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Exploring Gen Z Nursing Students' Experience and Emotional Processing in Simulation: A Grounded Theory Study

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EXPLORING GEN Z NURSING STUDENTS' EXPERIENCE AND EMOTIONAL PROCESSING IN SIMULATION: A GROUNDED THEORY STUDY

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ABSTRACT

Exploring Gen Z Nursing Students' Experience and Emotional Processing in Simulation: A Grounded Theory Study

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Simulation is an integral teaching methodology used within current nursing curricula. The goal of simulation is to promote learning, develop clinical judgment and reasoning, and ultimately improve patient care. However, some factors can disrupt the goals of the simulation learning experience. Students may experience uncomfortable emotional responses, such as anxiety, during simulation events, which impairs students' thinking processes leading to decreased learning, poor performance, an inability to assess knowledge, and potentially prohibits the transfer of knowledge to practice. Over 90% of the general Generation Z (Gen Z) population report uncomfortable emotions such as stress and anxiety. Simulation is used in the majority of pre-licensure nursing programs and currently over 75% of nursing students belong to the Gen Z population. The Gen Z's susceptibility towards uncomfortable emotions and inability to manage stress could set this generation up for poor outcomes within the simulated learning environment. The research identifies uncomfortable emotions in simulation, the Gen Z population with increased negative emotional responses, and impaired learning outcomes when uncomfortable emotions are present. However, Gen Z nursing students' emotional experiences and processing during simulation are unclear. This qualitative study used the Straussian grounded theory method, with a symbolic interactionism framework, to examine the Gen Z nursing student's emotional experience in simulation, their emotional responses, and the processing of emotions

during the learning activity. Participants were Gen Z nursing students participating in simulation in an undergraduate baccalaureate nursing program. Data was obtained through a reflection survey and semi-structured interviews. Data collection, coding, and analysis occurred concurrently with constant comparison analysis. Grounded theory methods were used to derive concepts and theories directly from empirical data inductively. Trustworthiness was established through credibility, dependability, confirmability, and transferability. The research followed the ethical principles found in the Belmont Report.

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I must also acknowledge my husband Craig and my daughter Baylee. You two experienced the ups and downs of this journey with me. I cannot put into words the amount of appreciation I have for you two. Thank you for the encouragement, support, and always believing in me. You are my world.

DEDICATION

I would like to dedicate this dissertation to my family who are my friends and my friends who are my family.

To my family, you have no idea how much your support means to me. To my husband Craig, this achievement is as much yours as it is mine. Thank you for providing what I needed when I needed it, always. To my daughter Baylee, thank you for being my rock and encouraging me. Follow your dreams sweetie! To my sisters BJ, Dorea, and Deedee without you none of this is possible, truly grateful. Not sure what I did to deserve all of you, I am blessed!

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Although my circle is small, I feel like I have the world! LET'S CELEBRATE!

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CHAPTER I

INTRODUCTION

Statement of the Research Problem

Simulation is an integral teaching methodology used within current nursing curricula (Smiley, 2019), leading to a wide range of emotional responses (Burbach et al., 2016; Kang & Min, 2019). Of particular concern is that nursing students often experience uncomfortable emotions, such as anxiety, in simulation (Al-Ghareeb et al., 2019; Burbach et al., 2016; Gosselin et al., 2016; Kang & Min, 2019; Patterson, 2016; Pollock & Biles, 2016; Yockey & Henry, 2019). Negative emotions in simulation have been shown to decrease performance (Al-Gareeb et al., 2019), reduce learning (Kang & Min, 2019), and disrupt focus (Burbach, 2016). If uncomfortable emotions are not processed, the individual will not be able to concentrate on the current situational goals (Gross, 2015). Negative emotional experiences in simulation for the Generation Z (Gen Z) nursing student are of particular interest for this research study.

Most students entering nursing programs are Gen Z learners (Hampton et al., 2019; Schmitt & Lancaster, 2019). The National League for Nursing (2020) reports that 75% of baccalaureate nursing programs students are 25 years old or younger. This newest generation of nursing students presents to the learning environment with characteristics different from previous generations (Chicca & Shellenbarger, 2018; Vizcaya-Moreno & Pérez-Cañaveras, 2020). Vizcaya-Moreno and Pérez-Cañaveras (2020) state that Gen Z nursing students are high consumers of technology; they are open-minded, diverse, and comfortable with diversity; and they are at an increased risk of isolation, anxiety, insecurity, and depression. Because the Gen Z student is at an increased risk for negative emotions, such as anxiety, their experiences in simulation are of concern.

One of the well-known characteristics of Gen Z individuals is that they experience increased negative emotions such as stress and anxiety (Duffy et al., 2019; MacLean et al., 2019) and perceive they are unable to manage their emotions effectively (Bethune, 2019). The Gen Z population is more likely to have self-doubt and have concerns about their psychological wellbeing (Chicca & Shellenbarger, 2018; Schmitt & Lancaster, 2019). Therefore, the increased predisposition towards heightened negative emotions may significantly influence simulation education and learning for this generational cohort of students.

The primary goals of simulation are to develop essential skills and nursing knowledge necessary for competent, practice-ready nurses (Kohn et al., 2000). Simulation is a bridge between didactic classroom learning and real-life clinical experience, allowing learners to practice in a safe environment while improving their nursing skills (Society for Simulation in Healthcare, 2020). The combination of the significance of simulation in nursing education, the detrimental consequences of negative emotional responses in simulation, and the emotional and psychological characteristics of Gen Z nursing students may create a concerning situation in simulation education.

Background and Significance

Gen Z students' present with distinct characteristics that require acknowledgment and consideration in current nursing pedagogies (Oducado, 2019; Vizcaya-Moreno & Pérez-Cañaveras, 2020). Chicca and Shellenbarger (2018) state that current nursing educational approaches and delivery methods may fail to meet the unique needs of Gen Z students. A particular interest for this research study is to explore the simulation experience for the Gen Z nursing student. Specifically, the emotions they experience and how they process their emotions during the learning event.

Description of Gen Z

Generations are defined as "groups of people born within the same span of years who share a unique identity due to life experiences" (Hampton & Keys, 2017, p.111). Societal trends and world events create unique cultures for each generation resulting in similar attitudes and traits (Hampton & Keys, 2017). Not every individual within the Gen Z population will align with the same generational characteristics. Therefore, it is vital to recognize generational traits as group tendencies rather than individual characteristics (Seemiller & Grace, 2016). This research study views Gen Z characteristics as group traits and considers each individual's uniqueness.

The literature identifies Gen Z as born between the late 1990s and 2010s with a wide range of specific years (Chicca & Shellenbarger, 2018; Hampton & Keys, 2017; Seemiller & Grace, 2017). For this research study, the Gen Z population is identified as those born from 1997 to 2012 (Dimock, 2019). Significant influencers of the Gen Z population have been the advancement of technology, issues of violence, an unstable economy, and social justice movements (Seemiller & Grace, 2017). These experiences have made the Gen Z population different from previous generations in fundamental ways (Parker & Igielnik, 2020), demonstrating they have different needs and expectations (DiMattio & Hudacek, 2020).

The Gen Z population are digital natives and have little to no memory of a time before smartphones (Hampton & Keys, 2017; Parker & Igielnik, 2020). Technology has always been accessible to the Gen Z learner providing instant access to information (Seemiller & Grace, 2017). Gen Z learners prefer hands-on opportunities that apply to real-life settings (Seemiller & Grace, 2016) rather than lecture and PowerPoint presentations (Vizcaya-Moreno & Pérez-Cañaveras, 2020). Unlike previous generations, Gen Z learners would rather observe others before applying the learning themselves, and they prefer intrapersonal learning before group

assignments (Seemiller & Grace, 2017). They describe themselves as loyal, compassionate, thoughtful, open-minded, and determined (Seemiller & Grace, 2016).

Considering the characteristics of the Gen Z population, simulation may seem like a well-suited teaching methodology due to the use of technology and opportunities for experiential learning. However, several characteristics of Gen Z students require consideration in simulation education, specifically when dealing with emotions such as anxiety (Chicca & Shellenbarger, 2018). For instance, Duffy et al. (2019) found that a higher proportion of Gen Z individuals rate their mental health as fair or poor, more than millennials (born 1981–96) and Gen Xers (1965–80). More Gen Z's also reported receiving mental health treatment than Gen Xers and baby boomers (born 1946–64; Duffy et al., 2019). In Bethune's (2019) study, nine out of 10 Gen Z adults reported they had experienced at least one physical or emotional symptom because of stress, such as feeling depressed, sad, disinterested, unmotivated, and fatigued. In addition, only one-half of these Gen Z adults feel they effectively manage their stress (Bethune, 2019).

According to Chicca and Shellenbarger (2018), Gen Z students often interact solely in the digital world therefore, they have underdeveloped social and relationship skills. In addition, Gen Z's reliance on technology increases the risk for isolation, insecurity, and mental health issues, such as anxiety and depression (Chicca & Shellenbarger, 2018). These findings are supported by a national survey that found 63% of college Gen Z students aged 18–22 years reported overwhelming anxiety (Duffy et al., 2019).

Nursing pedagogies will need to consider these findings and adapt to the Gen Z nursing student's needs. A teaching methodology such as simulation, which elicits negative emotions (Kang & Min, 2019; Yockey & Henry, 2019), may be challenging for the Gen Z student if negative emotions are not addressed. This new generation of nursing students present with

significant emotional responses that need consideration when providing learning experiences, particularly in simulation education. Because of the increasing demand for practice-ready graduates (Schmitt & Lancaster, 2019), it is imperative to explore how the experience of Gen Z students, particularly their emotional states, influences their learning in simulation.

Simulation

Simulation is a teaching method that creates a situation or environment allowing learners to experience a "representation of a real event for practice, learning, evaluation, testing, or to gain an understanding of systems or human actions" (Lioce et al., 2020, p. 44). Simulation is often used throughout nursing education to provide learning opportunities, assess student knowledge, and foster critical thinking (Aebersold, 2018; Bradley et al., 2019). Smiley (2019) found that approximately 90% of nursing programs in the United States report using simulation within their nursing education curriculum. In addition, the National Council for State Boards of Nursing has approved nursing programs to use up to 50% of clinical time in simulation (Hayden et al., 2014). Several states that have historically only allowed 25% of clinical time to be replaced by simulation (Bradley et al., 2019) have approved simulation use for up to 50% during the coronavirus pandemic (California State Board of Nursing, 2020).

In the Institute of Medicine (IOM) report, *To Err is Human: Building a Safer Health Care System,* simulation is identified as an educational strategy aimed to decrease errors in the clinical setting (Kohn et al., 2000). Simulation experiences in nursing education provide essential opportunities for students to develop critical thinking and refine clinical decision-making, resulting in fewer medical mistakes in clinical settings (Eyikara & Baykara, 2017). To promote optimal outcomes in simulation, the International Nursing Association for Clinical Simulation in Learning (INACSL Standards Committee et al., 2021a) has provided best practice standards.

Standards of best practice in simulation outline learner outcomes to determine the impact of simulation-based experiences on student satisfaction, learning, behaviors, and patient safety (INACSL Standards Committee et al., 2021b). These outcomes include "(a) Reaction: measures participant's satisfaction with training, (b) Learning: measures knowledge, skills, and attitudes gained from training, (c) Behavior: measures changes that occurred as a result of training, and (d) Results: improving quality and safety" (INACSL Standards Committee et al., 2021b, p. 40). Simulation educators ensure best practices in simulation, including understanding the barriers that may contribute to unsuccessful learning experiences such as uncomfortable emotions.

Research confirms that simulation is an effective educational tool in nursing education to achieve learning outcomes when following best practices (Aebersold & Tschannen, 2013; Crowe et al., 2017; Durham & Alden. 2008; Kim et al., 2016). However, simulation has elicited negative emotions, such as anxiety, in nursing students (Al-Ghareeb et al., 2019; Kang & Min, 2019; Yockey & Henry, 2019). Negative emotional states can impede the outcomes of the simulation experience (Burbach et al., 2016; Cheung & Au, 2011; Fraser et al., 2012; Gosselin et al. 2016; LeBlanc, 2019). Tyng (2017) posits that emotions affect perception, attention, learning, memory, reasoning, and problem solving, which are all areas necessary for meeting simulation outcomes.

Emotional Experiences in Simulation

Positive and negative emotional responses among students can occur during simulation (Rogers et al., 2019). Keskitalo and Ruokamo (2017) found the presence of several positive emotions related to simulation (e.g., a sense of community and enjoyment). Negative emotions were identified as feelings of uncertainty and worry (Keskitalo & Ruokamo, 2017). There is a greater focus in the literature on the negative emotions of learners because positive emotional

experiences often facilitate learning for students, whereas negative emotions hinder their learning (McConnell & Eva, 2012; Rogers et al., 2019). Rogers et al. (2019) further posit that emotions influence learning in several ways, depending on the extent and context of emotional activation.

Negative emotional responses in simulation have been identified throughout the literature (Al-Ghareeb et al., 2019; Burbach et al., 2016; Cheung & Au, 2011; Dzioba et al., 2014; Gantt, 2013; Gosselin et al., 2016; Kang & Min, 2019; Patterson, 2016; Pollock & Biles, 2016; Yockey & Henry, 2019). Anxiety experienced during simulation has proven to negatively influence learning, performance, concentration, and the student's ability to provide appropriate patient care (Burbach et al., 2016). Similarly, Yockey and Henry (2019) found that first and final-semester nursing students experience high anxiety levels during simulation throughout the curriculum. Using a modified Westside Test Anxiety Scale (Driscoll, 2007), they found that nursing students experienced high anxiety levels throughout certain simulation aspects (Yockey & Henry, 2019). Based on these studies, nursing students' anxiety was related to being observed during the simulation, unfamiliarity with the environment (Burbach et al., 2016), being assigned to the role of primary nurse, and fear of making a mistake (Yockey & Henry, 2019).

Kang and Min (2019) studied the concept of nursing students' psychological safety in simulation. They reported that students felt unprepared and anxious about the simulation even though they received the standard components of best practice in simulation including a prebriefing providing an orientation to resources in the simulation room, the expected time of the scenario, and an introduction to the simulation scenario. Furthermore, the students expressed anxiety, worry, and even fear after the simulation event had ended (Kang & Min, 2019). Several studies found that negative emotions impaired and decreased student learning (Dzioba et al., 2014; Kang & Min, 2019; Tyng et al., 2017). The characteristics of Gen Z students and the

pedagogical processes involved in simulation may provoke uncomfortable emotional responses, which could hinder the teaching and learning experience and have the opposite effect of its intended purpose. Therefore, the current study seeks to uncover emotional responses in simulation with a focus on emotions that are perceived as barriers to learning and performance.

Emotional Processing

Emotional processing is "a process whereby emotional disturbances are absorbed and decline to the extent that other experiences and behaviors can proceed without disruption" (Rachman, 1980, p.51). *Absorbing* is part of effective emotional processing in that the individual employs specific strategies to lessen uncomfortable emotions and gain a sense of comfort. Rachman (1980) provided some examples of strategies that may facilitate absorption of uncomfortable emotions including repeated exposure to the disturbing material, calm rehearsals of coping behaviors, repeated practice, proceeding from low to high provoking stimuli, the use of relaxation techniques, a sense of perceived control, or relevant conversation with a focus on the source of uncomfortable emotions (Rachman, 1980).

Rachman (1980) further outlined the sequence of events of emotional processing as: (a) an emotional disturbance, (b) a decline in emotional disturbance, and (c) a return to routine behavior. This outlined sequence of events indicates that the emotional processing has been effective. However, signs of unsatisfactory emotional processing include a continuance of intrusive thoughts and inability to concentrate on tasks (Rachman, 1980). Examples of activities that are likely to impede emotional processing include avoidance of the disturbing stimuli or situation, a refusal or inability to talk about them, repeated exposures to disturbing material under uncontrolled conditions, poorly presented material, few practice sessions, and absence of

perceived control (Rachman, 1980). Based on this explanation, simulation may include events that can facilitate or hinder emotional processing.

Emotional processing has a significant impact on learning and attentional processes (Shi et al., 2014). For instance, test anxiety can affect learning and performance if not processed (Shi et al., 2014). The sequence of events to indicate successful emotional processing for test anxiety would include: (a) anxiety is experienced by the learner in a testing situation resulting in an inability to concentrate on the situation or task; (b) then learner identifies anxiety and can reduce or "absorb" the impact of the negative emotion; and (c) the learner is then able to focus on the situation and engage in the task successfully.

The above description of emotional processing highlights the importance of emotions in simulation education. Students may be unable to critically think or apply their nursing knowledge if they feel overwhelmed by negative emotions. Najjar et al. (2015) claim that students will find difficulties processing the simulation cognitively until they can process the negative emotions elicited by the simulation. All three events (i.e., emotional disturbance, reduced disturbance, and return to expected behavior) need to occur for successful emotional processing (Rachman, 1980).

Negative emotions affect the application of nursing knowledge and impair the attainment of new knowledge (Kang & Min, 2019; Tyng et al., 2017). Therefore, impairment from negative emotions can be critical for simulation outcomes. Soderstrom and Bjork (2015) explain that education aims to create relatively permanent changes in student comprehension, understanding, and skills to support long-term retention and transfer. However, Kang and Min (2019) found that several simulation aspects decreased student learning, including anxiety about mistakes and fear

of evaluation. Learning outcomes are affected because emotions are strongly linked to attentional processes, closely related to learning (Bandura, 1988; Fraser et al., 2012; Tyng et al., 2017).

Negative emotions experienced during the simulation may impair learning outcomes, especially when the learner cannot process those emotions. Therefore, both the learner and the simulation facilitator must acknowledge emotions occurring during the simulation event. Nurse educators should also consider emotions during the simulation and implement these considerations into best practice guidelines.

Current best practice guidelines for conducting simulation may fail to capture the fundamental needs of the Gen Z student, specifically in the area of emotions and the increased reports of negative emotions for these learners (INACSL Standards Committee et al., 2021c). Emotional experiences are critical in educational settings because emotions modulate almost every aspect of cognition (Tyng et al., 2017). Because emotional processing is essential in dealing with the negative emotions that influence learning, traditional simulation approaches may be inadequate in meeting the needs of the Gen Z student. To provide optimal educational experiences, nurse educators must understand Gen Z's emotional responses and processing in current simulation pedagogies.

