024.

Thank you and best wishes,

Kate Giannettino, Doctoral Candidate, Teachers College, Columbia University

Elizabeth Saska, Doctoral Candidate, Teachers College, Columbia University

Claire Swope, Doctoral Candidate, Teachers College, Columbia University

Introduction

Social determinants of health (SDOH) are defined by the World Health Organization (2023) as non-medical conditions that influence health outcomes. These conditions are factors in which people are born, grow, work, live, and spend their daily lives. According to the U.S. Department of Health and Human Services (2023), a household of four persons with a yearly income of or below $30,000 meets the poverty guidelines. As of 2021, the national poverty rate in the United States was 11.6%, which means 37.9 million people were living in poverty at the time of the report (Creamer et al., 2022). Poverty creates a barrier to optimal health and can cause an increased risk for chronic diseases, limited access to health care, and lower life expectancy (US Department of Health and Human Services, 2023).

The National League for Nursing (NLN)(2019) has urged nurse educators to integrate SDOH education across the nursing curriculum. However, most of the existing studies in the literature reflect the use of SDOH education in only public and community health courses. Investigators have used role-playing teaching strategies, service-learning, and variations of simulation. The teaching strategies cited in the literature lack accessibility for institutions with limited funding, faculty, and simulation resources. Additionally, there is limited research on teaching strategies concerning SDOH and empathy in prelicensure

nursing students. An accessible teaching strategy is needed to implement SDOH education throughout the nursing curriculum. This study will investigate the effects of a video case study as a SDOH sophomore level classroom teaching strategy on attitudes toward poverty, beliefs about the relationship between poverty and health, empathy, and satisfaction and self-confidence in learning in prelicensure nursing students.

Objectives of The Classroom Activity

- Identify barriers to optimal health.
- Discuss socioeconomic factors that influence individual health and wellness.
- Examine how personal values influence the care of individuals who live in poverty.

Case Studies

Case studies are a well-established teaching and learning tool in nursing education (Seshan et al., 2021). Case studies are an active learning teaching strategy designed to apply what students learn in class to real-life clinical situations (Seshan et al., 2021). Case studies can improve critical thinking and clinical judgment and are typically used to improve metacognitive knowledge, but case studies can also impact learning in the affective domain (Brunero et al., 2010; Lui, 2023; Popil, 2011). This classroom activity will use two types of case studies: a video case study and a written or narrative case study. The video case study is a compilation of three fair-use videos about individuals experiencing poverty. The paper case study comprises identical transcripts from the videos on paper, without the video component. Case studies will be emailed directly to you after the PIs assign the type of case study to your course. **Please do not share this case study with your students ahead of time; this is an in-class activity.**

Debriefing

Debriefing is a reflective learning technique used in simulation-based education that encourages deep learning (National League for Nursing, 2015). The debriefing process encourages learners to reflect on knowledge gaps, perspectives, and assumptions and

promotes integrating newly acquired knowledge into safe practice (INACSL Standards Committee, 2016). The NLN (2015) has called for debriefing to be used in simulation and across the curriculum. In its position statement, the NLN argued that debriefing in simulation, clinical, and the classroom can encourage students to become more aware of how to apply classroom knowledge to clinical practice (NLN, 2015). Debriefing promotes critical thinking and reflection and is learner-driven (INACSL Standards Committee, 2016).

As a classroom instructor, you will facilitate the debriefing process. In alignment with best practices for debriefing, the debriefing portion of the classroom activity should be approximately double the amount of time students spend on the case study– we have allotted 30 minutes for the case study debriefing for both the intervention and comparison groups. It is important to remember that debriefing is a **learner-driven, inquiry-based learning active learning activity.**

There are four stages to debriefing (INACSL Standards Committee, 2016; Palaganas et al., 2016):

1. Description phase
    - Reminds learners of the objectives and the purpose of debriefing
2. Reaction/defuse phase
    - Approx 2 - 5 min
    - Goal: release of emotion and identification of the learner's areas of interest
    - "Initial reactions? How are you feeling at the moment?"