Purpose

The purpose of this research study is to examine the Gen Z nursing students' emotional experience in simulation, their emotional responses, and the processing of emotions that may occur during the learning activity. The specific aim of this study is to explore how Gen Z nursing students experience and process emotions in simulation.

Research Question

The research question for this qualitative study is as follows: How do Gen Z nursing students experience and process emotional responses in simulation?

Study Significance

There is a dearth of studies on Gen Z nursing students' general educational experience and learning outcomes, their learning experiences in simulation, and the impact of their emotions and how they process these emotions in simulation. As the Gen Z nursing population is relatively new, a gap in the literature is expected. However, there is also very little research regarding emotional processing in simulation. Current best practice in simulation indicates that a psychologically safe environment is essential to establish during the prebriefing session of the simulation (INACSL Standards Committee et al., 2021d). Best practice guidelines for a psychologically safe environment include the following: (a) including activities that help establish an environment of integrity, trust, and respect; (b) ensuring confidentiality and professionalism; (c) creating an atmosphere of trust by being accessible and approachable; (d) preventing defensive behavior and supporting risk-taking (INACSL Standards Committee et al., 2021d, p.12).

The INACSL Standards Committee et al. (2021d) guidelines provide a solid structure for the prebriefing session. However, the influence on Gen Z nursing students and their emotional responses is unknown. More research is needed to understand emotions during the simulation event and how students process those emotions. Findings from such studies will contribute to improving pedagogical approaches in simulation.

This study will add to the current state of the science by providing insight into the emotions Gen Z nursing students experience during simulation and how they can process those

emotions. The results may be used to inform interventional studies regarding emotions in simulation, specifically when emotions are highest such as the prebrief session or during the actual scenario when students are expected to perform. This research will help educators understand the emotional experience and create simulation experiences that will support the educational outcomes of these students so that they develop the proficiency in providing safe patient care at the bedside.

Definition of Terms

Absorbing- refers to the part of effective emotional processing in which the individual employs specific strategies to lessen the uncomfortable emotions and gain a sense of comfort. Absorbing does not refer to emotional maladaptive strategies of internalizing, suppressing, and bottling-in emotions; instead, absorbing pertains to acknowledging the presence of emotions and managing them in order to decrease the inner experience of discomfort and distress from uncomfortable emotions.

Axial coding- relating the data and grouping the concepts together to form themes (Corbin & Strauss, 2015).

Comparative analysis- comparing data for similarities and differences. Data found to be conceptually similar to previously coded data are given the same conceptual label and put under the same code. New data that is coded under a code, adds to the general properties and dimensions of that code, elaborating it and bringing in variation (Corbin & Strauss, 2015).

Conceptual saturation- the process of acquiring sufficient data to develop each category or theme fully in terms of its properties and dimensions and to account for variation (Corbin & Strauss, 2015).

Debriefing- defined as a "formal, collaborative, reflective process within the simulation learning activity; a session after a simulation event where educators, instructors, facilitators and learners re-examine the simulation experience for the purpose of moving toward assimilation and accommodation of learning to future situations" (Lioce et al., 2020, p. 15).

Emotional processing- is "a process whereby emotional disturbances are absorbed, and decline to the extent that other experiences and behaviors can proceed without disruption" (Rachman, 1980, p. 51).

Generation X- (Gen X) a generational cohort identified as born from 1965–1980 (Dimock, 2019).

Generation Z- (Gen Z) a generational cohort identified as born from 1997–2012 (Dimock, 2019).

Grounded theory- a qualitative methodology with the purpose of constructing theory grounded in the data (Corbin & Strauss, 2015).

Millennial Generation- a generational cohort identified as born from 1981–1996 (Dimock, 2019).

Open coding- breaking apart data and delineating concepts to stand for interpreted meaning of raw data (Corbin & Strauss, 2015).

Prebriefing- defined as an "information or orientation session held prior to the start of a simulation activity in which instructions or preparatory information is given to the participants. The purpose of the prebriefing is to set the stage for a scenario and assist participants in achieving scenario objectives" (Lioce et al., 2020, p. 39).

Psychological safety- A "feeling (explicit or implicit) within a simulation-based activity that participants are comfortable participating, speaking up, sharing thoughts, and asking for help as needed without concern for retribution or embarrassment" (Lioce et al., 2020, p. 40).

Qualitative research- a form of research in which a researcher collects and interprets data, making the researcher as much a part of the research process as the participants and the data they provide (Corbin & Strauss, 2015).

Selective coding- data analysis where themes are merged to form the core theme, supporting the theory (Corbin & Strauss, 2015).

Simulation- a teaching method that creates a situation or environment allowing learners to experience a "representation of a real event for the purpose of practice, learning, evaluation, testing, or to gain an understanding of systems or human actions" (Lioce et al., 2020, p. 44).

Symbolic interactionism- a theoretical framework based on the assumption that human beings act toward things based upon the meanings that these things have for them and that the meaning is derived from social interactions (Blumer, 1969).

Theoretical sampling- data collection based on concepts that appear to be relevant to the evolving storyline (Corbin & Strauss, 2015).

CHAPTER II

LITERATURE REVIEW AND FRAMEWORK

This chapter provides a synthesis of literature necessary to understand the state of the science on the Generation Z (Gen Z) population, emotions in nursing simulation, and the impact of emotions on the learning experience. Symbolic interactionism will also be included as the conceptual framework for this study. The first section covers generational research and an overview of the Gen Z population. The second section covers simulation education and emotions in simulation. The third section covers emotions and emotional processing. Lastly, this study will discuss symbolic interactionism as an applied framework.

Databases included EBSCOhost, CINAHL, PubMed, Ovid, ProQuest, and Science Direct with search terms including *nursing student, emotions, simulation, anxiety, Gen Z, learning, emotional processing*, and a combination of these terms. The computerized literature search was limited to the last ten years (2011–2021), except in seminal works, particularly in the conceptual framework section.

Generational Research

A generation refers to a cohort of people born over a 15–20 year span (Pew Research Center, 2015). Generational research captures the unique features of generational cohorts based upon a wide range of issues, behaviors, and characteristics (Pew Research Center, 2015). Generational research can provide a way to "understand how different formative experiences interact with the life-cycle and aging process to shape people's views of the world" (Dimock, 2019, p. 1). According to the Pew Research Center (2015), an individual's age is the most common predictor of attitude and behaviors. Each generation has unique characteristics that influence their views, attitudes, and behaviors (Hampton & Keys, 2017; Oducado, 2019).

Generational research is significant for nurse educators because generational characteristics influence how students approach learning (Dimock, 2019; Hampton & Keys, 2016). Seemiller and Grace (2017) warn that higher education will miss the opportunity to influence the minds of our next generation if specific philosophies and practices to educate, mobilize, empower, and prepare the Gen Z student are not adopted.

Gen Z

The Gen Z population comprises about 24% (74 million) of the total population in the United States (Twenge, 2017). This newest generational cohort has been referred to in many ways, including post-millennial (Fry & Parker, 2018), iGen (Twenge, 2017), Homelander (Howe, 2018), True Gen (Francis & Hoefel, 2018), and Gen Z (Dimock, 2019), amongst others. Among these terms, "Gen Z" seems to be the most popular term used. Although this generational cohort values individualism and avoids labels (Francis & Hoefel, 2018), the term Gen Z gained popularity and is the most used term for this cohort (Dimock, 2019).

There is growing interest in Gen Z research (Fry & Parker, 2018) from various concentrations such as employment, learning, and mental health. Goh and Lee (2018) researched Gen Z in hospitality positions, Bethune (2019) on Gen Z mental health, Duffy et al. (2019) on mood and anxiety, Schmitt and Lancaster (2019) on readiness to practice, Camfield et al. (2020) on stereotypes and learning, and Nicholas (2020) on learning styles. Even though research about Gen Z is limited and new, existing studies about the characteristics provide a foundational premise for applying our understanding of the Gen Z population to nursing education.

Characteristics

Compared to previous generational cohorts, Gen Z is the most diverse population to date (Dimock, 2019; Fry & Parker, 2018; Parker & Iglielnik, 2020). Fry and Parker (2018) report that

only a slight majority of the United States Gen Z population is non-Hispanic white (52%), which is significantly lower than other generations, including millennials (61%), Gen X (70%), and Boomers (82%). The newest generation is also on track to be the most educated (Fry & Parker, 2018; Parker & Iglielnik, 2020; Stiger, 2019). Gen Z high school graduates (59%) are enrolling in college, compared to Millennials (53%) and Gen X (44%; Fry & Parker, 2018).

The Gen Z population has shown dramatic shifts in lifestyle, behavior, and attitude (Dimock, 2019). For example, in a study of Gen Z college students in the United States, 70% of the sample self-identified themselves as a dependable generation, strong advocates for their personal beliefs, and influential change agents (Dimock, 2019). The proportion of Gen Z adults (aged 18–23, in 2020) that identify as lesbian, gay, bisexual, or transgender (LGBT) is 15.9%, which is significantly higher than millennials (9.1%), Gen X (3.8%), and boomers (2%; Jones, 2021). Gen Zs believe they are powerful and capable of making meaningful changes, specifically with social justice issues and equal human rights (Seemiller & Grace, 2017). Seemiller and Grace (2016) describe the Gen Z population as compassionate, thoughtful, and determined individuals.

The Gen Z population has grown up in a technologically connected world, with answers immediately available through electronic media (Hampton et al., 2019; Nicholas, 2020; Parker & Iglielnik, 2020; Seemiller & Grace, 2017; Shatto & Erwin, 2016). Seemiller and Grace (2016) state that access to instant answers has weakened critical thinking skills for Gen Z students because they have not been challenged to problem solve for themselves. Others suggest that the growing amount of time spent with technology and social media contributes to the growth in anxiety and depression among this group (Parker & Iglielnik, 2020). In addition, technology has had a significant influence in shaping this generation, specifically with how people communicate

(Dimock, 2019). Gen Z has its own set of social norms and trends when communicating and building relationships with others (Dimock, 2019; Seemiller & Grace, 2016). For example, Gen Z individuals prefer quick, succinct, and always accessible communication such as text messages (Nicholas, 2020; Seemiller & Grace, 2016; Williams, 2019). Technology also significantly influences Gen Z's learning preferences (Hampton & Keys, 2016).

Learning Preferences

Like previous generations, Gen Z students strive to acquire practical knowledge; however, learning preferences are markedly different (Nicholas, 2020; Seemiller & Grace, 2017). Gen Z students prefer active learning (i.e., simulation and case studies) instead of passive lecture-led learning (Hampton et al., 2019; Nicholas, 2020; Seemiller & Grace, 2016; Seemiller & Grace, 2017; Shatto & Erwin, 2016). Gen Z nursing students view clinical skills and competent practice as the most crucial component of academic success (Hampton et al., 2019), aligning with their active learning preferences. Gen Z individuals generally have an eight-second attention span, which results in frustration when answers are not immediately provided to them in learning situations (Shatto & Erwin, 2016; Stiger, 2019). Gen Z students prefer learning methods such as audio-enhanced PowerPoint presentations, simulation, and case studies over other methods such as lectures (Hampton et al., 2019).

Emotions of Gen Z

Formative life experiences have led to specific Gen Z emotional characteristics. Similar to previous generations, major global events have contributed to how Gen Z individuals view and experience the world (Seemiller & Grace, 2017). For instance, the Vietnam War affected Baby Boomers, the fall of communism influenced Gen X, and the attack on the World Trade Center impacted millennials (Seemiller & Grace, 2017). Terrorism and widespread public

shootings are foundational occurrences that have influenced the Gen Z population leading to feelings of uncertainty, fear, and worry (Bethune, 2019; Seemiller & Grace, 2017). Recent social issues like the coronavirus pandemic (Parker & Iglielnik, 2020), immigration, and sexual assault (Bethune, 2019) further compound feelings of stress.

Gen Z College students are reporting overwhelming anxiety and feelings of depression to the point that these difficult emotions interfere with their daily lives (American Psychological Association, 2018; Twenge, 2017). Twenge (2017) found an increased rating of mental health issues in the United States reaching an all-time high, with reports of feeling overwhelmed increasing by 51%, those seeking counseling increasing by 64%, and feelings of depression increasing by 95% (Twenge, 2017). Most Gen Z college students describe their mental health as below average (American Psychological Association, 2018; Twenge, 2017). Duffy et al. (2019) examined trends in mood, anxiety, and suicide-related outcomes among U.S. college students from 2007 to 2018 across two large national datasets and found rates of depression, anxiety, nonsuicidal self-injury, suicidal ideation, and suicide attempts markedly increased over the assessed years. Many of the increases were extreme, for example, severe depression, nonsuicidal self-injury, suicide plans, and suicide attempts more than doubled over a decade (Duffy et al., 2019).

Negative emotions derived from stress affect learning in various ways depending on the extent and reason for the emotional response (Rogers et al., 2019). Research indicates that when negative emotions are experienced during educational activities, attention is given to uncomfortable emotions rather than learning (Kang & Min, 2019; Najaar, 2015; Tyng et al., 2017). Consequently, negative emotions affect simulation learning because attention and

performance are needed to meet the foundational purposes of simulation, such as practicing, learning, evaluation, and understanding (Lioce et al., 2020).

Nursing Students

Most students entering nursing programs are Gen Z (Chicca & Shellenbarger, 2018; Hampton et al., 2019; Schmitt & Lancaster, 2019), making this cohort of students significant in nursing education and research. However, there is a paucity of knowledge regarding the Gen Z nursing student. Current literature on Gen Z nursing students is expository and theoretical, rather than empirical research. For example, Chicca and Shellenberger (2018) reviewed the attributes of Gen Z individuals as learners and recommended strategies for connecting with Gen Z students in nursing education and clinical environments. Suggested strategies include active learning design, experiential learning, integration of technology into instruction, and short, succinct, prompt, and frequent interactions with students (Chicca & Shellenberger, 2018). Williams (2019) also adds a general overview of Gen Z college student characteristics. Challenges in teaching and learning associated with this generational cohort were identified as technological gaps between faculty and learners, short student attention span, and communication preferences (Williams, 2019). Hampton and Keys (2017) also give a general description of the Gen Z students and implications for nurse educators to create meaningful learning experiences. Suggestions include incorporating active learning strategies throughout the curriculum, such as the internet, web games, simulation, audience response systems, problem-based learning, case studies, team activities, and videos (Hampton and Keys, 2017). These articles deliver a preliminary understanding of the Gen Z nursing student. However, more research is needed to understand the Gen Z population and the impact of their characteristics in nursing education.

Current research studies regarding Gen Z nursing students are limited to student preferences and satisfaction in learning environments. For example, Oducado (2019) studied Gen Z nursing satisfaction with Facebook as an educational tool. Results indicated that Gen Z students value Facebook as an educational tool and are satisfied with using social media for educational purposes (Oducado, 2019). Hampton et al. (2019) studied Gen Z nursing students' learning preferences and engagement. Research showed the most preferred learning method was a lecture with audience response clickers, and the least preferred method was assigned reading (Hampton et al., 2019). DiMatto and Hudacek (2020) studied how psychological dimensions of the clinical learning environment predict student satisfaction. Researchers found students were most satisfied when they could make decisions, work at their own pace, and receive direction, feedback, and support (DiMatto & Hudacek, 2020). Vizcaya-Moreno and Pérez-Cañaveras (2020) also studied Gen Z preferred learning methods in clinical settings. In addition, Gen Z students preferred linking mentorship learning to clinical experiences, online tutorials, interactive gaming, and virtual learning environments (Vizcaya-Moreno and Pérez-Cañaveras, 2020). These studies contribute to a general understanding of Gen Z student preferences. However, research studies involving students' performance or learning outcomes were not evident. Additional research is needed to determine the efficacy of implementing teaching and learning strategies that consider the identified student preferences (DiMatto & Hudacek, 2020; Vizcaya-Moreno and Pérez-Cañaveras, 2020).

A single article was found that specifically addressed Gen Z nursing student outcomes. Schmitt and Lancaster (2019) explored Gen Z's self-confidence, anxiety, and readiness to practice between two BSN pre-licensure student groups. One group received 126 hours in a precepted clinical experience, and the other group received 252 clinical hours. Results showed

that Gen Z nursing students' anxiety did not improve even after extra time (i.e., double the amount of time) in the clinical setting (Schmitt & Lancaster, 2019). More research is needed with the Gen Z nursing student population to obtain a foundational understanding of their needs.

Simulation

Simulation is a teaching and learning strategy that has been integrated increasingly into nursing education (Aebersold, 2018; Bradley et al., 2019; Smiley, 2019). *Simulation* creates a situation or environment allowing learners to experience a representation of a real event or scenario (Lioce et al., 2020). Currently, over 90% of nursing programs in the United States have incorporated simulation in their educational curriculums (Smiley, 2019).

Nursing education is practice-oriented, focusing on theoretical knowledge and psychomotor skills (Eyikara & Baykara, 2017). As a teaching and learning strategy in nursing education, simulation allows students to practice clinical skills while developing clinical judgment (Eyikara & Baykara, 2017; Lioce et al., 2020). This type of education is in nursing because it provides learning opportunities for students and assesses student knowledge for educators (Aebersold, 2018; Bradley et al., 2019; Lioce et al., 2020).

Simulation has proven to be an effective teaching modality (Bradley et al., 2019; Crowe et al., 2017; Curl et al., 2016; Hayden et al., 2014; Kim et al., 2016; Reid et al., 2020). Studies have found that using simulation in place of hospital-based clinical experiences provides equivalent learning outcomes (Curl et al., 2016; Hayden et al., 2014; Reid et al., 2020). Simulation promotes clinical judgment (Eyikara & Baykara, 2017; Najaar et al., 2015; Reid et al., 2020), increases self-efficacy, and improves skill performance (Lin, 2015; Najaar et al., 2015).

Emotions in Simulation

Students often experience various emotions in simulation (Keskitalo & Ruokamo, 2017; Rogers et al., 2019), which influences the simulation experience and learning outcomes (Najaar et al., 2015; Roh et al., 2021; Tyng, 2017; Vogal & Schwabe, 2016). Rogers et al. (2019) found that students participating in simulation experienced both positive emotions (e.g., excitement and enthusiasm), as well as negative emotions (e.g., distress and anxiety). Other positive emotions reported include interest in simulation learning, a sense of community, and enjoyment of studying (Keskitalo & Ruokamo, 2017). Positive emotions may increase learning, elevate motivation, and improve performance (Keskitalo & Ruokamo, 2017; Roh et al., 2021). In comparison, negative emotions lead to poor learning outcomes (Burbach et al., 2016, Cato, 2013; Cheung & Au, 2011; Kang & Min, 2019).

Anxiety in simulation is the emotion most often reported in the literature (Al-Ghareeb et al., 2019; Burbach et al., 2016; Gosselin et al., 2016; Kang & Min, 2019; Patterson, 2016; Pollock & Biles, 2016; Yockey & Henry, 2019). In addition to anxiety, students experience other uncomfortable emotions in simulation, such as uncertainty (Burbach et al., 2016; Dzioba et al., 2014; Keskitalo & Ruokamo, 2017; Zhang, 2017) and worry (Kang & Min, 2019; Keskitalo & Ruokamo, 2017). Students have also reported feeling pressured (Dzioba et al., 2014; Zhang 2017), stressed (Dzioba et al., 2014; Keskitalo & Ruokamo, 2017; LeBlanc, 2019; MacLean et al., 2019), and unprepared (Kang & Min, 2019).

The consequences of uncomfortable emotions in simulation are evident in current nursing research. Yockey and Henry (2019) report that uncomfortable emotions can lead to various concerns including mental distraction, irrelevant thoughts, reduced working memory, and poor performance. Additional research found that difficult emotions were a barrier to learning (Dzioba

et al., 2014; Gosselin et al., 2016; Kang & Min, 2019), and could lead to reduced participation in the learning experience (Kang & Min, 2019). The literature indicates clear benefits to reducing uncomfortable emotions, including improved performance, learning, and success in simulation (Gosselin et al., 2016).

Simulation has been used in interventional studies to reduce anxiety in clinical settings. For instance, Bremner et al. (2008), Hollenbach (2016), and Kameg et al. (2014) researched using simulation before clinical rotations to reduce anxiety. Bremner et al. (2008) found the students that received simulations using high fidelity manikins reported less anxiety when entering their first clinical rotation. Hollenbach (2016) found that using simulation before first clinical experiences had mixed results. Although nursing student anxiety levels dropped initially, they were the same as pre-simulation scores one week later (Hollenbach, 2016). Moreover, some participants had higher anxiety scores after simulation than pre-simulation (Hollenbach, 2016). These studies imply that, to date, the effects of anxiety during simulation to learning are mixed and inconclusive.

Educational interventions to alleviate the effects of negative emotions nursing students experience in simulation have also been tested (Baksi et al., 2017; Gosselin et al., 2016; Hollenbach, 2016; Kameg et al., 2014). Interventional studies have focused on preparatory work before simulation (Baksi et al., 2017; Gantt, 2013), music therapy before simulation (Gosselin et al., 2016), and simulation in a fundamental course (Lin, 2016). Baksi et al. (2017) and Gantt (2013) researched the effect of preparatory work before simulations. Baksi et al. (2017) provided extra preparatory classes to the intervention group before their first clinical rotations. The classes included clinical practice, anxiety phenomenon, interpersonal relationships, and problem-solving (Baksi et al., 2017). Gantt (2013) provided additional time in simulation before an actual graded

simulation event. The additional simulation scenarios were comparable to the actual graded scenario (Gantt, 2013). Both studies looked at extra preparation before simulation as an intervention to reduce anxiety, and both studies showed no significant decrease in anxiety (Baksi et al., 2017; Gantt, 2013). Gosselin et al. (2016) incorporated relaxing music in the simulation experience and found that music therapy before the simulation experience was associated with decreased anxiety and improved performance. Lin (2016) researched the use of simulation to reduce anxiety in fundamental skills testing. Findings showed that simulations assisted students with completing necessary course content (i.e., skills testing) but that anxiety levels were related more to self-efficacy than the simulation experience. For instance, students with high self-efficacy experienced lower anxiety levels and increased performance than students with lower self-efficacy (Lin, 2016).

Research shows that emotions are central to understanding student experiences in simulation. The literature review on emotions in simulation identified the high prevalence of negative emotional responses in simulation and the detrimental impact of these emotional responses on learning and performance. However, research indicates that a clear understanding of students' emotions in simulation is still missing, and current approaches are inconclusive.

Emotions and Emotional Processing

Emotional processing is defined as "a process whereby emotional disturbances are absorbed and decline to the extent that other experiences and behaviors can proceed without disruption" (Rachman, 1980, p.51). As theorized by Rachman (1980) *absorb* refers to the strategies used to “take in” or manage the uncomfortable emotions. Similarly, in simulation, Najaar et al. (2015) explain that emotional processing involves an active process of working through the emotions that emerge from the simulation experience. Successful emotional

processing has significant implications in education. Indications of effective emotional processing include a decline in distress, a reduction in disturbing behavior, and an increased ability to concentrate (Rachman, 1980).

Rachman (1980) explains that emotional processing requires three conditions: an emotional disturbance, evidence that the disturbance has declined, and a return to normal behavior. According to Rachman (2009), effective emotional processing is facilitated by adaptive and nonthreatening thoughts to promote the breaking down of uncomfortable incoming emotional stimulation into manageable proportions that can then be processed. An example of these three conditions in a simulation would be a student experiencing anxiety during the event. The student focuses on anxiety rather than the simulation (i.e., emotional disturbance) and is therefore unable to perform or engage in the simulation. The student then recognizes the negative emotion and implements strategies (e.g., positive self-talk) to neutralize the uncomfortable emotion (i.e., disturbance has declined). The student then proceeds to engage in the simulation appropriately (i.e., return to normal behavior). If an emotional disturbance occurs without a decline in disturbance or returns to normal, then the emotional processing is incomplete (Rachman, 1980).

Absence of emotional processing during learning experiences affects attention, motivation, action, and behaviors (Tyng, 2017; Vogal & Schwabe, 2016). An inability to emotionally process results in an array of consequences (Rachman, 1980). Signs of ineffective emotional processing include unpleasant intrusive thoughts, inappropriate expression of emotion, behavioral disruptions, fear, inability to construct thought, and resistance to disruption (Rachman, 1980). Focusing on nursing simulation, Najaar et al. (2015) conducted a grounded theory study that identified emotional processing as a prominent theme in student descriptions of

their simulation experiences. Students reported that emotional processing initially occurred with the dissipation of anxiety immediately after the simulation ended (Najaar et al., 2015). However, emotional processing continued to occur for hours, days, and even weeks after the simulation for some participants (Najaar et al., 2015). Emotional processing would be most useful during the simulation, when there are still opportunities to engage in the learning event. However, the study by Najaar et al. (2015) found that emotional processing occurred after the simulation had completed. High emotions, left unresolved in simulation, will fail to improve following the learning event (Fraser et al., 2012), act as a barrier to learning during the event, and contribute to unsafe care practices (Burbach et al., 2016; Cheung & Au, 2011). Najaar et al. (2015) highlight the importance of future research to examine the relationship between emotional processing, anxiety, and learning.

Conceptual Framework

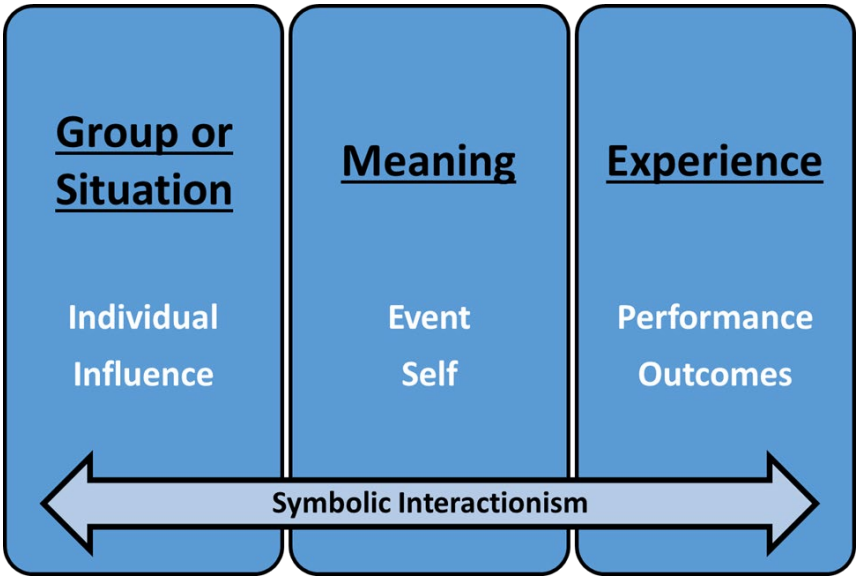
Symbolic interactionism serves as the conceptual framework for this study. The framework provides the theoretical underpinnings of grounded theory (Andersen et al., 2012), which is the methodology of choice in the current study. This study explores the emotions and emotional processing in the simulation learning environment. Therefore, situational influences, simulation meanings, and emotional experiences are applied to the symbolic interactionism framework. (Figure 1). To date, Gen Z nursing students' emotional experiences in simulation and how they process their emotions during the event remain unclear. Symbolic interactionism is central to grounded theory research to develop a valid, deep, rich, and explanatory theory (Milliken & Schreiber, 2012).

Symbolic interactionism assumes that humans act toward things based upon the meanings that they have for them and that meaning derives from social interactions (Blumer, 1969).

Blumer (1969) explained that individual experiences occur inside groups and that the group exerts influence on experience. The implications of group dynamics concerning this study are illustrated in Figure 1, within the first box labeled Group or Situation. The individual's psychological makeup is associated with group demands, expectations, and judgment, influencing feelings or processes such as thought and learning (Blumer, 1969). This type of interaction is relevant to simulation research because simulation is generally an interpersonal phenomenon in which students work with their peers in groups and with their faculty to manage patient scenarios.

Figure 1

Applied Symbolic Interactionism Framework



Note. This model shows Symbolic Interactionism and its application to the components of this grounded theory research study.

Interactions are essential in understanding the thinking and learning processes occurring with the participants in a simulated environment. The Gen Z nursing student processes can be seen through a symbolic interactionism "lens" when students attribute meaning to the simulation through interactions with their peers. Analysis of the experience provides a way of discovering the shared understanding of the event from those involved and allows theoretically relevant data to emerge (Andersen et al., 2012).

An understanding of student meanings and emotional processing can be achieved by looking through the “lens” of symbolic interactionism. The manner in which an individual attributes meanings are depicted in Figure 1, in the second box labeled “Meaning”. Blumer (1969) defines this portion of the model in terms of action and consequences. Therefore, the meaning of something resides in the action that it elicits. An example in simulation could be that a student feels judged or scrutinized in simulation. The student might then be fearful of making a mistake and attributes negative meanings to simulation (Cato, 2013; Stephen et al., 2020). These meanings could lead to inaction, poor performance, and negative experiences in simulation due to the fearful meaning attributed to the situation. Meaning is one of the significant elements of symbolic interactionism in understanding behaviors, interactions, and social processes (Jeon, 2004). In contrast, if the student views simulation as an opportunity for growth and a safe place to learn, the simulation will take on positive meanings for the students (Bearman et al., 2019) and could elicit proactive engagement in the simulation learning experience.

Experience is the process through which the individual attributes meaning and develops actions based on those meanings, leading to a new experience and meaning (Blumer, 1969). Experience in symbolic interactionism is a continuous process seen in Figure 1, the final box labeled “Experience.” A recent study found that nursing students attribute fear to simulation

(Stephen et al., 2020). Students had fears about the simulation event in all three phases of the simulation experience (i.e., prebrief, scenario, and debrief session). Participants feared being yelled at, being made fun of, being talked down to, being told "you should know this," and being mocked or bullied by peers (Stephen et al., 2020).

Similarly, Najaar et al. (2015) employed a study to examine nursing student experiences in simulation. Research themes included fear and anxiety, which are common emotions for nursing students in simulation (Najaar et al., 2015). These findings help facilitators understand the student perspective toward simulations experiences. In addition, the experience leads to meanings that students attribute to simulation. Understanding these processes could guide educators to understand critical behaviors that contribute to optimal learning in simulation.

The researcher has a fundamental role in the qualitative research process (Corbin & Strauss, 2015). The researcher collects and interprets the data. Therefore, to understand the processes, the researcher must view it from the participant's point of view (Blumer, 1969). The researcher studied the phenomenon from the participant viewpoint to examine Gen Z nursing students' emotions and emotional processing in simulation experiences as reflected in Figure 1. As individuals engage in experiences, they attribute meaning to all aspects within the event. This becomes a continuous process as the individual within a group or situation attributes meanings to the experience, which then influences actions that lead to further meanings (Blumer 1969). These processes can be seen in simulation learning experiences and therefore create the framework for this study.

The focus of this study was the exploration of how Gen Z nursing students view their simulation experience, which emotions are involved, and how they process those emotions in simulation. The goal was to discover what was happening in the processes through which the

Gen Z nursing student experienced and managed emotions in simulation. This research study used the symbolic interactionism framework throughout the research process, including developing the interview guide, data collection, and data analysis (Corbin & Strauss, 2015).

Chapter Summary

A synthesis of literature was provided to explain the state of the science on the Gen Z population, emotions in nursing simulation, and the impact of emotions on the learning experience. Symbolic interactionism was discussed as the framework for the study. Based on current research, the processes involving the emotions of Gen Z students in the simulation learning environment remain unclear. More specifically, little is known about Gen Z nursing students' emotional experiences in simulation and how they process their emotions during the simulation event. This research may provide a deeper understanding of essential concepts in simulation for the Gen Z nursing student and may inform future interventional studies.

CHAPTER III

METHODOLOGY

A qualitative research design was used to fully understand how Generation Z (Gen Z) nursing students experience and process emotions in simulation. Qualitative research is the best choice when attempting to understand a phenomenon rather than test a theory or hypothesis (Jeon, 2004). Specifically, a grounded theory (GT) approach provided an understanding of the processes involved with emotions in simulation for the Gen Z nursing student. In this chapter, the methodological discussion will include the Design, Sample, Procedures, Data Collection, Data Analysis, Ethical Issues, the Role of the Researcher, and Strategies for Ensuring the Trustworthiness of Qualitative Data.

Design

The qualitative GT method by Corbin and Strauss (2015) was used for this study. The GT method is appropriate when there is a lack of theoretical explication, and the phenomenon is not well explained (Corbin & Strauss, 2015). This methodology is inductive based on conceptualization directly linked to the data rather than on a predetermined hypothesis (Strauss & Corbin, 1990). The goal is to move beyond an explanation and to analyze the actions, interactions, and processes to develop a theory grounded in the data (Corbin & Strauss, 2015). Grounded theory can uncover the beliefs and meanings that underlie actions and demonstrate how emotions contribute to the behaviors of the individuals or groups in the setting or context under study (Corbin & Strauss, 2015). To date, no literature theoretically explains how Gen Z nursing students process their emotions in simulation. Grounded theory is appropriate when a phenomenon is not well explained (Corbin & Strauss, 2015), and because GT is the study of

process (Charmaz, 2015) it is imperative to use a GT approach to explicate the emotional processes in simulation with Gen Z nursing students.

The social aspects of a phenomenon can be studied in GT research as this approach is rooted in social processing (Corbin & Strauss, 2015). A simulation is a social event that leads to creating social knowledge and meaning relevant to the learner (Parker & Myrick, 2011). Due to the social component of simulation, using the GT approach is appropriate in exploring the social phenomenon involved in simulation (Corbin & Strauss, 2015). In addition, because simulation learning experiences are social events (Parker & Myrick, 2011), using GT as a methodology is an excellent fit to explore the processes involved with emotions and emotional processing in simulation.

Several ontological and epistemological assumptions underlying the GT research process provide a good fit to the phenomenon of focus of the proposed study. These philosophical assumptions are consistent with the tenets of symbolic interactionism, the theoretical foundation of grounded theory methodology. The first ontological assumption is that social interaction creates reality (Blumer, 1969). Social interactions generate new meanings, alter existing meanings, and maintain old meanings (Corbin & Strauss, 2015). Actions are embedded in interactions and generate additional meanings (Corbin & Strauss, 2015). These assumptions align with this research study because students interact with simulation scenarios, other students, nursing faculty, and simulation staff members to derive new meanings. Simulation interactions and student actions within the scenario combine to generate new knowledge.

The second philosophical assumption is that interpretation of action occurs through individual perspectives that may change as interactions proceed (Mead, 1959). Shared perspectives lead to interactions, and when not shared, perspectives must be negotiated and

brought into alignment for interactions to proceed (Blumer, 1969). Throughout the simulation learning process, nursing students are engaged in social interactions that continually reconstruct personal meanings, leading to changes in perspective and knowledge relevant to learning and practice (Parker & Myrick, 2011). If perspectives are not shared, uncertainty may occur, leading to student confusion and inability to make sense of the simulation scenario (Burbach et al., 2016).

The third philosophical assumption is that there are emotional aspects in the actions of the individuals involved in a social interaction (Dewey, 1929). The integration of emotions and actions is an essential assumption for this research study. Although research has shown that students experience a wide array of emotions in simulation (Al-Ghareeb et al., 2019; Keskitalo & Ruokamo, 2017; LeBlanc, 2019; MacLean et al., 2019), what has yet to be discovered is how students process those emotions before, during, and after simulation experiences. High negative emotions in simulation decrease learning and lead to unsafe practice (Burbach et al., 2016; Cheung & Au, 2011; Fraser et al., 2012). As emotion and action are intermingled, Gen Z's emotions will affect action in simulation.

Based on the ontological and epistemological assumptions underlying GT methodology, actions and interactions in simulation create knowledge and meaning for the students, which are influenced by emotional responses throughout the experience. These assumptions informed this study by giving the researcher a lens through which to view the simulation experiences and how students process their emotions (Corbin & Strauss, 2015). Furthermore, the lens of symbolic interactionism (i.e., the theoretical foundation of grounded theory methodology) allowed the researcher to explore meanings that students attribute to the simulation experience and how they are expressed through their emotions.