3. Analysis/discovery phase
    - Approx. 15-20 min
    - Introduce general topics for discussion and identify knowledge gaps

6

    - Three sub-phases:
        i. Exploring
            1. Explore the learners' perspective
        ii. Facilitation of understanding of material
        iii. Identification of knowledge gaps
    - If there is time, ask the learners if there is anything they would like to discuss

4. Summary/application phase

    - Approx 8-10 min
    - Recap the experience
    - Identify insights
    - Allows the learners to conceptualize how the topics they discussed are relevant to their practice.

As the debriefing facilitator, you provide a psychologically safe learning environment that allows students to engage with one another and either challenge existing viewpoints or build on them. Using the following techniques can assist learners to feel safe in the debriefing environment (Grant et al., 2018; (INACSL Standards Committee, 2016; Palaganas et al., 2016):

- **Setting the expectation:** Start the debriefing session by reminding the students of the learning objectives and the expected length of time for debriefing (30 minutes). Set the expectation that this will be a conversation amongst all participants and that all viewpoints are welcome and valid. Ask students to please put away all their electronic devices to encourage engagement.

7

- **The debriefing environment:** Students and facilitators should be seated for the debriefing session. **It is important to note that facilitators should not place themselves at the front**

of the debriefing area or at the head of the debriefing space. This creates a power differential between the student and the facilitator. When possible, the facilitators should seat themselves amongst the students.

- **Body language:** Be aware of your body language and the messages you send to the students in the debriefing. Avoid keeping your arms crossed across your chest and leaning back in your chair; instead, convey your interest by sitting forward with your arms at your side or in your lap. Be aware of your eye contact as well: use eye contact when students are speaking.
- **Silence:** The deliberate use of silence is a powerful debriefing technique. Students may need extra time to process their thoughts and emotions and work up the courage to speak during the debriefing. Silence can also be used when the conversation appears stalled; the longer the group sits in silence, the more likely a student will share a thought or experience that moves the conversation forward.

Difficult debriefing situations may arise, especially when discussing sensitive topics like poverty. As the debriefing facilitator, you must navigate these situations while maintaining psychological safety to the best of your ability. Grant et al. (2018, p. 706 - 710) outlined the following communication tools for difficult debriefing situations:

8

1. **Normalization:** this technique is often used to build trust in the debriefing process. Example: "This is a complex issue, and I think many people may have conflicting feelings and thoughts about individuals experiencing poverty."
2. **Validation:** offers acknowledgment and acceptance of the student's feelings; the student's feelings may not be ones you agree with, but acknowledging that

these feelings are real and relatable can oftentimes make students feel more comfortable. Example: “I hear what you’re saying. It sounds like you’ve had some negative experiences with people who are experiencing poverty, which has impacted your opinions.”

3. **Generalization:** this technique uses the concept being discussed and applies it to another situation. Example: “Sometimes, the health disparities caused by poverty can be applied to other situations, like a person’s school or work situation. What do you think?
4. **Paraphrasing:** as the facilitator, you can repeat in your own words what a student or multiple students have said, which may reinforce the comments and allow others to weigh in. **Note:** it is important not to introduce your own opinions when paraphrasing. Example: “What I’m hearing is that some of the members of our group feel really strongly that poverty isn’t a choice, while others feel that it is.” Often, it may be helpful to follow up with a generalization such as “Do you think this might be a common situation amongst the healthcare team when they’re caring for a patient who lives in poverty?”

9

5. **Broadening:** this technique is useful for involving other students and/or other sources of information because it encourages sharing other viewpoints, which can greatly enrich the discussion. Example: “I’m wondering what the rest of the group members think about the relationship between poverty and health… would anyone like to share their perspective?”
6. **Previewing:** this technique is often used to keep the group on task and to manage other situations, such as student(s) who may be dominating the discussion,

defensive students, and students who are not engaged in the debriefing. “I’m hearing that we have a lot of thoughts and opinions about this topic. Would it be okay if we moved on to discuss some of the personal strengths of the individuals in the case study?”