Sample

Similar to most qualitative designs, a purposive theoretical sampling design was implemented for this study. The sample consisted of Gen Z pre-licensure nursing students from a baccalaureate nursing program in the western United States engaging in simulation through the standard nursing curriculum. The participants reflected upon simulation experiences that were aligned with INACSL standards of best practice (INACSL Standards Committee et al., 2021a). Inclusion criteria for the study were the following: must (a) be an undergraduate pre-licensure student of baccalaureate nursing program, (b) be born between 1997 and 2012, (c) be over the age of 18 years old, (d) and have participated in at least one simulation event in the current nursing education program.

The researcher determined participant eligibility during the recruitment process before data collection. The sample was obtained from students from all four levels of the undergraduate nursing education program; the total number of participants was determined through theoretical sampling and data saturation (Corbin & Strauss, 2015). Recruiting from all four levels allowed the researcher to capture experiences from diverse perspectives to develop an in-depth and rich understanding of emotions in simulation from Gen Z students throughout the nursing program.

Procedures

Participant recruitment occurred through various methods. The Communication and Outreach Specialist from the School of Nursing distributed the Informational Recruitment Flyers (Appendix A). A Letter of Information was directly sent by the nursing faculty teaching undergraduate courses to communicate with students through email (Appendix B). The informational recruitment letter was sent shortly after IRB approval and then periodically throughout the semester to obtain an adequate number of participants. Students interested in

participating in the study contacted the researcher directly through email as provided in the poster. The researcher determined eligibility to participate through a Qualtrics survey. Potential participants then received information about the study, including the Informed Consent Form (Appendix C) through Qualtrics. Ample time to review the Informed Consent Form and an opportunity to ask questions about the study was provided. When all questions were answered, the research participant was asked to sign the Informed Consent through Qualtrics. After that, the participant was provided another Qualtrics link to complete the pre-interview survey (Demographic Data and Initial Reflection Questionnaire, Appendix D). The researcher then scheduled a mutually convenient Zoom-based interview. A semi-structured interview guide (Appendix E) was used in the Zoom-based interview. As an incentive for participation, Amazon gift cards ($30.00) were provided to the students. A 30-minute follow-up interview (member checking process) was conducted after the participants' data had been coded and analyzed to confirm whether the themes identified from the transcript accurately reflected their experiences.

Data Collection

Due to coronavirus restrictions, data were collected remotely to ensure all state guidelines were followed. Currently, the state is at substantial risk for the spread of coronavirus. Therefore, data was obtained electronically through a Qualtrics questionnaire and Zoom video conferencing.

The study promotion and participant recruitment began with recruitment flyers and an informational letter being sent out by a School of Nursing faculty. The recruitment process was repeated until data saturation occurred. Interviews were scheduled to allow adequate time for data analysis between the interview sessions. Three weeks at the end of the semester were dedicated to the analysis and follow-up interviewing. Overall, data collection started in June 2021 and ended in December 2021.

The research participants completed an open-ended questionnaire reflecting on previous simulation experiences (Appendix D). This initial questioning captured some of the meanings, emotions, and processes experienced during the simulation. Follow-up semi-structured interviews were scheduled and completed through Zoom video conferencing at a mutually convenient time. The semi-structured interviews had more detailed, probing questions (Appendix E). The interviews were recorded and transcribed verbatim.

The researcher maintained meticulous journaling throughout the data collection process. Research journaling provides several benefits in qualitative research, including self-awareness (i.e., bias and assumptions), recording the decision-making process, and logging important information following each data-collection session (Corbin & Strauss, 2015). Before any data collection, the researcher began journaling and continued with an entry to record session events after each interview. It was essential to note personal reactions to the interview session to be aware of the reciprocal influence that the participant and researcher could have on each other (Corbin & Strauss, 2015). Through researcher journaling, open-ended survey, and semi-structured interviews (Corbin & Strauss, 2015), the researcher captured data necessary to understand Gen Z nursing students' emotional responses and processes in simulation.

Data Analysis

In alignment with GT methodology (Corbin & Strauss, 2015), data analysis began with the first participant interview and ceased with data saturation. Memoing was used to keep written records of the data interactions and analysis (Corbin & Strauss, 2015). Memoing is an essential component of grounded theory research to record interactions with the data, including examining the data, making comparisons, asking questions, coming up with concepts that stand for meanings, and identifying relationships between concepts (Corbin & Strauss, 2015). Glaser

(1998), the founder of the GT methodology, asserted that a GT analysis without memoing is essentially not a grounded theory methodology. Therefore, the researcher conducted memoing (in addition to journaling) to facilitate data analysis and theory development further.

There are three phases in Corbin and Strauss's (2016) GT data analysis: open coding, axial coding, and selective coding. The first phase is open coding, which entails a line-by-line examination of the data to discover patterns (Corbin & Strauss, 2015). During open coding, the researcher examined the data to determine the meaning of what was being relayed (Andersen et al., 2012). Constant comparisons occurred when the data was reviewed and compared to previous information to conceptualize patterns (Andersen et al., 2012; Streubert & Carpenter, 2011). The second phase is axial coding (Corbin & Strauss, 2015). Concepts were grouped based upon common perceptions and processes during axial coding, leading to categories (Corbin & Strauss, 2015). The different categories were then integrated, and connections were made around the significant categories of the study (Corbin & Strauss, 2015). Through continuous analysis, selective coding helped to identify the core theme. The core theme formed the structure of the theory (Corbin & Strauss, 2015).

Theoretical sampling was applied in the later stage of the iterative process of data collection and analysis. Theoretical sampling is defined as "sampling based on properties and dimensions of concepts" (Corbin & Strauss, 2015, p. 85). Hence, as the researcher collected and analyzed the data, the researcher clarified initial codes and categories (i.e., those derived from open and axial coding) through theoretical sampling. The researcher asked specific questions in subsequent interviews to clarify and refine categories in the emerging theory. Therefore, data analysis was an iterative process with the researcher continually reviewing the data to become fully immersed in it and to grasp a true sense of the phenomenon. The process of grounded

theory research involves constantly updating and revising concepts, adding concepts, and seeing new relationships (Corbin & Strauss, 2016). The data analysis continued until data saturation was achieved (i.e., no new data was discovered), and a theoretical explanation emerged (Andersen et al., 2012).

Ethical Considerations

Approval to conduct the study was obtained from the university Institutional Review Board. Permission to conduct the study was granted by the School of Nursing Program Director and the Simulation Program Director (Appendix F). Once permissions were received, the researcher began recruiting participants.

Participation was voluntary, with the participant's ability to discontinue involvement at any time without penalty. Participants received a $30.00 gift card to Amazon as an incentive and token of appreciation from the researcher. The gift card was given after the first interview. The researcher stored all files on a password-protected computer labeled with pseudonyms chosen by the participants to protect confidentiality. All files will be destroyed after data collection and analysis procedures are complete.

Participants were fully informed before the interview started. The researcher ensured participants had access to the Letter of Information and time to review. Time was also provided during the interview for any additional questions. Participation in the study did not have any academic consequence to the student's course or program.

Role of the Researcher

In this study, the researcher interacted with Gen Z nursing students by exploring emotions and emotional processing in simulation. Qualitative research is an approach that requires the researcher to collect and interpret the data, which makes the researcher as much a

part of the research process as the participants and the data they provide (Corbin & Strauss, 2015). Therefore, the researcher was self-aware of the influence between the researcher, participants, and data. The researcher remained self-aware by keeping a research journal (Corbin & Strauss, 2015).

The researcher kept a journal to control for perspectives, assumptions, and biases (Corbin & Strauss, 2015). Since the researcher was part of the research, she had to be constantly aware of how her personal experiences regarding emotional responses in educational settings could have influenced the research process. The research journal was valuable for self-awareness, recording the reason for making certain decisions, and obtaining insight into her behavior (Corbin & Strauss, 2015). There was a journal entry following each data collection session to ensure essential information was not forgotten or lost.

Trustworthiness of Qualitative data

Lincoln and Guba (1985) provide criteria for ensuring trustworthiness of qualitative data, which is vital for evaluating the value or substance of the research. Credibility, dependability, confirmability, and transferability are the ways to establish trustworthiness in qualitative research (Lincoln & Guba, 1985). Strategies used to meet these criteria are described next.

Credibility pertains to confidence in the truth of the findings (Lincoln & Guba, 1985). To establish credibility, the researcher spent time with the data to understand and learn about the phenomenon (Lincoln & Guba, 1985). The researcher reviewed the participant reflections before interviews, collected and analyzed data after the interviews, and read the transcripts repeatedly. During data analysis, the researcher conducted member checking regarding interpretations and emerging data to ensure the interpretation reflected the participants' experience. All interviews were transcribed verbatim, and interpretations were checked with participants to ensure the

experience was reflected accurately for credibility (Lincoln & Guba, 1985). Member checking was implemented through the 30-minute follow-up interviews. Eight out of the 18 participants completed the member checking process.

Dependability refers to the quality of the integrated data collection and analysis (Lincoln & Guba, 1985). Confirmability is the extent to which the data reflects participant responses, not researcher bias (Lincoln & Guba, 1985). Dependability and confirmability were achieved through an external audit of the research processes (Lincoln & Guba, 1985). Confirmability was supported through the transcription of audio and video interviews verbatim. With grounded theory research expertise, the Dissertation Committee Chair participated as an external auditor to examine selected transcripts and other supporting documents. The researcher and external auditor worked together to ensure consistency and applicability of the process. Personal participant information was not shared with the external auditor in order to maintain confidentiality. The researcher also kept a research journal to record decision-making processes and to maintain self-awareness.

Transferability is the extent to which the research findings apply to other settings and groups (Lincoln & Guba, 1985). Because of the specific context and interactive dynamics involved in a naturalistic context of qualitative data analysis, transferability of data depends on the presentation of "solid descriptive data" or "thick description" (Patton, 2002). Therefore, the researcher established transferability of the data by ensuring sufficient descriptive data in the research report for others to evaluate the applicability of the data to their own contexts. Describing the phenomenon in great detail may allow others to determine whether the findings apply to other groups, settings, and situations (Lincoln & Guba, 1985); hence, the researcher ensured that the research report was thorough and detailed.

Chapter Summary

The focus of this study was to explore how Gen Z nursing students experience and process emotions in simulation. The scope of this research included simulation in nursing education, Gen Z students, emotions, and emotional processing in simulation. As discussed in Chapter 2 (i.e., the review of related literature), there is a dearth of empirical studies exploring the experience of Gen Z nursing students in simulation, especially regarding emotions and emotional processing in simulation. More particularly, exploring how Gen Z learners process their emotions in simulation is imperative because high emotions are experienced during simulation, the Gen Z population has higher rates of mental health issues than previous generations, and negative emotions in simulation can lead to poor learning outcomes. Therefore, the researcher deemed it appropriate to use a GT methodology to explore how Gen Z nursing students experience and process their emotions in simulation because there is a lack of theoretical explication of the phenomenon in the current research literature.

Symbolic interactionism provided the theoretical basis of methodology for the study. Building upon symbolic interactionism, GT was used to collect and analyze the data. The findings from this research study conveyed insights into the emotions of Gen Z nursing students in simulation and the processes used to manage emotions. This study also delivered a foundational theoretical framework for future interventional studies that align with the distinct needs of the Gen Z nursing student in simulation. The next chapter will discuss the findings of the grounded theory analysis.

CHAPTER IV

RESULTS

Introduction

Chapter 4 presents the demographic and qualitative findings of this grounded theory (GT) study. Exemplary quotes are provided using research participant pseudonyms. The findings are presented as "The Grounded Theory of *Seeking Equanimity*" and answers the research question: How do Gen Z nursing students experience and process emotional responses in simulation?

Demographic Findings

Eighteen students from a baccalaureate nursing program at a public university participated in the study. The demographic characteristics of the study sample are summarized in Table 1. The majority of participants were Asian (50%) and female (72.2%). Most of the participants were from level three (i.e., third semester) of an accelerated baccalaureate nursing program.

Qualitative Findings

An inductively derived theory was formed focusing on the emotional experiences Generation Z (Gen Z) nursing students have during simulation and the processes used to manage those emotions. This GT study was developed through a symbolic interactionist perspective. Through this perspective, participants' emotions and emotional processing strategies were viewed as responses to the simulation environment and the subjective meanings participants attributed to the experience. Categories emerged in relation to the processes participants used to manage their emotional responses during simulation events.

Table 1

Demographic Characteristics of Study Participants

Characteristics		Total Sample (N=18)	Percentage
Gender			
	Female	13	72.2
	Male	4	22.2
	Non-binary	1	5.5
Age			
	20	7	38.8
	21	6	33.3
	22	3	16.6
	23	2	11.1
Race/ Ethnicity			
	Asian	9	50.0
	Hispanic	6	33.3
	Mixed Race (Asian/White)	2	11.1
	Black	1	5.5
Level			
	1	3	16.6
	2	5	27.7
	3	6	33.3
	4	4	22.2

Note. Level indicates student placement within the nursing program.

The core category emerging from the constructed theory was *Seeking Equanimity*. Seeking is defined as finding or obtaining (Collins Dictionary, 2019) while equanimity is defined as being calm and controlling emotions, especially in a difficult situation (Cambridge Dictionary, 2021). In this study, the core category pertains to trying to obtain a state of calmness and maintain control of emotions while experiencing a challenge (e.g., overwhelming anxiety in simulation). Research participants discussed a variety of emotions they experienced in simulation

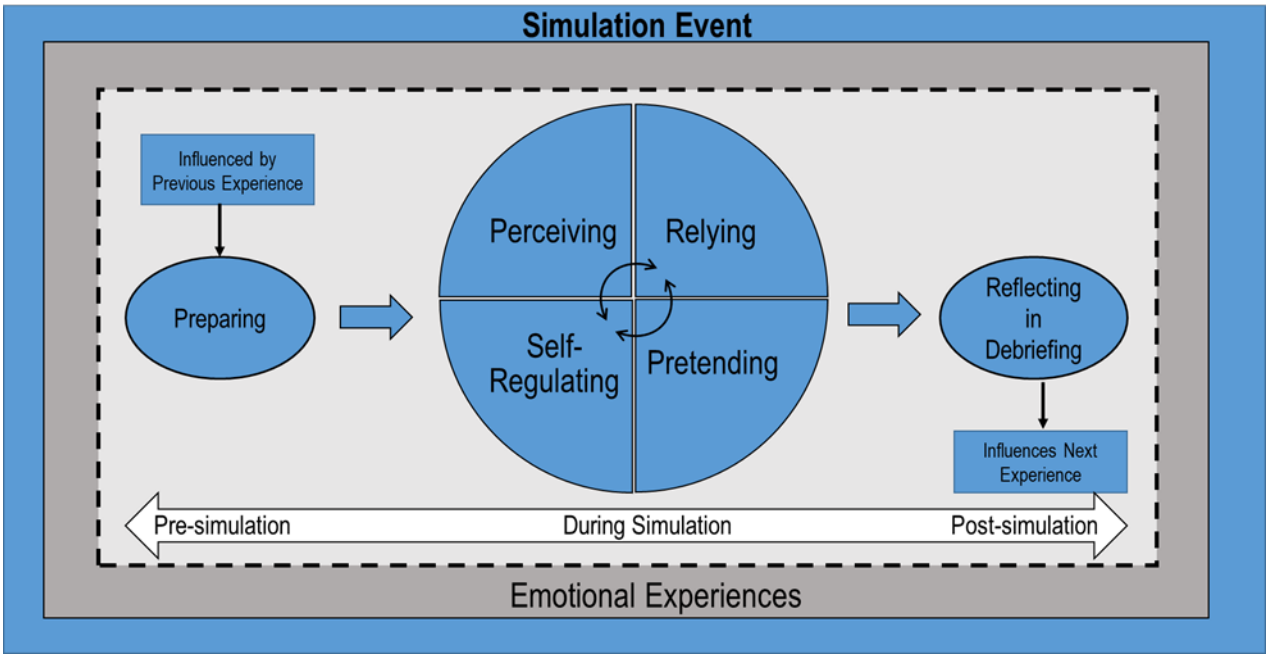
and described both internal and external efforts in trying to obtain an emotional calmness (i.e., *Seeking Equanimity*).

Overview of Grounded Theory

The core category of *Seeking Equanimity* captures six categories of the theory. The six related categories include the processes of: 1) *preparing*, 2) *self-regulating*, 3) *relying*, 4) *pretending*, 5) *perceiving*, and 6) *reflecting in debriefing*. Figure 2 illustrates the grounded theory of *Seeking Equanimity*.

Figure 2

The Grounded Theory of Seeking Equanimity



Conceptual Model

The conceptual model, *Grounded Theory of Seeking Equanimity*, is a representation of the findings from this study. The overall graphic encapsulates the processes occurring within a simulation event to process uncomfortable emotions. The outer box (blue) of the rectangle represents the simulation event which comprises the learning activities occurring in simulation. The middle box (dark grey) portrays the actual emotional experiences occurring within the simulation event. The innermost box (light grey) consists of the strategies participants used to process their emotions during a simulation event. The broken line between the middle box and the innermost box indicates the interdependent interaction between the identification of emotional experiences (middle box) and the application of strategies (innermost box) to process emotions. Hence, the broken line represents the fluctuating emotions participants described experiencing during the event. In the innermost box, the bar with an arrowhead in each end represents the different phases of the simulation including the prebriefing (i.e., pre-simulation), the scenario and performance phase (i.e., during simulation), and the debriefing phase (i.e., post-simulation). The first oval on the left side of the inner box involves the processes of *preparing* and directly impacts the next phase. The large circle in the middle of the inner box represents the majority of processes including *self-regulating, relying, pretending,* and *perceiving.* At the center of the large circle are two interacting arrows, depicting that the processes can occur at any time during this phase of simulation and one process is not dependent on another. The last oval represents the processes that occur during *reflecting in debriefing*. The final phase impacts future experiences and contributes to the meanings that participants assign to simulation. This conceptual model provides a visual representation of the findings from this study.

Core Category: Seeking Equanimity

Seeking Equanimity emerged as a core category of the grounded theory analysis. Nursing students described their experience in simulation as a "roller coaster of emotions" filled with a multitude of emotional responses, feelings, and physical reactions, as described in Table 2. These internal experiences (i.e., emotional responses, feelings, physical reactions) affected certain aspects of simulation, such as student perceptions of the learning event. For example, one of the participants stated:

It can be hard to do something [engaging in simulation] *that gives you negative emotions* (Blake).

Another participant described how emotions, particularly negative emotions, could influence performance and learning in simulation:

> *It* [uncomfortable emotions] *definitely weighs down on my performance. It feels like it's an obstacle to my learning, because it makes me think more about what other people are thinking of me or what I'm doing wrong, rather than what I might be doing better, or what I'm doing correctly and all the good stuff that I'm doing. Yeah, it also affects me personally, because it's really, um you know, it really triggers the perfectionist part of my life and makes me feel like I'm not in a space where I can make mistakes and not be judged.* (Eliza)

The findings indicated that Gen Z nursing students were attempting to achieve a sense of emotional stability and composure in simulation. Participants expressed that to achieve this sense of emotional stability during the simulation; they needed to engage in the learning event rather than being internally preoccupied, which only impeded their learning and performance.

Therefore, *Seeking Equanimity* emerged as the goal of nursing students' actions and methods to process emotions in simulation throughout this study.

Six categories comprise the grounded theory of *Seeking Equanimity.* These six categories depict strategies participants used in processing emotions in simulation. More particularly, the participants commonly employed these strategies to process difficult emotions to achieve the primary process of *Seeking Equanimity.* The six categories are 1) *preparing,* 2) *self-regulating,* 3) *relying,* 4) *pretending,* 5) *perceiving, and* 6) *reflecting in debriefing.* The following section details each category and subcategory of the core category, *Seeking Equanimity.*

Table 2

Gen Z nursing student responses in simulation

Emotional Responses and Feelings			Physical responses
Accomplished	Embarrassed	Lost	Blank Out
Anxious	Empathetic	Nervous	Brain Fog
Afraid	Encouraged	Panic	Crying
Awkward	Excited	Proud	Fatigued
Compassionate	Failure	Relief	Freezing up
Confident	Fearful	Scared	Fast heart beat
Confused	Frightened	Scrutinized	Loss of Focus
Critiqued	Fun	Stressed	Rigid
Defeated	Happy	Terrified	Zone Out
Depressed	Humorous	Tricked	
Devastated	Incompetent	Uncertain	
Disappointed	Insecure	Uncomfortable	
Discouraged	Joyous	Upset	
Disgruntled	Judged	Worried	

Description of Categories

Category 1: Preparing. The category of *preparing* refers to the strategies Gen Z nursing students employed to prepare themselves prior to a simulation event. Students described two essential pre-simulation events for *preparing*. The first occurs before the simulation event when they received information and had time to review and research the patient case (i.e., *obtaining pre-sim information*). The second occurs immediately before the simulation during group discussion and activities (i.e., *engaging in briefing*).

Participants expressed how *preparing* was extremely helpful in processing their emotions, particularly difficult emotions they experienced during simulation. Therefore, the findings indicate that *preparing* was foundational in effectively processing emotions during simulation events. For example, one participant expressed how *preparing* prior to a scheduled simulation helped her to process her emotions:

> *Even though there is a whole bunch of emotions and pressure going on, you still want to be as confident as possible. They* [simulation facilitators] *allow us to prepare beforehand, which is a big thing. I think that is probably one of the most important things, they allow us to prepare, they do not just throw us in there.* (Hermione)

Two subcategories of *preparing* emerged through axial coding of data: (a) *obtaining pre-sim information* and (b) *engaging in briefing*. These subcategories demonstrate the specific strategies Gen Z nursing students used to prepare prior to a simulation event.

Subcategory 1a: Obtaining Pre-sim Information. The subcategory of *obtaining pre-sim information* pertains to the materials students received by simulation facilitators to prepare for the simulation event. Students preferred to receive this information several days before the scheduled event. Participants found comfort in obtaining information prior to the learning event,

such as the simulation objectives and other information (e.g., patient diagnosis, laboratory results, medication list, past medical history). One participant described the importance of *obtaining pre-sim information*:

> *I think that a big factor is being given the objectives for each scenario before coming in, because it gives me a peace of mind and allows me to perform better.* (Jacey)

Students find comfort in *preparing* when faced with uncomfortable emotions by referring to the simulation basics, such as the objectives. Simulation objectives were often referred to as a starting point for managing uncomfortable emotions. A participant described how the objectives assisted with managing uncomfortable emotions:

> *It is hard to fight off anxiety. The best I can do is start off by knowing what I need to do during the scenario.* (Scott)

Therefore, participants expressed that their ability to process their emotions effectively increased when they felt they were allowed to prepare for the learning event.

Subcategory 1b: Engaging in Briefing: In addition to *obtaining pre-sim information* prior to the simulation day, *preparing* includes activities that occur immediately before simulation, while *engaging in briefing*. Some examples of these activities included an orientation to the environment, group discussion about the scenario, and time to develop a plan. One participant discussed how *engaging in briefing* prevented uncomfortable emotions from taking over:

> *It* [briefing] *gives a focus, like there is a goal that you have to reach. And, just in case like anything goes wrong in the simulation; you remember you have a goal to reach before you start freaking out.* (Sophie)

Several specific aspects of the briefing session were referenced as being helpful such as group discussion of the scenario and basic patient knowledge. Another student identified the briefing session as imperative to maintaining her emotional composure:

> *I was able to review the patient's information before entering the simulation and make sure I know what I am doing when I walk in. Discussing the patient beforehand with my fellow nursing students helps because I can get their opinion and we can collaborate. Knowing what is going to happen before it does allows me to mentally prepare myself. That helps me to remain calm and composed, even when surprises are thrown at me.* (Emma)

Many students also mentioned the importance of establishing a safe environment while *engaging in briefing*. One participant discussed the impact of feeling safe:

> *My instructors have made me feel comfortable, which has been beneficial to my performance in sim because I feel safe to learn.* (Natalia)

In contrast, some students reported not engaging in briefing when they did not feel prepared for the simulation. Some participants reported they had not received adequate simulation information, which led to feelings of being judged, tricked, or scrutinized. Eliza described her experiences with feeling tricked:

> *I would have liked more of a rundown of like what to expect or at least like things to look for. Maybe a couple more hands-on stuff because I feel like honestly the scenario was really rough and was just meant to like trick students and stuff and um it just didn't feel really fair.* (Eliza)

Students identified *engaging in briefing* as extremely important to the processing of emotions. A solid briefing allowed the students to process uncomfortable emotions and engage in

the learning environment. However, participants indicated that when they did not have a sufficient briefing, it was more difficult to process their emotions.

***Summary of Category 1*:** *Preparing* prior to the simulation event was a theme noted throughout the study that assisted students in processing their emotions and remaining calm during the learning event. Participants reported that *preparing* is the factor that contributes most to their performance in simulation. *Preparing* incorporates two subcategories: (a) *obtaining pre-sim information* and (b) *engaging in briefing*. The processes embedded within this main category allowed the Gen Z nursing student to manage emotions in simulation.

Category 2: Self-Regulating. The category of s*elf-regulating* pertains to students' internal strategies to gain control and manage emotions in simulation. Self-regulation is defined as "control or supervision from within; the bringing of oneself into a state of order" (Merriam-Webster, 2021a). Hence, *self-regulating* primarily refers to internal processes (i.e., thought processes, deep breathing) to maintain a sense of emotional equilibrium when facing challenges and difficulties during simulation. Therefore, Gen Z nursing students use *self-regulating* techniques to process their emotions in simulation. One of the research participants described their efforts at *self-regulating* through deep breathing for relaxation and self-de-escalation of perceived distress:

> *Deep breathing definitely helps and just like focusing my attention more appropriately. Because when I allow my thoughts to expand and think about all of the things that are happening at the same time that is when the anxiety increases. But if I just repeat like one phrase like 'what does this patient need' and 'what am I doing right now', like focus myself internally, on the situation that I'm dealing with, it helps me to drown out all of the unnecessary.* (Eliza)

Three subcategories of *self-regulating* emerged through axial coding of data: (a) *practicing deep breathing,* (b) *self-affirming,* and (c) *organizing thoughts*. *Self-regulating* was a category expressed throughout the study as students referred to using physical, as well as mental regulation, to effectively process emotions during the simulation event.

Subcategory 2a: Practicing deep breathing. The subcategory of *practicing deep breathing* pertains to the *self-regulating* technique of students focusing on their breathing and taking a moment to re-focus. *Practicing deep breathing* was a coping mechanism mentioned by many Gen Z nursing students in this study. One participant described *practicing deep breathing* as:

> *I take a deep breath and, close my eyes even, and try to clear up the fog.* (Piper)

Nursing students felt that it was acceptable to take a minute for themselves and re-focus during the simulation event. For example, a participant stated that remembering to take a deep breath helped her to re-center herself in the moment:

> *I just stop and I breathe, and I look around me like what do I need? What is happening with my patient? What do I need to get?* (Kay)

When asked about the effectiveness of deep breathing techniques, participants emphatically deem *practicing deep breathing* as a necessary *self-regulating* strategy to process emotions during simulation events. A relevant excerpt from the interviews is provided below:

> *All in all, reassuring myself and taking deep breaths is how I manage my emotions in the simulation experience.* (Sandy)

Subcategory 2b: Self-affirming. The subcategory of *self-affirming* pertains to participants' positive self-talk in simulation. Affirming is defined as "to show a strong belief in or dedication to something, such as an important idea" (Merriam-Webster, 2021b.). Students

reported that positive affirmations were used to settle emotions prior to entering the simulation room and throughout the learning event. Hence, participants used *self-affirming* to reassure themselves that the simulation is controllable, copacetic, and they can manage the situation through *self-regulating* processes such as *self-affirming*. One participant described her experiences with *self-affirming* as:

> *I reassure myself that everything is, everything is okay, and you* [themselves] *should not be nervous and just, you know, do some kind of interventions.* (Sandy)

Some students even attributed their self-affirmations from the suggestions of their faculty. For example, Kay recounted how her simulation faculty encouraged students to use positive self-affirmations to help cope with the stress in simulation:

> *I heard it from one teacher and it just stuck, I am here to learn, not to be perfect.* (Kay)

Another participant concurred with the importance of positive self-affirmations on emotions by sharing how *self-affirming* eased his anxiety during simulation:

> *I find it better when they* [nursing faculty] *tell us that we are still learning. That is the reason why we do simulation, it is better to do the errors here than in the hospital setting. So definitely they do not expect us to be perfect, and I think that is takes a lot of weight off my own shoulders and my own expectations of myself. Positive affirmations essentially*. (Brent)

Subcategory 2c: Organizing Thoughts. The subcategory of *organizing thoughts* pertains to students' attempts to create an organized, systematic approach to thoughts and actions in simulation. Participants describe *organizing thoughts* as structuring their thoughts around activities that need to be accomplished within the simulation scenario. Primarily participants

often spoke of creating “mental checklists” to process emotions in simulation. Jacey described her *self-regulating* technique of *organizing thoughts*:

> *When I realize I am nervous or anxious, I try to go through a checklist in my head of all the things I came into the room for. So even if it's just little things that I have to do, I’ll just check it off in my head and then the more things that I check off the more confident I’m getting because, you know, I’m getting it* [mental checklist] *done.* (Jacey)

The participants described *organizing thoughts* as helpful to processing emotions because they could focus on their “mental checklist” rather than their uncomfortable emotions. This *self-regulating* technique was referred to as minimizing the problematic emotions and preventing them from taking over their thoughts.

***Summary of Category 2*:** In summary, *self-regulating* refers to Gen Z students' strategies to manage their emotions in simulation. The findings show that these self-regulating strategies helped students to process emotions and engage in the simulation by reducing intrusive negative emotions. Gen Z nursing students indicated that nursing faculty assist with *self-regulating* as they provided positive affirmations during the briefing session that assisted students during simulation. *Self-regulating* incorporates three subcategories: (a) *practicing deep breathing,* (b) *self-affirming,* and (c) *organizing thoughts*. The processes embedded within this category improved Gen Z nursing students’ ability to process emotions in simulation.

Category 3: Relying. The category of *relying* refers to students’ dependence on outside resources to manage difficult emotions in simulation. Depending on others was referred to as providing comfort, particularly during challenging situations in simulation. One of the participants described how she would feel if she did not have someone else to rely on in simulation:

It would have been like really scary. I am so nervous, because I know, everybody would be just watching me rather than a team. I'm doing everything wrong! (Jada)

Jada continued to describe her reliance on familiarity with items and tasks in the room to manage her emotions. She provided an example of a simulation that required the nursing students to get a wound culture; however, she did not remember how to do it:

I felt like everything I learned went out of my head and I also felt nervous. A wound culture? But, I feel like we were only taught that like in class, so we both [partner and student] *looked at each other, like I don't know how to do that! We did not end up doing it because we did not want to do it wrong. I'm pretty sure I can do vital signs so I did that, first, and then I remember my teacher saying you have to do, like a head-to-toe* [physical assessment] *so it's like okay after vital signs we'll do that.* (Jada)

Two subcategories of *relying* emerged through axial coding of data: (a) *depending on partner* and (b) *finding the familiar*. Throughout the study, relying on outside resources was a category referred to in response to how emotions are processed during the simulation event. These two subcategories show the strategies Gen Z nursing students employed to process their emotions and focus on the simulation.

Subcategory 3a: Depending on Partner. One of the processes subsumed in *relying* on managing emotions in simulation was having a partner in simulation and mainly *depending on the partner* for processing difficult emotions in simulation. Students discussed the importance of having a partner for comfort, collaboration, and rescue. For example, one participant has a fear of freezing up in front of her patient and stated:

It's very helpful for me in my opinion, I want to have a partner, because then, I feel someone's there to save me and then the patient is not left on their own, just waiting for you to say something when you freeze. (Mozi)

Participants stressed the importance of experiencing the simulation with peers to have someone else to rely on in the simulation. One participant described how she leaned on her partner for support:

I think being able to lean on another classmate when I forget what to do is what helps relieve my anxiety a little bit, to know that I am not going through it alone. (Jacey)

The ability to process uncomfortable emotions while depending on their partner allowed Gen Z nursing students in this study to process emotions in simulation.

Subcategory 3b: Finding the Familiar. The subcategory of *finding the familiar* refers to the comfort students feel when discovering familiar elements in the simulation environment. Research participants often relied on the familiar to appear productive rather than focus on uncomfortable emotions. For example, one participant discusses her strategy of *finding the familiar* when faced with overwhelming anxiety in simulation:

I just focus on something that is most familiar to me. So, let's say the family member asked me a question and I know the answer to that question. I would most likely direct my attention to that, because I know it [the answer]. *That's what I'm most familiar with rather than a beeping machine, because I don't know what's going on with that* [the machine]. *So, yeah. So my thinking goes to what I am most comfortable with.* (Piper)

Another practical example in which students would implement the process of *finding the familiar* was doing a previously learned skill to help manage feelings of being uncomfortable. For instance, one participant recounted that when she felt uncomfortable in the simulation, she

looked for a vital signs machine because she was comfortable with taking vital signs. It helped her delay in dealing with the uncomfortable emotions associated with unfamiliar or new learning tasks. In another example, Jada recalled how she managed her uncomfortable emotions in simulation by *finding the familiar:*

> *I think, for me, I just think 'what can I do that makes me look productive'. I guess, because I do not want to just be standing there because, to me, that is like 'oh I really don't know what I'm doing'! So, I want to make it look like I know what I'm doing by doing something else that maybe I don't have to do, but I'm just going to do anything.* (Jada)

Summary of Category 3: Nursing students *Seek Equanimity* by *relying* on external resources within the simulation environment. *Relying* provided a sense of comfort for the participants, as they could depend on something other than themselves. *Relying* incorporates two subcategories: (a) *depending on partner* and (b) *finding the familiar*. The overall focus of the *relying* is to appear calm, competent, and productive. Even if they may not be calm, students find comfort in making it appear they were comfortable and competent, leading to the next category, *pretending*.

Category 4: Pretending. The category of *pretending* encapsulates the methods students use to appear knowledgeable and competent, reducing uncomfortable emotions. Pretending is defined as "to give a false appearance of being, possessing, or performing" (Merriam-Webster, 2021c). Participants use pretending to process emotions in simulation, specifically in situations where they are unsure about what to do in the situation. Students expressed feelings of uncertainty in some simulation events and, as a result, they reported feeling uncomfortable

during the experience. When describing her experiences with feeling uncomfortable about her knowledge and ability, Emma stated:

> *I felt like I don't know a lot, and so I was like, I don't know what I'm doing but I'm going to try my hardest and I'm just going to fake it.* (Emma)

Three subcategories emerged from *pretending*: (a) *appearing calm*, (b) *protecting an image*, and (c) *faking competence*. These three subcategories capture the strategies of the Gen Z nursing student to process emotions in simulation by *pretending* to be emotionally calm and competent in nursing.

Subcategory 4a: Appearing Calm. The category of *appearing calm* pertains to the processes taken to give the impression of being calm as an outside appearance when the participant was actually feeling anxious, uncertain, or incompetent. Gen Z nursing students strive to appear calm to their observers at all times. Students seemed intense during the participant interviews when describing how they appear to others. For one of the participants, *appearing calm* seemed essential to processing her emotions in simulation:

> *I might be full of anxiety inside, I might be feeling like I have no clue what I'm doing, but on the outside, everyone watching me is going to think I know what I'm doing and that I'm calm.* (Jada)

Several participants explained that *appearing calm* was essentially crucial in managing their uncomfortable emotions in simulation. For example, Sophie recounted how the process of *appearing calm* felt necessary for her to manage her negative emotions:

> *You just have to hide it* [uncomfortable emotions]. *It is hard, but you just have to do it. No matter what, you just have to have a calm collected attitude. Just take baby steps to hide your nervousness.* (Sophie)

Appearing calm was the goal for Gen Z nursing students to process uncomfortable emotions because they felt others viewed them in a positive manner. The opinion of others was important to Gen Z students, and therefore if they were viewed positively, they could decrease their uncomfortable emotions.