7. **Naming the dynamic:** this technique can be used when the difficult debriefing situation escalates. As the facilitator, you will “name the elephant in the room,” so to speak. “It seems to me that there are some very strong viewpoints about individuals experiencing poverty, and it’s affecting our ability to have a collegial conversation about this topic. Why don’t we discuss how our own thoughts and feelings towards poverty might impact our ability to provide person-centered care?”

Grant et al.’s (2018) article details these techniques. The article also includes suggested sequencing of the strategies discussed above. Please take the time to read this article, which can be accessed here: V. J. Grant, T. Robinson, H. Catena, W. Eppich & A. Cheng (2018) Difficult debriefing situations: A toolbox for simulation educators, Medical Teacher, 40:7, 703-712, DOI: 10.1080/0142159X.2018.1468558

10

Structured debriefing questions for classroom activity:

1. Initial reactions
    a. What stood out to you from the scenarios? (Approx. 2 - 5 minutes)
2. What were some of the challenges that the individuals were facing? (Approx. 5 - 6 minutes)
3. How might these challenges impact the individuals’ health? (Approx. 5 - 6 minutes)
4. What are some of the personal strengths of these individuals? (Approx. 5 - 6 minutes)
5. How might a nurse’s personal values affect person-centered care? (Approx 8 - 10 minutes)

Research Method

This study is a multi-site, two-group pretest-posttest quasi-experimental design. Three universities have been selected for this study: Felician University in Rutherford, NJ; Sacred Heart University in Fairfield, CT; and Goldfarb School of Nursing at Barnes-Jewish College in St. Louis, Missouri.

The Primary Investigators (PIs) will assign each course section to the intervention or comparison group and communicate these assignments to the respective faculty. Goldfarb School of Nursing (GSON) students will be assigned using randomorganizer.org and the PIs will communicate group assignments with the faculty. The GSON students will need to be physically divided into two separate classrooms. All students should participate in the intervention or comparison whether or not they have consented to the study. Only those who have consented

to the study will complete the surveys. **Students should not be informed of their assignment to intervention or comparison groups.**

- If you are teaching in the section assigned to the **video** case study, you will introduce the objectives of the classroom activity, play the 16-minute video, and then begin the debriefing.
- If you are teaching in the section assigned to the **paper** case study, you will introduce the objectives of the classroom activity, hand out the paper case study, and then begin the debriefing. Please allow up to 15 minutes for students to read the paper case study to themselves; we ask that you do **not** read

the case study to the class, as you may inadvertently influence students with your inflection and tone of voice.

See below for the research timeline:

Activity	**Intervention Group**	**Comparison Group**
Primary Investigators visit each course section before the research experiment begins.	N/A	N/A
Pretest via Qualtrics: students will receive an email to their institutional email accounts with a description of the study, a link to consent, and link to complete the pretest surveys. Pretest	Informed consent, demographics survey, Attitude toward Poverty Short Form, Jefferson Scale of Empathy for Health Professions Students, and Beliefs About the Relationship Between Poverty and Health scales.	Informed consent, demographics survey, Attitude toward Poverty Short Form, Jefferson Scale of Empathy for Health Professions Students, and Beliefs About the Relationship Between Poverty and Health scales.

will close the night before the intervention at midnight. Reminder email sent one week before the study begins.		

Classroom Activity: Case study is approx 15 minutes	Faculty introduce the objectives of the classroom activity. Then, students will watch the SDOH video case study in the classroom.	Faculty introduce the objectives of the classroom activity. Then, faculty will hand out the SDOH paper case study for students to read individually in the classroom.
Classroom Activity: Faculty-led structured debriefing is approx 30 minutes	Immediately after the students view the video case study, the facilitator will conduct a debriefing using the following questions: 1. Initial reactions a. What stood out to you from the scenarios? 2. What were some of the challenges that the individuals were facing? 3. How might these challenges impact the individuals' health? 4. What are some of the personal strengths of these individuals? 5. How might a nurse's personal values affect person-centered care?	Immediately after the students read the paper case study, the facilitator will conduct a debriefing using the following questions: 1. Initial reactions a. What stood out to you from the scenarios? 2. What were some of the challenges that the individuals were facing? 3. How might these challenges impact the individuals' health? 4. What are some of the personal strengths of these individuals? 5. How might a nurse's personal values affect

		person-centered care?