Subcategory 4b: Protecting an Image. The subcategory of *protecting an image* pertains to participants *pretending* to possess the knowledge and skill to be viewed as competent nursing students. The ability to maintain a specific appearance, even when *pretending*, was extremely important for Gen Z nursing students as many participants expressed the need to protect their image. One participant described the importance of *protecting an image*:

> *We like to protect our ego. We want to look good in front of our peers. I think that's what we're all about, is just looking good in front of other people and not looking inferior.* (Piper)

The importance of image directly affected the emotions involved with simulation events. When self-image was threatened, uncomfortable emotions increased. Furthermore, participants expressed how social media pressures them to protect an image. A research participant explained the importance of image for Gen Z students:

> *We* [Gen Z] *were raised with social media. So I am literally just bombarded constantly with like how people look and comments about how people perceive others. It definitely weighs heavy on us.* (Eliza)

Audio-visual recordings during simulation were a common source of uncomfortable emotions for participants in *protecting an image*. Recordings triggered concerns about what others think of them, especially their peers. Being recorded was a significant source of stress for one participant:

There are three or four cameras in the room. Our other classmates can see us. We [students] *were all like, 'Oh no! How? Like this is crazy'. I was nervous.* (Sandy)

Perceptions regarding what others think of them were often mentioned when explaining the reasons behind *pretending.* For example, a participant explained:

In the back of your head, you are thinking 'Oh, what is everybody else going to think'? I am doing everything wrong and I do not want to embarrass myself or make it seem like I do not know what I am doing. I guess it kind of hurts, like the process because you are worried about something that should not matter, you should be worrying about the patient and taking care of them. (Sophie)

In addition to being concerned about image in front of their peers, students are also concerned about how their patients and faculty will perceive them. A participant described her simulation experience with *protecting an image*:

You need to have that calm demeanor when all the beeping monitors just go wailing; you just have to stay calm for that family member and the patient, because you are being recorded. (Kay)

Gen Z nursing students cannot effectively process emotions when they feel they are unable to *protect their image*. Their focus remains on the image they portray and the emotions associated with damaging their image. In order to maintain their image, participants often spoke of *faking it*.

Subcategory 4c: Faking It. Another subcategory subsumed under the process of *pretending* was the strategy of *faking it.* Participants commonly used this strategy, especially in situations where they felt incompetent or fearful. Students expressed that they were fearful of being discovered for their lack of preparation, knowledge, and competence on a given simulation

task. Therefore, they would use *faking it* as a strategy to pretend to be calm, confident, and competent. Below is an excerpt of a participant's remark about *faking it*:

> *I have adapted the phrase, 'If you don't know it, fake it until you make it' to allow my patients to have confidence in me and the care they are receiving. I can repeat the situation later, but right now I need to be in the moment, engaged and participate with my fellow students. So, then I am sitting there like, wow, I do not know as much as I should, but we are just going to fake it until I make it and see how it goes.* (Emma)

Several participants mentioned the phrase "fake it until you make it." The strategy of *faking it* allowed students the ability to appear knowledgeable and competent in their nursing practice, leading to processing of the uncomfortable emotions and an increase in confidence. When specifically asked about "faking it until you make it," a participant responded by stating:

> *Oh yes, hundred percent, all the time! Inside, my stomach is turning and I have a whole bunch of butterflies and can feel my throat like closing up. However, I still try to produce sound that does not sound shaky. I try to make it more pronounced. I also try to limit my hand movements, because my hands shake sometimes. So, you know, you just try to make yourself look as confident as possible and try to absorb all the scariness of the situation.* (Hermione)

In addition to student concerns about their image in front of classmates, participants are also concerned about their image in front of their patients. The process of *faking it* was used to appear competent during the simulation concerning patient care. A participant provided an example where the simulation patient was asking questions about a medication:

> *He* [the patient] *was on oxygen. So, we did not know if he could have the medication. We called the doctor and she said not to administer it. We told the patient that we can't*

administer because it's contraindicated. Then he [the patient] *was asking questions like, 'do you know why'? We did not know the answers, so we just answered him pretending that we knew the answers. We just told him it could bring side effects. Then he asked 'what kind of side effects'? We just pretended to know the answer and said it could cause chest pain.* (Sandy)

A *faking it* mentality allows Gen Z nursing students to pretend competence. Their image is then protected and they are able to process their uncomfortable emotions.

Summary of Category 4. The findings demonstrate that the image of being competent and knowledgeable in simulation was necessary for students to process emotions. *Pretending* encompassed several aspects of processing emotions in simulation. The ability to appear calm assisted Gen Z nursing students with managing uncomfortable emotions. The category of *pretending* includes three subcategories: (a) *appearing calm*, (b) *protecting an image*, and (c) *faking competence*. The source of many uncomfortable emotions related to experiences where students were not in control of the image others saw. In other words, their image was threatened. When jeopardized, students could not manage their emotions and experienced a rise in uncomfortable emotions, further reducing their ability to process.

Category 5: Perceiving. The category of *perceiving* pertains to developing beliefs about oneself and preserving the opinion of others. Participants formed perceptions of themselves in simulation and were also concerned about how others viewed them. Students' opinion of self was essential to processing emotions in simulation. Participants report both internal and external factors contributing to self-concept, which influenced emotional processing. One participant shared her feelings about the process of *perceiving* in simulation:

I am most concerned about just looking dumb in front of my colleagues and instructor. I know that before every simulation they [simulation facilitators] *give out a precaution, saying that this is a good learning environment, no judgments and everything. Despite that, I still get anxious or nervous about just making a fool of myself. I guess other people are judging, really.* (Piper)

Three subcategories emerged from the process of *perceiving*: (a) *forming a self-concept*, (b) *feeling judged*, and (c) *questioning self*. These three subcategories describe the strategies of the Gen Z nursing students to process emotions in simulation by perceiving themselves positively or negatively.

Subcategory 5a: Forming a self-concept. The subcategory of *forming a self-concept* refers to how nursing students perceive themselves in relation to their peers in simulation. Participants describe *forming a self-concept* by determining if they are equivalent to the performance and behaviors of their peers in simulation. When comparing themselves to others, participants reported that they perceived themselves positively or negatively. Participants stated that they managed uncomfortable emotions when they perceived themselves positively by performing as well or even better than other nursing students performed. One participant candidly stated:

You want someone else to be the dumbest person in the room. (Jada)

Forming a self-concept determines how one perceives themselves in simulation; hence, the self-concept they developed during their simulation influenced how they managed their emotions and behaviors during simulation. For example, when students perceived themselves as deficient in competence, they became more vulnerable to responding negatively to anxiety-

producing situations during simulation. An excerpt from an interview is provided below to demonstrate how *forming a self-concept* affects the emotions experienced during simulation:

> *As Gen Z's, we are mostly young adults, I think self-esteem plays a pretty big part in how we behave and how we act* [in simulation]. *I think that plays a lot into my experience with sim. The fear of messing up in front of your peers.* (Scott)

Participants described that a positive self-concept assisted with feeling confident and competent within the simulation environment, thus promoting effective processing of emotions. In contrast, negative self-concept contributed to feelings of inadequacy and incompetence, which limited opportunities to process or manage uncomfortable emotions during simulation. Participants often described perceptions of inadequacy as a factor that increased anxieties and disrupted processing emotions. For example, one participant explained:

> *It is hard sometimes, when you see your classmates that know it all. So that kind of makes you compare yourself to them and be like, 'Oh, I'm not as ready as they are'.* (Alex)

Social media (e.g., TikTok and YouTube) were also identified as venues where Gen Z nursing students developed a self-concept by sharing similar simulation experiences with other nursing students. All students in this study expressed that they made mistakes in simulation and explained that sharing these experiences increased self-concept and made uncomfortable emotions easier to manage. In addition, social media allowed nursing students to compare their experiences with others, leading to both effective and ineffective processing of emotions depending on how they perceived themselves in comparison. One participant explained how social media assisted her with *forming a self-concept*:

It is interesting on social media these days to see other nursing students sharing similar experiences during school simulations. That helps us laugh off the bad moments and to learn from each other. Specifically these days on TikTok, most peoples' feeds tend to filter to what they watch most, and as nursing students our feed gets pretty full of nursing videos that are either helpful, relatable, or comforting. (Alex)

Subcategory 5b: Feeling Judged. Another subcategory under the process of *perceiving* is *feeling judged,* which involved self-perceptions of judgment by others. As students actively participated in the simulation, they perceived that their peers and faculty judged them and scrutinized their actions. One participant explained how she felt about *feeling judged*:

The mistakes we make are scrutinized in front of our peers, and by our peers, in the hopes of learning to occur. (Eliza)

Feeling judged was a prevalent sentiment shared by the participants and was associated with multiple negative emotions. Below are two excerpts on how *feeling judged* elicited uncomfortable emotions such as fear and anxiety:

I guess just in the general aspect, like, I am afraid to be standing out in anyway and being judged for, like, how I think. (Piper)

I am scared of being criticized or that I am just not doing as good as I should be doing. (Brent)

Participants expressed that the process of *feeling judged* distracted them from focusing on the learning event, resulting in experiencing uncomfortable emotions. Participants described that they were more concerned about judgment and increased negative emotions than learning and immersing themselves in the simulation.

Subcategory 5c: Questioning Self. The subcategory of *questioning self* pertains to students' thoughts about their role in simulation and the subsequent impact on becoming a nurse. Students viewed their performance in simulation to be a reflection of their ability to be a competent nurse. One participant described how she equated simulation with being a good nurse:

> *I can practice being the best nurse possible. If I can just do that, do what I always do, then everything will be okay.* (Emma)

The process of questioning self was profound for the research participants. Participants expressed that their performance in simulation was significant enough to influence their ability of being a competent nurse. They further explained that they felt they did not belong to a community of nurses if they performed poorly in simulation. Therefore, their self-perceptions of their performance in simulation (e.g., negative self-concepts of being incompetent, lacking knowledge) affected their inability to manage difficult emotions in simulation and resulted in questioning themselves as unfit to be a nurse. One excerpt below best explains the process of *questioning self*:

> *Like is this the right thing* [nursing] *or my right pathway? Like, why am I not performing* [in simulation] *as well as my classroom?* (Jada)

Summary of Category 5. The category of *perceiving* includes the processes involved with Gen Z nursing students' consideration of themselves and their roles in nursing simulation. Participants developed perceptions of self throughout the simulation experience. The main category of *perceiving* contains three subcategories: (a) *comparing self to others*, (b) *feeling judged*, and (c) *questioning self*. Several factors influenced perceptions of self, including the performance of others, faculty comments, and social media. Social media and other technologies

such as YouTube and TikTok facilitated the processing of uncomfortable emotions experienced in simulation.

Category 6: Reflecting in Debriefing. The debriefing period immediately follows the simulation scenario and allows group reflection about the simulation experience. As previously defined in Chapter one, debriefing is a collaborative and reflective process within the simulation learning activity where educators, instructors, facilitators and learners re-examine the simulation experience for the purpose of moving toward assimilation and accommodation of learning to future situations (Lioce et al., 2020, p. 15).

The category of *reflecting in debriefing* involves the processes students used to manage emotions by reflecting on personal and group performance in simulation. Gen Z nursing students reported that *reflecting in debriefing* affected their emotions and their ability to process those emotions. Reflecting also assisted with shaping their emotions towards future simulation events. One participant described her own emotions and how reflecting on her feelings helped her to manage those emotions:

> *Internally I am freaking out and I feel like everyone can see the panic on my face. I feel like they can see me freaking out. However, in the debrief room, I asked, 'OK, how badly did I panic'? They* [peers in debriefing] *said, you did not panic at all, and I did not see anything. You were calm, you were efficient, you were focused and things like that*. (Emma)

Three subcategories emerged from *reflecting in debriefing*: (a) *introspecting,* (b) *receiving feedback,* and *(c) influencing future experiences*. Research participants identified *reflecting in debriefing* as influential in effectively processing emotions.

Subcategory 6a: Introspecting. The subcategory of *introspecting* refers to reflecting on one's thoughts, feelings, and actions. Participants described bringing their perspectives about the simulation by *reflecting in debriefing* as essential to effective processing of emotions. One participant discussed *introspecting* and how a faculty member's experience facilitated her own process of *reflecting*:

> *Just talking it* [emotions] *through really. You just tell the instructor like 'I was feeling this way' or like, 'oh dang, I really feel sad about how a certain simulation went' or 'I'm not comfortable with this' and they just talk you through it. They* [simulation faculty] *provide real life examples from their clinical experiences and then we just reflect. Like, okay maybe I should try that next time. Yeah, and the simulations where it's like the really hard ones, sometimes it teaches you to build thick skin and just like get through the scenarios.* (Sophie)

Subcategory 6b: Receiving feedback. The subcategory of receiving feedback is the process of acknowledging that other stakeholders involved in the simulation (e.g., fellow students, faculty, simulation staff) have an opinion on one's performance in simulation. The process of receiving feedback did not necessarily pertain to participants agreeing to feedback received from others. Instead, this subcategory pertains to students being aware that each involved in simulation is entitled to an opinion or perspective of the student's performance in simulation and that the student needs to listen to these differing perspectives actively.

Receiving feedback during debriefing was described as having a positive effect on processing uncomfortable emotions. For instance, Jacey described a simulation where she believed she performed terribly and she was experiencing uncomfortable emotions:

During simulation, I feel a mix of emotions. I get super nervous and anxious. It is just a lot of mixed emotions and then after, when I was done, like everyone always encourages each other that we did a great job. We get a lot of great feedback from our classmates. We use a whiteboard that says everything we did that was great and then everything that we did that we could have improved on, and some things that we missed so it's just a great learning experience overall. (Jacey)

Several research participants described how their fears and uncomfortable emotions reduced after group discussions in debriefing. Participants described *reflecting in debriefing* as having a significant effect on their current emotions and future experiences.

Subcategory 6c: Influencing Future Experiences. The subcategory of influencing future experiences refers to the processes of reflecting how their internal experiences (e.g., emotional responses, feelings, physical reactions) during simulation would affect their subsequent performance in simulation and future experiences of being a practicing nurse. Participants referred to the debriefing session as instrumental for emotional processing.

Participants described how the debriefing session influenced their feelings about future simulation experiences. For example, one participant shared a simulation event that negatively affected her perspectives of future simulation and clinical performance:

It kind of felt like 'let us just throw this student in the deep end, watch them drown, and then talk about it afterwards type of thing. Many of the lessons I remember the most are from those types of experiences. It makes it so that previous experiences are harder to get over. Definitely, I feel like in simulation, whenever I fail, I really hold on to that, and then it crushes my spirit when it comes to other simulations or clinical activities, stuff like that. (Eliza)

The negative emotional experience was described as having an adverse influence on future simulation events and inhibited the effective processing of emotions, specifically when the participant did not feel safe. On the other hand, others seemed to have a positive outlook and had positive emotional experiences, which facilitated effective emotional processing. One participant described how the debriefing session helped him to establish a positive outlook for future simulations:

> *My experiences in simulation has been nothing short of great! I have learned many different things from different scenarios. After the simulation, we went into the debriefing room and that is where all of the learning happened. We discussed what my partner and I did correctly and what we could have done differently for next time. Constructive feedback definitely was given and received.* (Ed)

Summary of category 6: Participants described *reflecting in debriefing* as a powerful component in processing emotions in simulation. The debriefing session was an accessible and convenient opportunity where some participants could process uncomfortable emotions. However, the debriefing session was also found to elicit uncomfortable emotions for some participants, leading to ineffective emotional processing. Either way, *reflecting in debriefing* was found to influence future experiences. Three subcategories emerged from *reflecting in debriefing*: (a) *introspecting*, (b) *receiving feedback, and (c) influencing future experiences*.

Chapter Summary

This chapter detailed the qualitative grounded theory analysis findings through a symbolic interactionist perspective and the Strauss and Corbin (2015) grounded theory methodology. The core category that emerged based on the grounded theory analysis was the

process of Seeking Equanimity. The study's findings answered the research question: How do Gen Z nursing students experience and process emotional responses in simulation?

The core category, *Seeking Equanimity*, captures the overall processes of the study as Gen Z nursing students are attempting to maintain or obtain emotional stability throughout the simulation experience. These processes were described as categories which directly related to participant emotional responses within the simulation environment and the strategies used to process those emotions. The six categories of 1) *preparing,* 2) *self-regulating,* 3) *relying,* 4) *pretending,* 5) *perceiving, and* 6) *reflecting in debriefing* outline the methods Gen Z nursing students use to process emotions effectively. Explanations and exemplars for each category and subcategory were provided to validate the constructed theory.

CHAPTER V
DISCUSSION

Introduction

The purpose of this grounded theory (GT) study was to examine the Generation Z (Gen Z) nursing students' emotional experiences in simulation, their emotional responses, and the processing of emotions that may occur during the learning activity. This study aimed to develop a theory grounded in the experiences and emotional processing of Gen Z nursing students in simulation. A Straussian GT approach was used to address gaps in current simulation research:

1. Lack of studies explicating the emotions and emotional processing of Gen Z nursing students in simulation.
2. Lack of a theoretical basis for processing emotions in simulation.

Data analysis of semi-structured interviews revealed the core category of *Seeking Equanimity.* This core category involves students' efforts at processing uncomfortable emotions throughout the simulation experience. Gen Z nursing students use many strategies to process emotions in simulation to maintain or achieve emotional equilibrium. The processes were identified as *preparing, self-regulating, relying, pretending, perceiving,* and *reflecting in debriefing.*

This final chapter discusses the implications of the study findings as they relate to the larger body of evidence in nursing, Gen Z, and simulation research. In addition, implications of the theory, strengths and limitations, and recommendations for future research are presented.

Demographics

The Gen Z population is the most ethnically and racially diverse generational cohort in the United States compared to Baby Boomers, Gen X, and Millennials (Dimock, 2019; Fry & Parker, 2018; Parker & Iglielnik, 2020). This study captured the diversity of the population

(Table 1). The participants' gender and age reflect the population of students enrolled in basic RN programs in the United States (National League of Nursing, 2020). However, the number of participants who self-identified as Asian (n = 13, 72.2%) and Hispanic (n = 6, 33.3%) significantly exceeded the national data reported for these categories (4.7% and 11.0%, respectively; National League of Nursing, 2020). The study sample showed more racial diversity than the RN students enrolled in basic RN programs in the United States (National League of Nursing, 2020). These demographics are an asset to this study because they provide data for a diverse student population, more reflective of the diversity seen in the Gen Z population (Fry & Parker, 2018).

Comparison of Findings to Current Literature

The core category of *Seeking Equanimity* encapsulates the processes Gen Z nursing students employed during simulation experiences to manage emotions. *Seeking Equanimity* refers to the students' attempts at achieving, or appearing to achieve, emotional equilibrium. This study found that Gen Z nursing students experienced a wide range of emotions in simulation, as indicated in Table 2. Similar to this GT study, other studies have also found that students experience an array of emotions in simulation (Burbach et al., 2016; Cato, 2013; Kang & Min, 2019; Ko & Choi, 2021; Madsgaard et al., 2016; Rogers, 2019). Madsgaard et al. (2021) summarized emotions in simulation through an integrative review of current literature. Students reported experiencing various emotions during the simulation and described them as a "rollercoaster of emotions" (Madsgaard et al., 2021). Similarly, participants from the current study echoed the term "rollercoaster of emotions." Emotions were described as "ups and downs" throughout the experience creating a rollercoaster analogy used by several participants.

Anxiety was a predominant emotion experienced by the research participants in this GT study. Current literature has also found anxiety a central emotion for nursing students in simulation education (Burbach et al., 2016; Najaar, 2015; Rogers et al., 2019; Yockey & Henry, 2019). Najaar et al. (2015) report that anxiety and fear are especially prominent themes and a nearly universal part of students' simulation experience. These findings were also evident in this GT study. Although the emotional experiences in the literature are similar, research related to the management or processing of those emotions is difficult to find, specifically for the Gen Z nursing student in simulation.

No studies could be located that specifically researched nursing students' emotional processing in simulation. However, comparisons can be drawn from some current studies that examined nursing students' emotional processing strategies during stressful situations in general. Bodys-Cupak et al. (2018) found that first-year nursing students (aged 20–29) used avoidance as a coping mechanism during their first clinical rotation that elicited stress. Avoidance as a coping mechanism increased as uncomfortable emotions increased. These findings by Bodys-Cupak et al. (2018) are different from this research study's findings. The participants in this study used several effective coping strategies. None of the participants explicitly referred to any avoidance behaviors to manage or process emotions.

Tekac et al. (2021) published one of the few studies focused on the Gen Z population and emotional processing during stressful situations. The researchers reported that Gen Z students scored low on self-regulation scales. A low score indicates difficulties in processing uncomfortable emotions and shutting out the discomfort evoked by negative feelings. They also found that Gen Z students were less capable of using resources or practical stress management tools (Tekac et al., 2021). On the contrary, the results from this study indicate that Gen Z

students employ a variety of stress management strategies. The strategies are effective when appropriate resources are available during the simulation, which is often viewed as stressful.

Current research studies align with the emotional experience findings from this study. Students experience an array of emotional responses in simulation, some of which can be uncomfortable. However, there are significant differences in comparison when investigating the capabilities of the Gen Z population in processing emotions. The findings from this study provide new data regarding the emotional processing capabilities of the Gen Z student in simulation, primarily when provided the necessary resources. The ability to prepare was a vital resource for Gen Z students to manage emotions.

Preparing

The category of *preparing* emerged as a significant resource used to process emotions in simulation. The participants identified two essential components of *preparing*: 1) the ability to prepare by studying the scenario information provided by the simulation facilitators and 2) preparing as a cohort through group discussion immediately prior to engaging in the scenario. Gen Z nursing students find comfort in *preparing* for the simulation event. The process of being prepared assisted Gen Z nursing students to process their uncomfortable emotions, which then allowed them to move forward with their learning objectives. These findings are consistent with recently published standards of best practice for creating a psychologically safe environment (INACSL Standards Committee et al., 2021a).

The INACSL Standards Committee et al. (2021d) established standards in creating a psychologically safe environment during the prebriefing phase of simulation. The prebriefing phase of simulation has specific standards that lead to a psychologically safe environment, including preparation and briefing components of simulation. Preparation refers to situating the

learners into a shared mental model and preparing learners for the educational content of the simulation-based experience. Briefing pertains to conveying essential ground rules for the simulation-based experience (INACSL Standards Committee et al., 2021d). These findings are similar to this GT research study as both found certain aspects of the prebriefing session to affect emotions with two crucial factors: *preparing* and *engaging in briefing.*

The current GT study found that prebriefing leads to students effectively processing emotions in simulation. However, prebriefing, when done incorrectly, can also lead to an increase in uncomfortable emotions and inhibit emotional processing. Other researchers also found the prebriefing session to contribute to uncomfortable emotions in simulation (Cato, 2013; Kang & Min, 2019; Roh et al., 2018; Roh et al., 2020; Stephen et al., 2020; Turner & Harder, 2018). Kang and Min (2019) researched emotions in prebriefing and found that uncomfortable emotions are elicited in nursing students when they feel unprepared for the simulation event. These findings are similar to this GT study, because participants found themselves experiencing uncomfortable emotions when they were unable to prepare for the simulation or were provided with very little information. The feelings elicited from being unprepared led to a sense of being tricked or set up for failure for the Gen Z nursing student. Participants expressed the need for sufficient scenario information and pre-simulation learning activities.

The results from this GT study are consistent with previous studies in the literature regarding aspects of prebriefing and feelings of psychological safety. One specific example is the simulation facilitator's role in reassuring students about a safe environment and opportunities to learn from mistakes. Stephen et al. (2020) conducted a qualitative study to explore nursing student perspectives regarding what constitutes a psychologically safe learning environment in simulation. They report that students find comfort in the prebriefing session when faculty

explicitly state that simulation is safe for student learning and that mistakes are expected (Stephen et al., 2020). The current GT study found similar results with participants stating that the facilitator's role in creating a psychologically safe environment is essential for processing emotions. More specifically, results from both studies found that uncomfortable emotions decreased when simulation facilitators mentioned that mistakes are expected, and the simulation lab is a judge-free zone.

Psychological safety also increases when group-learning activities are incorporated into the prebriefing session. This study found that uncomfortable emotions decreased when the students were allowed to engage in a group discussion about the patient case prior to the simulation. Roh et al. (2018) reported similar findings. They found increased psychological safety scores when group-learning activities were incorporated into the prebriefing session. The researchers conducted two different prebriefing sessions. An experimental group received an additional group activity involving discussion of the patient case. Consequently, the experimental group reported higher psychological safety scores than a control group (Roh et al., 2018).

In contrast to the findings of this GT study, the literature also mentions the negative impact that preparation may have on students in simulation. Najaar et al. (2015) suggest that preparation may negatively influence the simulation experience for students if the scenario does not unfold in the manner that students are expecting based upon the preparation activities. Beischel (2013) also reports that preparation for the simulation experience itself increased anxiety if student preparation time exceeded one hour. Lesā et al. (2021) report that certain aspects of preparation may negatively affect students in simulation because they may focus on the specific scenario-related information, which can influence what they notice and how they

respond. The negative aspects of preparation found in these studies (Beischel, 2013; Lesā et al. (2021; Najaar et al., 2015) were not elicited in the findings of this study. In fact, the participants from this study relied heavily on *preparing* and experienced an increase in uncomfortable emotions when they felt they did not receive adequate prebriefing.

Gen Z students in this GT study also referenced YouTube and TikTok as preparation resources that assist with managing emotions during the *preparing* phase of the simulation. Gen Z students in this study used self-directed learning and discussed using social media to learn new skills, review previous knowledge, and practice beforehand. Previous research regarding Gen Z nursing students and the educational use of social media in simulation could not be located.

However, some research studies on social media such as YouTube and Facebook for learning purposes in general nursing education (Mahasneh et al., 2021; Shatto et al., 2017). Mahasneh et al. (2021) conducted a qualitative study exploring nursing students' learning preferences and strategies. Results showed that students sought knowledge and skills outside the classroom through social media (i.e., YouTube). Participants described watching YouTube as a quick way of preparing for exams and understanding complex procedures (Mahasneh et al., 2021). In addition, Shatto et al. (2017) researched a flipped-classroom approach in a medical-surgical nursing course. A course Facebook page was used for group discussion and questions before class. Researchers found that Facebook proved extremely popular with the participants and promoted interactive engagement with course content (Shatto et al., 2017). These findings are also factual in preparing for simulation. Students from this GT study found social media beneficial for engaging with the simulation scenario and relieving uncomfortable emotions because they felt prepared for the simulation event.

The overall preparation findings indicate that Gen Z nursing students value simulation preparation similar to previous studies and generational cohorts. The new data emerging from this study is the reliance on social media to help mediate emotions prior to simulation, the impact of *preparing* prior to simulation, and feelings of being tricked or set up for failure when not allowed to prepare appropriately. The Gen Z participants in this study did not report any negative aspects from *preparing* prior to simulation. In addition to *preparing* for the learning experience during the prebrief session, students used various *self-regulating* techniques to process emotions during simulation.

Self- Regulating

The second category of s*elf-regulating* in this GT study pertains to students' internal strategies to control and manage emotions in simulation. Participants in this GT study reported self-regulation techniques that assisted with processing emotions, such as *practicing deep breathing, self-affirming,* and *organizing thoughts*. *Self-regulating* of emotions in simulation learning has been shown to decrease uncomfortable emotions. For instance, Nichols (2018) presented similar findings when investigating the impact of performance anxiety on student nurses in simulation. Not only were the emotional findings similar, but the *self-regulating* methods for coping were also alike. The coping skills and resources that participants identified as helpful in mitigating negative emotions were breathing, focusing, positive self-talk, visualization, memorization, and practicing (Nichols, 2018). In this study, Gen Z nursing students described *self-regulating* as taking a moment or a pause in simulation to focus on self-regulation of breathing, positive self-talk, and creating mental checklists. These techniques reduced uncomfortable emotions and allowed learners to focus more clearly on the situation.

Although other research studies did not report the specific self-regulation techniques found in this current GT study, they discussed other *self-regulating* methods that nursing students use to process emotions in simulation. For example, Ko and Choi (2020) found that nursing students attempted to relieve uncomfortable emotions by listening to music, reading poetry, stretching, and going outside to get some fresh air. Participants described these *self-regulating* techniques as essential for reducing stress and refreshing the mind (Ko & Choi, 2020). Gosselin et al. (2016) also found that *self-regulating* of uncomfortable emotions was assisted by listening to music. Researchers found that music reduced anxiety, improved performance, and facilitated learning in simulation (Gosselin et al., 2016).

The findings show that self-regulation techniques are essential for nursing students to manage emotions in simulation. In addition to *preparing* and *self-regulating* to process emotions in simulation, the Gen Z nursing student also relies on certain familiar aspects within the simulation environment.

Relying

Gen Z nursing students report that *relying* on external resources assists with processing emotions in simulation. Two primary external resources used to manage emotions in simulation identified in this GT study were simulation partners and familiarity with the environment. Participants described having a partner in simulation as imperative in processing uncomfortable emotions because students can share in decision-making and rely on someone else if they do not know what to do. Participants overwhelmingly stated that their partner provides immense comfort. These findings are consistent with the qualitative study by Dzioba et al. (2014) that found student teams resolve issues collaboratively with their peers. Students reported that they did not panic when someone else was there (Dzioba et al., 2014). Kim and Park (2018) also

found that collaborating with team members led to an ability for participants to concentrate more on the simulation.

In contrast to the findings of this study, other research has found that working with partners can cause uncomfortable emotions. Kang and Min (2019) found that students worried about harming their team members by performing poorly. Ko and Choi (2020) report that participants in their study struggled with working as a team and had difficulties with cooperation and communication. The participants felt they were being evaluated by peers rather than supported (Ko & Choi, 2020). Similarly, Lesā et al. (2021) found that students did not feel they were in a supportive environment when working with peers. Students felt the interactions were awkward and that simulation partners were judgmental (Lesā et al., 2021). This GT analysis did not encounter similar findings on the negative consequences of having a partner in simulation.

Familiarity with the environment was an additional resource that Gen Z nursing students used to process uncomfortable emotions in simulation. Participants reported *finding the familiar* to be a source of comfort because they could focus on something they already knew. The sense of familiarity reduces the uncomfortable emotions brought on by their uncertainty about their following action in the simulation. For example, a student experiencing uncomfortable emotions in simulation would search for something familiar in the room, such as a vital sign machine. Taking vital signs is a familiar task they are comfortable performing. Therefore, they can process uncomfortable emotions and move forward with the goals of the simulation.

Few studies report on the impact of familiar environmental items in nursing simulation. However, there is some research about the increase in uncomfortable emotions when students are not familiar with the environment in general. For instance, Burbach et al. (2016) found that an

unfamiliar environment caused an increase in anxiety and uncertainty for the students in simulation. In addition, simulation best practices research specifically address an orientation to the simulation environments to promote psychological safety (INACSL Standards Committee et al., 2021d). However, research could not be found that addresses the impact of familiar items in the room or tasks students utilize to manage emotions in simulation. This study provides new information regarding the impact of familiarity in the simulation lab and its influence on emotions in Gen Z nursing students.

Pretending

The category of pretending pertains to the methods students use to appear knowledgeable and competent in simulation. Participants in the current study expressed overwhelming concern about protecting a positive image during simulation. Participants expressed feelings of uncertainty about what to do during the simulation event and, as a result, they reported feeling uncomfortable during the experience. Hence, they used the process of pretending to appear calm and portray an image of a competent student to better process difficult and uncomfortable emotions. This GT study found that Gen Z nursing students use pretending in various ways to process emotions in simulation, predominantly when protecting their image.

The participants of this study explained that the strategy of *pretending* allows them to present an ideal image by appearing calm, confident, and competent in situations that may elicit uncomfortable emotions. For example, participants reported feeling panicked, yet they managed to "appear calm" to hide their uncomfortable emotions from observers. *Pretending* helped students because they could process their emotions better when they did not feel judged. Other participants spoke of "faking it until I make it" so that they appear competent to their peers.

Similar to the findings of this GT study, being observed was a prominent source of uncomfortable emotions found in the literature (Handeland et al., 2020; Kim and Park, 2018; Ko & Choi, 2020; Lesā et al., 2021; Maclean et al., 2019; Najaar, 2015). Research findings specifically indicate that observation by others creates uncomfortable emotions in simulation. Students feel vulnerable if peers observe them during their interactions in simulation (Handeland et al., 2020). MacLean et al. (2019) reported that being observed adds stress, and participants are nervous about making mistakes and being embarrassed in front of their peers. Being observed creates a fear of having their mistakes exposed (Kang & Min, 2019), being judged (Maclean et al., 2019), and may expose incompetence (Kim and Park, 2018). These findings are consistent with the current GT study, because several participants expressed these same concerns.

Although there are studies on the adverse emotional effects of being observed in simulation, there is a dearth of studies demonstrating specific strategies for managing those emotions. In addition, no studies could be found regarding methods to reduce uncomfortable emotions elicited from being observed in simulation.

This study adds new knowledge about the Gen Z perspective regarding being observed in simulation and how they enact various emotional processing strategies to process negative emotions. Results showed that in addition to uncomfortable emotions from how participants may appear to others, uncomfortable emotions are also elicited from perceptions of self.

Perceiving

The category of *perceiving* refers to how nursing students perceive themselves in relation to their peers in simulation. Participants perceive themselves a certain way (positively or negatively) in simulation and believe others view them in the same manner. This study found that Gen Z nursing students perceive certain aspects of themselves to be compared against their

peers and experience judgment by others in simulation. They compare themselves to others to determine how they equate. These comparisons can lead to a mix of emotions, including confidence or insecurities about oneself. Students reported that they process uncomfortable emotions when they perceive themselves as performing better than, or equal to, their peers. They also view themselves as being judged by peers in this same manner and fear they may be viewed as inferior.

Perceiving involves thought processes of comparing themselves to others. Research regarding nursing students comparing themselves to others in simulation was challenging to find. Cato (2013) did find that nursing students fear not being as competent as their peers in simulation. Of the factors that add to uncomfortable emotions in simulation, judgment was identified as a significant cause (Cato, 2013). Feeling judged in simulation is a common theme and reflects this GT study's findings. MacLean et al. (2019) found that even when students trust their cohort, they still feel judgment from their peers. Byler (2018) also found that feeling judged was a source of uncomfortable emotions, specifically increased anxiety and stress. Comparing oneself to others and feelings of judgment led some participants in this GT study to experience uncomfortable emotions about their role as nurses.

This study showed that negative perceptions of self in simulation led to uncertainty about ability in nursing practice. Participants viewed their performance in simulation to reflect their abilities as future registered nurses. The category of *perceiving* included narratives of doubting competence and questioning career choice. Several participants revealed concerns about being competent nurses after performing poorly in simulation.

The findings from this study align with other studies regarding nursing students' perceived incompetence and failures in simulation. Lesā et al. (2021) found similar results.

Nursing students felt they performed poorly in simulation, which transferred over to their perceptions of themselves as a nurse (Lesā et al., 2021). Participants conveyed that their confidence was shattered and questioned whether they should become nurses (Lesā et al., 2021). Zamanzadeh et al. (2016) also found that nursing students based self-perceptions on their abilities as nursing students. For example, participants deemed themselves competent to be a nurse when they believed they possessed the requisite traits of the profession, such as critical thinking, nursing knowledge and skills, and the ability to practice independently (Zamanzadeh et al., 2016). Kim and Park (2018) also reported similar findings. Participants reported high-stress levels, moderate self-esteem, and questioned their competence in simulation (Kim & Park, 2018). Students felt they should manage the patient scenario independently without assistance from others (Kim & Park, 2018). This mentality prevented the participants from seeing their value in nursing when they could not succeed in the simulation (Kim & Park, 2018).

Positive perceptions of self in simulation are essential for Gen Z nursing students in processing uncomfortable emotions and obtaining positive perceptions of themselves as nurses. This study provides new knowledge about the impact of self-perception and the consequences to personal views of nursing as a career choice. Simulation experiences contribute to these perceptions because this study found that the Gen Z nursing students' perception of self comes from comparing their simulation performance with others.