Posttest via Qualtrics: Approx 15 minutes Immediately after the debriefing ends.	Following the debriefing, students who consented to participate in the study will receive an email with a link to complete the posttest surveys using Qualtrics: One additional question will be included asking which form of the case study the student participated in; Attitude toward Poverty- Short Form, Jefferson Scale of Empathy for Health Professions Students, Beliefs About the Relationship Between Poverty and Health, and the Student Satisfaction and Self Confidence in Learning scale.	Following the debriefing, students who consented to participate in the study will receive an email with a link to complete the posttest surveys using Qualtrics: One additional question will be included asking which form of the case study the student participated in; Attitude toward Poverty-Short Form, Jefferson Scale of Empathy for Health Professions Students, and Beliefs About the Relationship Between Poverty and Health, and the Student Satisfaction and Self Confidence in Learning scale.
One week after intervention and comparison all students will receive the video and paper case studies via email.	PIs will send the video and paper case studies to all students' institutional emails.	PIs will send the video and paper case studies to all students' institutional emails.

References

Creamer, J., Shrider, E.A., Burns, K., & Chen, F. (2022, September 13). Poverty in the United States: 2021. United States Census Bureau. https://www.census.gov/library/publications/2022/demo/p60-277.html

Brunero, S., Lamont, S., & Coates, M. (2010). A review of empathy education in nursing. *Nursing Inquiry*, *17*(1), 65-74. https://doi.org/https://doi.org/10.1111/j.1440-

1800.2009.00482.x INACSL Standards Committee. (2016). Healthcare simulations of best practice: Debriefing. *Clinical Simulation in Nursing*, *12*, S21-S25. https://doi.org/10.1016/j.ecns.2016.09.008 Lui, W. (2023). Effect of unfolding case-based learning on clinical judgment among undergraduate nursing students. *Nurse Educator.* Published ahead of print. https://doi.org/10.1097/NNE.0000000000001526

National League for Nursing. (2015). *Debriefing across the curriculum: A living document from the National League for Nursing*. https://www.nln.org/docs/defaultsource/uploadedfiles/professional-development-programs/nln-vision-debriefing-across the-curriculum.pdf

National League for Nursing. (2019). *A vision for integration of the social determinants of health into nursing education curricula: A living document from the National League for Nursing*. https://www.nln.org/docs/default-source/uploadedfiles/default-document-library/social determinants-of-health.pdf?sfvrsn=aa66a50d_0

15

Palaganas, J. C., Fey, M., & Simon, R. (2016). Structured debriefing in simulation-based education. *AACN Advanced Critical Care*, *27*(1), 78-85. https://doi.org/10.4037/aacnacc2016328

Popil, I. (2011). Promotion of critical thinking by using case studies as teaching method. *Nurse Education Today*, *31*(2), 204-207. https://doi.org/https://doi.org/10.1016/j.nedt.2010.06.002

Seshan, V., Matua, G. A., Raghavan, D., Arulappan, J., Al Hashmi, I., Roach, E. J., Sunderraj, S. E., & Prince, E. J. (2021). Case study analysis as an effective teaching strategy: Perceptions of

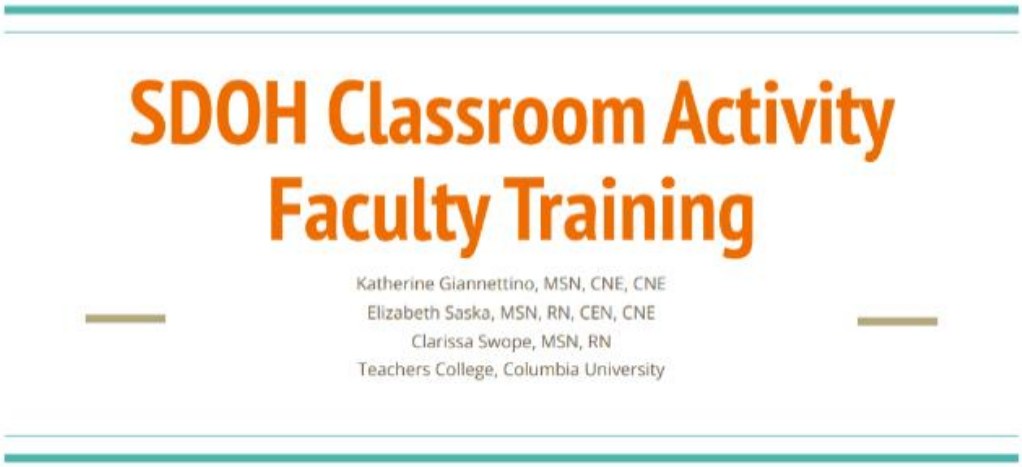
undergraduate nursing students from a middle eastern country. *SAGE Open Nursing*, *7*, 23779608211059265. https://doi.org/10.1177/23779608211059265

U.S. Department of Health and Human Services. (n.d.). HHS poverty guidelines for 2023. Retrieved March 18, 2023, from https://aspe.hhs.gov/topics/povertyeconomicmobility/poverty-guidelines#main-content

World Health Organization. (2010). *A conceptual framework for action on the social determinants of health*. https://www.who.int/publications-detail redirect/9789241500852

Appendix K

Faculty Training PowerPoint



Who, Why, and What?

- **Who**: Sophomore prelicensure nursing students at Goldfarb SON (MO), Felician University (NJ), and Sacred Heart University (SHU)

- **Why:**
  1. SDOH are not well-integrated at the sophomore level
  2. Poverty has wide-ranging effects on health
  3. Person-centered care

- **What:** Combination of 3 real-life case studies highlighting the effects of poverty on health combined with a structured debriefing

The Experiment

Intervention (Video + Debriefing)

- Pretest before class
- Watch video case study as a group (16 min)
- Faculty-led structured debriefing (30 min)
- Completion of posttest (15 min)

Comparison (Paper + Debriefing)

- Pretest before class
- Read paper case study **individually** (15 min)
- Faculty-led structured debriefing (30 min)
- Completion of posttest (15 min)

***Please do not post the case studies ahead of time or inform students of the group they are in!**

Debriefing Best Practices

- **Learner-driven** reflective teaching technique
- Goal: To reflect on knowledge gaps, perspectives, and assumptions, and promotes integrating newly acquired knowledge into safe practice.
- Psychological safety:
  - Setting the expectation
  - The environment
  - Body language
  - Silence

Case Study Debriefing

1. Description phase → *Now we're going to have a structured conversation about the case study...*
2. Reaction phase → *Initial reactions? What stood out to you from the scenarios?* (2 - 5 min)
3. Analysis/discovery phase → (5 - 6 min per question):
   a. *What were some of the challenges that the individuals were facing?*
   b. *How might these challenges impact the individuals' health?*
   c. *What are some of the personal strengths of these individuals?*
4. Summary/application → *How might a nurse's personal values affect person-centered care?* (8 - 10 min)

Difficult Debriefings

- Goal: address what's happening while maintaining psychological safety
- See the training guide and Grant et al. (1028) article for examples
- Some tips...
  - Remember that your role is to facilitate, not lecture. Differing viewpoints are expected.
  - Avoid introducing your own opinions

Figure 2. Cognitive aid for combining reactive strategies.

Ask the PIs

- Questions about:
  - Your assignment to the intervention or comparison groups?
  - The case studies, debriefing, and/or the timeline for the activity?
  - Difficult debriefing situations
  - Other questions?

Appendix L

Classroom Visit Recruitment Script

Hello, my name is_____ ,thank you for allowing me a few moments to visit your classroom today. I am a doctoral student in the Doctor of Education in Nursing Education program at Teachers College, Columbia University. I am working with two other doctoral candidates on a study as part of our dissertation.

My clinical nursing background is ___
I have been an educator for ____

I am very excited to speak with you today!

I am here today, in hopes that you will participate in a multi-site study at Felician University in NJ, GSON in St. Louis, and Sacred Heart University in CT.

The study that we are inviting you to participate in explores different teaching strategies concerning social determinants of health.

All students will participate in the teaching strategies as a part of the curriculum, however, participating in the study is strictly voluntary, and you may choose to withdraw from the study at any time. This study is not tied in any way to your grade in this course.

If you agree to participate please review the informed consent you will receive by email and complete a survey. In a few weeks you will be participating in one of the two groups that have been randomly assigned to your section of the class. After this you will be asked to complete a second survey. All of your data is being collected electronically using a platform that will de-identify your data so your information will remain anonymous.

When you complete all portions of this study you will be emailed a $30 gift card to Amazon. At the end of the study both groups will have the opportunity to experience both strategies being studied.

My colleagues and I thank you so much for your time and participation. The information collected from this study will allow us to add to the existing nursing education literature to support educators in using evidence-based teaching strategies.

I am limited on what I am able to reveal about the teaching strategies, but do you have any questions that I may answer?

Question and Answer: 10 minutes

- PIs will not reveal the variables of the study.
- PIs may share the estimated length of time to complete the survey.
- PIs may share that there are two different teaching strategies but will not share specific details.

- PIs may share the estimated time it will take for participants who complete all components of the study to receive the Amazon gift card.

Appendix M

Recruitment Flyer

Appendix N

Teachers College IRB Approval Letter

TEACHERS COLLEGE
COLUMBIA UNIVERSITY

Teachers College IRB *Exempt Study Approval*

To: Clarissa Swope
From: Justin Brown, Research Compliance Manager
Subject: IRB Approval: 24-173 Protocol
Date: 02/19/2024

Thank you for submitting your study entitled, "*Nursing Students' Attitudes Toward Poverty After a SDOH Classroom Activity: A Quasi-Experimental Study*," the IRB has determined that your study is **Exempt** from committee review (Category **1**) on 02/19/2024.

Please keep in mind that the IRB Committee must be contacted if there are any changes to your research protocol. The number assigned to your protocol is **24-173**. Feel free to contact the IRB Office by using the "Messages" option in the electronic Mentor IRB system if you have any questions about this protocol.

Please note that your Consent form bears an official IRB authorization stamp and is attached to this email. Copies of this form with the IRB stamp must be used for your research work. Further, all research recruitment materials must include the study's IRB-approved protocol number.

As the PI of record for this protocol, you are required to:

- Use current, up-to-date IRB approved documents
- Ensure all study staff and their CITI certifications are on record with the IRB
- Notify the IRB of any changes or modifications to your study procedures
- Alert the IRB of any adverse events

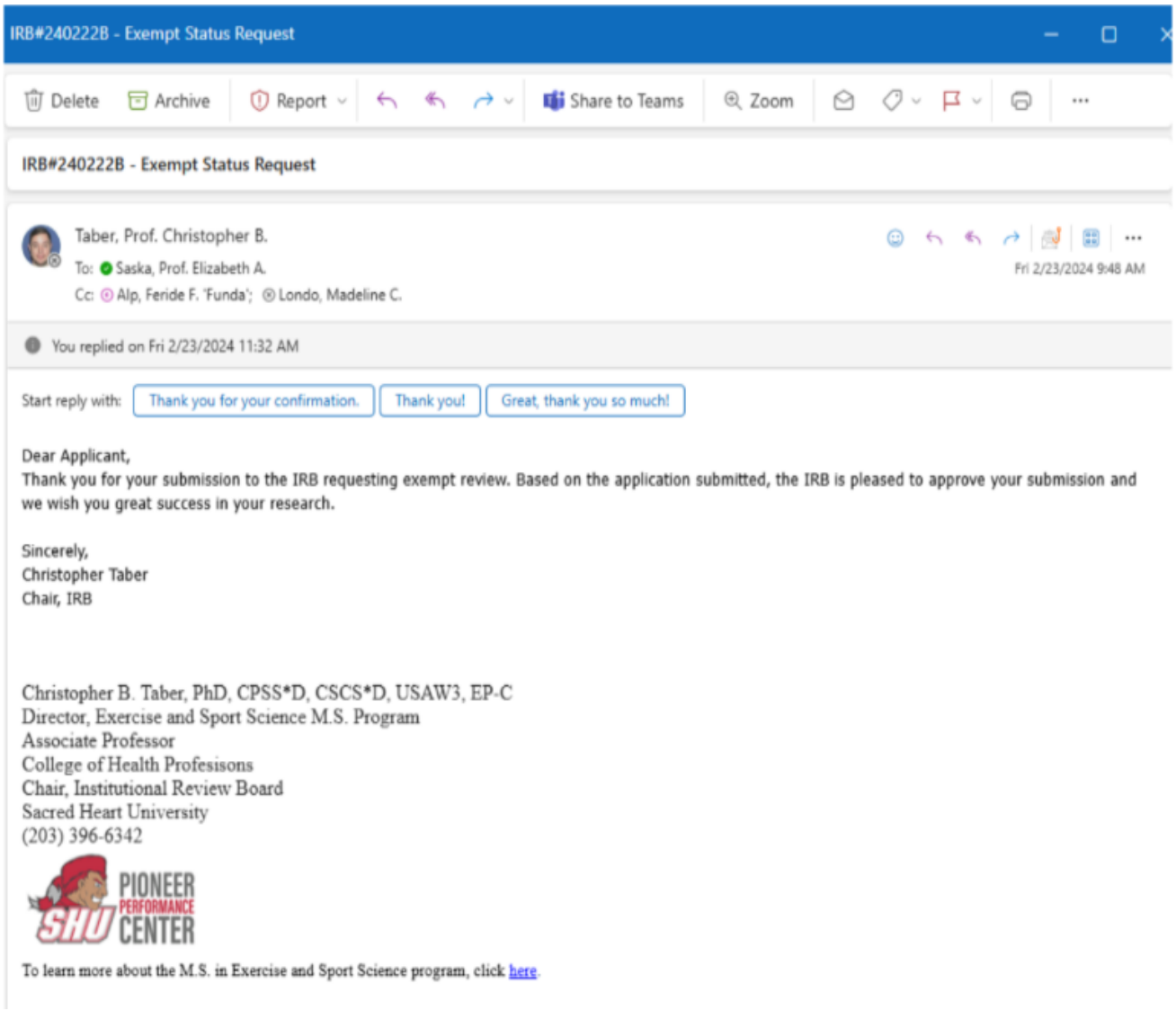
You are also required to respond if the IRB communicates with you directly about any aspect of your protocol. Failure to adhere to your responsibilities as a study PI can result in action by the IRB up to and including suspension of your approval and cessation of your research.

You can retrieve a PDF copy of this approval letter from Mentor IRB.

Best wishes for your research work

Appendix O

Sacred Heart University IRB Approval Letter



IRB#240222B - Exempt Status Request

Delete Archive Report Share to Teams Zoom

IRB#240222B - Exempt Status Request

Taber, Prof. Christopher B.
To: Saska, Prof. Elizabeth A.
Cc: Alp, Feride F. 'Funda'; Londo, Madeline C.
Fri 2/23/2024 9:48 AM

You replied on Fri 2/23/2024 11:32 AM

Start reply with: Thank you for your confirmation. Thank you! Great, thank you so much!

Dear Applicant,
Thank you for your submission to the IRB requesting exempt review. Based on the application submitted, the IRB is pleased to approve your submission and we wish you great success in your research.

Sincerely,
Christopher Taber
Chair, IRB

Christopher B. Taber, PhD, CPSS*D, CSCS*D, USAW3, EP-C
Director, Exercise and Sport Science M.S. Program
Associate Professor
College of Health Profesisons
Chair, Institutional Review Board
Sacred Heart University
(203) 396-6342

PIONEER PERFORMANCE CENTER

To learn more about the M.S. in Exercise and Sport Science program, click here.

Appendix P

Felician University Approval Letter

Approval to Conduct Research at an External Site

Felician University, School of Nursing
Dean Christine Mihal, PhD
MihalC@felician.edu

Teachers College IRB Protocol 24-173

February 27, 2024

Dear Teachers College IRB,

Based on my review of the proposed research by Katherine Giannettino and her faculty supervisor, Dr Jane K. Dickinson, I give permission for the researcher to conduct the study entitled *"Nursing Students' Attitudes Toward Poverty After a SDOH Classroom Activity: A Quasi-Experimental Study"* within the Fundamentals of Nursing Modalities course at Felician University's School of Nursing. As part of this study, I authorize the researcher to recruit participants, share informed consent, engage with the course faculty concerning the SDOH activity, electronically collect de-identified data with the participants' consent, and disseminate results with all personal identifiers removed. Individuals' participation will be voluntary and at their own discretion, and they may withdraw from the study at any time.

We understand that our organization's responsibilities include: allowing the course faculty to engage with the researcher and providing two classroom spaces for one hour with audio-visual capabilities. We reserve the right to withdraw from the study at any time if our circumstances change.

We understand that the research will include typical classroom teaching strategies using video and written case studies, an electronic pretest, and an electronic posttest.

This authorization covers the time period of March 11, 2024 – October 31, 2024.

I confirm that I am authorized to approve research in this setting.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Teachers College IRB.

Sincerely,

Christine C. Mihal, Ed.D, R.N.
Dean, School of Nursing

Appendix Q

Goldfarb School of Nursing Approval Letter

Approval to Conduct Research at an External Site

Goldfarb School of Nursing at Barnes Jewish College
Dean Kathleen Polley-Payne, PhD. RN, MSN, PNP
Kathleen.Payne@bjc.org
Wanda E. Cummings – Executive Services Coordinator
wanda.cummings@bjc.org

TC IRB Protocol 24-173

February 21, 2024

Dear Teachers College IRB,

Based on my review of the proposed research by Clarissa Swope and TC faculty supervisor, Dr Jane K. Dickinson, I give permission for the researcher to conduct the study entitled "*Nursing Students' Attitudes Toward Poverty After a SDOH Classroom Activity: A Quasi-Experimental Study*" within the Foundations of Professional Practice course at Goldfarb School of nursing. As part of this study, I authorize the researcher(s) to recruit participants, share informed consent, engage with the course faculty concerning the SDOH activity, electronically collect de-identified data with the participants' consent, and disseminate results with all personal identifiers removed. Individuals' participation will be voluntary and at their own discretion, and they may withdraw from the study at any time.

We understand that our organization's responsibilities include: allowing the course faculty to engage with the researcher and providing two classroom spaces for one hour with audio-visual capabilities. We reserve the right to withdraw from the study at any time if our circumstances change.

We understand that the research will include typical classroom teaching strategies using video and written case studies, an electronic pretest, and an electronic posttest.

This authorization covers the time period of March 4, 2024 – October 4, 2024.

I confirm that I am authorized to approve research in this setting.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Teachers College IRB.

Sincerely,

Interim Dean,
Barnes-Jewish College at Goldfarb School of Nursing

Appendix R

Recruitment Letter

Dear ____ ,

We are exploring the use of different teaching strategies concerning social determinants of health in the undergraduate nursing curriculum. In order to collect information, we are requesting that you complete the consent form and survey linked below. This survey will be submitted anonymously, and no personal identifiers will be used.

There are minimal risks associated with the completion of the study which are further discussed in the informed consent. Your participation in this study does not count in the calculation of your course grade in any way. The information collected from this study will allow us to add to the existing nursing education literature to support educators in using evidence-based teaching strategies.

Participation is voluntary. If you complete all portions of the study you will be emailed a $30 gift card to Amazon. At the end of the study both groups will have the opportunity to experience both strategies being studied.

Should you have any questions about the study, please contact any of the investigators listed below.

With regards,
Principal Researchers:

Katherine Giannettino, kg2715@tc.columbia.edu

Elizabeth Saska, eas2310@tc.columbia.edu

Clarissa Swope, cms2387@tc.columbia.edu

This study was reviewed by the IRB at Teachers College and Felician University/Sacred Heart University/GSON