Reflecting in Debriefing

The category of *reflecting in debriefing* involves students' processes to manage emotions by reflecting on personal and group performance in simulation. Gen Z nursing students reported that *reflecting in debriefing* affects their emotions, emotional processing, and assists with shaping their feelings towards future simulation events. Participants in this study reported that

reflecting on the event with their cohort and simulation facilitators helped them process uncomfortable emotions. Results show that debriefing could either facilitate emotional processing or exacerbate uncomfortable emotions. Effective emotional processing was facilitated when standards of best practice were implemented into the debriefing session (INACSL Standards Committee et al., 2021e). Standards of best practice specify that the debriefing session should "encourage reflection, explore knowledge, and identify performance/system deficits while maintaining psychological safety and confidentiality" (INACSL Standards Committee et al., 2021e, p. 29). Findings from this study demonstrate that the simulation setting which the research was conducted conformed to these new INACSL standards as evident by the improvement of uncomfortable emotions and strategies used to effectively process these difficult emotions.

Debriefing has been researched abundantly concerning its impact on emotions (Abulebda et al., 2021; Ko & Choi; 2020; Na et al., 2021; Zhang et al., 2019); the results of this study are consistent with the general findings. Na et al. (2021) found that students experienced increased positive emotions and decreased negative emotions after debriefing. Although these findings are similar to this GT study, they were only found to be true if the students perceived the environment to be psychologically safe.

A psychologically safe environment was found to be instrumental in Gen Z nursing students' ability to process emotions and participate in the debriefing session. A debriefing approach that viewed mistakes as an opportunity to learn was preferred over scrutiny and feeling criticized. For instance, Gen Z students in this study were self-critical, and they appreciated the positive feedback from faculty and peers. Discussing the actions that went well and framing errors as opportunities for improvement helped them process uncomfortable emotions. These

findings are in alignment with current debriefing research (Abulebda et al., 2021; Cheng et al., 2014; Turner & Harder, 2018). Abulebda et al. (2021) describe the fundamental requirements of debriefing to be a safe environment with an opportunity for learners to decompress. In addition, Turner and Harder (2018) found that focusing on student errors in simulation debriefing is counterproductive. Cheng et al. (2014) also found that students prefer to debrief through reflection rather than criticism. These findings are in alignment with the results of this study.

Gen Z nursing students in this study linked ineffective debriefing methods to an increase in uncomfortable emotions and an inability to process emotions. One of the concerning findings of this study was student reports of feeling set up for failure. Participants mentioned feeling reluctant to participate in debriefing when they felt tricked or set up for failure. Similarly, MacLean et al. (2019) found that some participants in their study also felt set up for failure and judged for their mistakes. However, other participants in the same study acknowledged their mistakes and felt supported in their learning (MacLean et al., 2019). Similar to the finding in this study, Kang and Min (2019) found that uncomfortable emotions led to students not engaging in the debriefing session.

Participants in this GT study reported ruminating on the negative emotions during simulation long after the debriefing was finished. Participants mentioned thinking about the negative aspects of the simulation for days. Najaar et al. (2015) found similar results, with some participants stating they began to process emotions during debriefing. For others, the processing of emotions was more complex and continued to occur for hours, days, or even weeks after the simulation (Najaar et al., 2015). The uncomfortable emotions led to undesirable impressions of simulation and negatively influenced future experiences.

Study Implications

The findings of this GT study may serve as a theoretical foundation for tailoring the educational experience of simulation for the Gen Z nursing student population. This approach may result in improved educational outcomes in simulation so that Gen Z nursing students develop the proficiency to provide safe patient care at the bedside. *Seeking Equanimity* are the strategies Gen Z nursing students use to process uncomfortable emotions and meet the simulation goals more successfully. Simulation facilitators can implement change and create environments conducive to these strategies.

Conducting a comprehensive prebriefing. The findings on the category of *preparing* highlight the importance for students to obtain pre-sim information and to engage in briefing. Our findings imply that students need to be provided with the necessary preparatory activities prior to the simulation experience. Our findings show that when students have a sense of being prepared prior to the simulation experience, they are able to process their emotions effectively, create a positive experience from the simulation, and achieve their goals.

The goal is to situate the learners into a shared mental model and prepare them for the educational content of the simulation-based experience (INACSL Standards Committee et al., 2021a). Facilitators should provide the learning outcomes and a comprehensive patient report with enough time for preparation to occur prior to the simulation event. The preparation information should then be followed up with group discussions during the prebriefing session immediately before participating in the simulation scenario. The discussion should be student-driven and focus on the patient case and simulation expectations. These activities follow best practice standards (INACSL Standards Committee et al., 2021a) and prove to alleviate uncomfortable emotions for the Gen Z nursing student in simulation.

Allowing opportunities for self-regulation. The category of ***s****elf-regulating* involves internal techniques that students use to process uncomfortable emotions. The self-regulation techniques included breathing exercises, positive affirmations, and mental checklists. Participants often mentioned that these techniques assisted with processing uncomfortable emotions and increase focus on the simulation event. The findings indicate that students need to feel safe implementing these strategies during simulation.

Simulation facilitators should set students up for success by discussing the ability and opportunity to take a moment to breathe deep, refocus, and use positive self-talk during the simulation. For instance, allowing students to verbalize that they "need a minute," even during the scenario, provides a safe space for learners to do so. Mindfulness training may be a beneficial prebriefing strategy because it focuses on nonjudgmental awareness of distressing thought processes and emotions, which consequently improves one's self-regulation of uncomfortable emotions (Basler et al., 2020; Wong, 2021). Allowing opportunities for self-regulation during the scenario could assist students with feeling comfortable enough to implement the strategies that help alleviate their uncomfortable emotions.

Ensuring available resources. The findings from the category of *relying* indicate that Gen Z nursing students feel it essential to have outside resources for assistance in the simulation to process emotions. The two primary resources identified were *depending on partner* and *finding the familiar.* The results indicate that *relying* on peers and having familiarity with the environment are resources that Gen Z nursing students use to process uncomfortable emotions.

Facilitators can pair students with a partner or even allow learners to choose their partners or groups. Familiarity with group members is a source of comfort for Gen Z nursing students. A

review of the simulation environment, including the equipment, should be covered in the prebriefing session. New equipment should be reviewed through hands-on practice activities during the prebriefing session. In addition, incorporating familiar patient care tasks into the scenario can provide comfort because students feel calmer when productive. These activities could provide simulation participants with the resources they rely upon to process uncomfortable emotions.

Normalizing deficiencies. In our GT analysis, the theme *pretending* demonstrates that the participants needed to protect their image and self-esteem by pretending to be knowledgeable, confident, and competent while performing in the simulation. Participants enacted *pretending* when they felt deficient in knowledge or skill. This theme implies that students have internal experiences during simulation that impair the processing of emotions when their image is threatened.

Simulation facilitators should encourage questions and normalize knowledge or skill gaps. Faculty should make it very clear that perfection in simulation is not expected. Mistakes are an expected aspect of the simulation and actually contribute to the learning experience. Therefore, any observed or perceived deficiencies should be addressed as an area for improvement and an opportunity for growth in nursing knowledge. In addition, identifying and discussing deficiencies could promote learning and growth in both prebriefing and debriefing.

Addressing judgment. The category of *perceiving* involves *feeling judged* in simulation. Judgment was identified as a significant cause of uncomfortable emotions in simulation. Participants expressed that when they feel judged, they cannot achieve a sense of emotional stability during the simulation. Rather than engaging in the learning event, they were internally preoccupied with feeling judged.

Simulation facilitators should implement a judgment-free zone beginning at the prebriefing and continuing throughout the simulation, including the debriefing session. This strategy aligns closely with normalizing deficiencies. If mistakes are viewed as an opportunity for learning, participants may feel less judged for their errors. However, as students tend to perceive themselves as constantly being judged, facilitators need to remind students about the judgment-free environment throughout the simulation experience.

Engaging in constructive reflection. The category of *reflecting in debriefing* includes introspection and receiving feedback. Participants in this study reported that reflecting on the event assisted with processing uncomfortable emotions. Participants reported that debriefing could facilitate emotional processing or exacerbate uncomfortable emotions depending on how the session was conducted. Positive feedback was identified as a facilitator for processing uncomfortable emotions.

Simulation facilitators should follow best practices and address emotions during the first phase of the discussion. Group discussion should focus more on reflection than criticism. Gen Z students are highly protective of their image; therefore, students should not be singled out. Areas for improvement should be addressed as a group from a team perspective. The debriefing frames future experiences and should be conducted in a manner that meets the needs of the Gen Z nursing student.

These implications can potentially adjust simulation practice for Gen Z students to minimize the prevalence of uncomfortable emotions. Currently, simulation best practices provide a process for developing and delivering simulation experiences (INACSL Standards Committee et al., 2021c). Kang and Min (2019) studied the concept of nursing students' psychological safety in simulation. They reported that students felt unprepared and anxious about the simulation even

though they received the standard components of the simulation. Furthermore, the students expressed anxiety, worry, and fear after the simulation (Kang and Min, 2019). Facilitators should follow best practice standards and incorporate additional Gen Z-specific elements to reduce uncomfortable emotions. Findings from this GT study may help reform simulation so that the Gen Z population may achieve the simulation educational outcomes by reducing uncomfortable emotions.

Strengths and Limitations of the Study

Strengths

The strengths of this study were directly related to the identified gaps in current literature that this study addressed and the commitment to Corbin and Strauss's (2015) GT methodology. The three main strengths of this study were:

1. Strict adherence to constant comparative analysis of research data following GT guidelines to understand the emotions and emotional processing of Gen Z nursing students in simulation.
2. Diverse research study participants.
3. A variety of methods for data collection were used, including interviews, surveys, and theoretical sampling during follow-up interviews.

Data collection and analysis occurred simultaneously with the researcher comparing all new findings to previous data. Data analysis began with the first survey and ended with data saturation. Memoing occurred throughout the data analysis process to record interactions with the data, including examining the data, making comparisons, asking questions, coming up with concepts that stand for meanings, and identifying relationships between concepts. Data analysis and theory development occurred through open, axial, and selective coding. Theory development

occurred through multiple reviews of the findings, constant comparison analysis, continuous consultations with a GT methodology expert, and multiple revisions of the conceptual model. Data analysis was an iterative process with the researcher fully immersed in the research to grasp a true sense of the phenomenon and provide a theoretical explanation of the findings. Study findings were shared with eight participants who validated that the conceptualization of *Seeking Equanimity* was representative of their emotional experiences and processing strategies in simulation.

The sample consisted of a diverse group of students from a baccalaureate nursing program in the western United States. Demographic results indicated that participants came from various racial and ethnic backgrounds. The participants were students from all four undergraduate nursing education program levels. Recruiting from all four levels allowed the researcher to capture experiences from diverse perspectives to develop an in-depth and rich understanding of emotions in simulation from Gen Z students throughout the nursing program. This study also provided an opportunity for diverse nursing students to offer unique and varied perspectives of their experiences in simulation.

The variety of methods for data collection increased the richness of data. The Qualtrics survey provided information about the emotional experiences of Gen Z nursing students and their processing of emotions in simulation. Survey analysis provided the researcher with a reference point for conducting the interviews. A more in-depth discussion ensued during the virtual interviews based on the survey's initial reflections. Follow-up interviews provided additional information during theoretical sampling. Confirmation of accuracy occurred during member checking to ensure data accurately reflected participant experiences.

Limitations

There are several limitations identified with the current study. First, the research was conducted at a single nursing school; therefore, the application and transferability of findings to larger populations of nursing students and other student population groups that use simulation may be limited. Additional research should use nationally represented samples to capture other factors affecting emotional processing such as varying culture, geographical locations, historical experiences, and curricular structures. Second, the study used a convenience sample, which might have the potential to attract participants with strong personal views about emotional experiences in simulation. However, this study used purposive and theoretical sampling methods as the recommended sampling process within the grounded theory approach. Third, albeit we used a reflection questionnaire prior to individual semi-structured interviews, the researcher, in essence, employed a one-time data collection process. Therefore, theorizing on how students process their emotions during simulation was mainly based on the participants' accounts of their previous simulation experiences. Longitudinal data through multiple interviews may have yielded new findings on the grounded theory of *Seeking Equanimity*.

Recommendations for Future Research

This study was designed to address gaps in the literature regarding the Gen Z nursing students' emotions and emotional processing in simulation. Data analysis revealed the unique experiences and strategies this population of students implement to process emotions in simulation. The study presents the grounded theory of *Seeking Equanimity* and lays the foundation for future research.

Future research should expand on the qualitative findings from this study. Investigations that vary from the study design features such as region, program, and educational level may

uncover vital concepts related to nursing students' experiences and emotional processing in simulation. Therefore, more qualitative investigations may be needed to refine and expand the concepts that emerged from this study.

Emotionally supportive interventions for *preparing* in simulation should also be investigated. A specific example provided in this study included *obtaining pre-sim information*. Specifics about this potential intervention could help refine best practices. For example, research related to the timing of simulation prep work (i.e., amount of time required for student to complete), when information should be administered (i.e., how long prior to the simulation event), and what information should be provided (e.g., patient report, physician orders, lab results, etc.) may identify best practices in administering prebriefing information prior to simulation.

The effects of social media use in simulation preparation may also be a beneficial research endeavor. Participants discussed a reliance on social media to help mediate emotions prior to their simulation experiences. Self-directed learning from social media was mentioned explicitly for preparation purposes to learn new skills, review previous knowledge, and practice before the simulation. Research in this area could provide new information about the benefits of using social media as a resource in simulation education.

Research in *self-regulating* techniques during simulation should also be considered. Specific examples provided from this study included *practicing deep breathing, self-affirming,* and *organizing thoughts*. Research regarding opportunities for self-regulation throughout the simulation may yield beneficial strategies for simulation educators.

In addition, research regarding *perceiving* such as *forming a self-concept, feeling judged*, and *questioning self* would be beneficial in simulation education. Findings from this study found

these student perceptions to consume thoughts and disrupt engagement in simulation. Identifying strategies to reduce negative perceptions and mitigate the impact on emotional processing could improve learner experiences in simulation.

Future research should also investigate the unique findings from this study related to psychological safety. Participants experienced uncomfortable emotions from feeling unsafe in the learning environment. However, psychological safety assessment tools in simulation were not found. A tool to measure psychological safety could assist future interventional studies to increase psychological safety in simulation education and learning.

A significant source of uncomfortable emotions in this study were participant feelings of being tricked or set up for failure. Several participants discussed the negative impact these perceptions had on their experiences in simulation. An understanding of why students feel tricked or set up for failure and methods to alleviate those perceptions would be beneficial knowledge in simulation education and learning.

Conclusion

This chapter provided an interpretation of the results, compared to the current literature, and implications for simulation education. The study's strengths and limitations were identified, and recommendations for future research were offered.

In summary, the grounded theory of *Seeking Equanimity* explains the processes, strategies, and context of how Gen Z nursing students process their emotions, particularly uncomfortable ones, in simulation. The conceptual model of *Seeking Equanimity* provides a visual representation of the processes used by Gen Z students in simulation to manage uncomfortable emotions. The findings provide a theoretical foundation for educators to create

and conduct simulation-learning events. This theoretical foundation may inform future simulation research and interventional studies.

There are limited studies regarding the Gen Z nursing student and emotional processing in simulation. The grounded theory that emerged from this study is the first to address Gen Z nursing students' emotional processing in simulation. The study's research question was: How do Gen Z nursing students experience and process emotional responses in simulation?

Corbin and Strauss's (2015) GT methodology was used to answer the research question: How do Gen Z nursing students experience and process emotional responses in simulation? Through the inductive data analysis of the participants' data, our findings revealed *Seeking Equanimity* as a multifaceted process as students engaged with the simulation and uncomfortable emotions. A conceptual model of emotions and emotional processing was constructed through qualitative data analysis and included member checking to ensure the accuracy of the study findings. This model explicates the multi-dimensional emotional experiences of the Gen Z nursing student. The processes involved with *Seeking Equanimity* include 1) *preparing,* 2) *self-regulating,* 3) *relying,* 4) *pretending,* 5) *perceiving, and* 6) *reflecting in debriefing.*

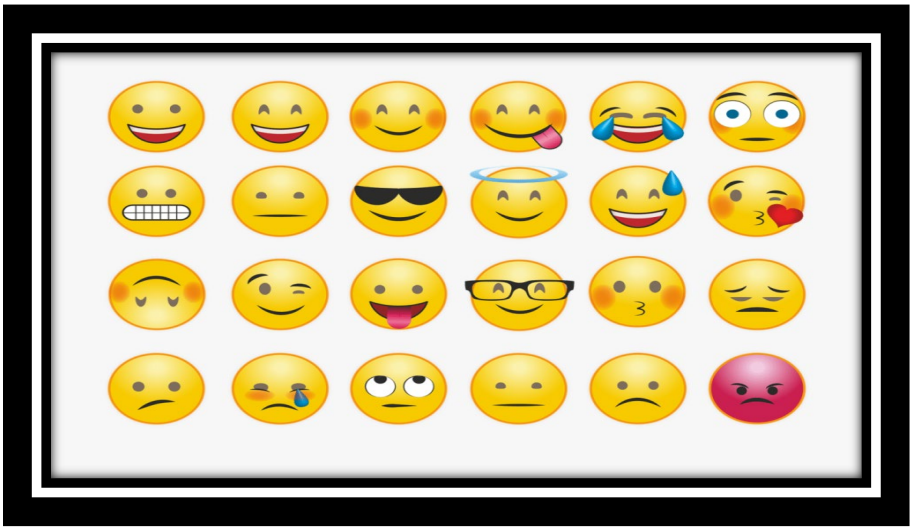
The study illustrated that Gen Z nursing students experience various emotions and implement several strategies to process uncomfortable emotions in simulation. The findings provide theoretically based evidence to modify the simulation approach for Gen Z nursing students, including future research regarding the efficacy of such changes. Continued research will help guide pedagogical choices directed towards minimizing uncomfortable emotions in simulation.

APPENDIX A

INFORMATIONAL RECRUITMENT FLYER

Attention: Gen Z Nursing Students!

Please consider participating in a study about emotions in simulation.



Volunteers will participate in:

- An online questionnaire
- An interview for 1 hour via Zoom
- A follow up interview for 30 minutes to 1 hour via Zoom

An Amazon gift card will be provided as a token of appreciation for your participation.

In the interview, you will be asked about:

- Your experience with emotions in simulation
- How you manage your emotions in simulation

If you would like to participate or receive further information about this study, contact:
Wendy Matthew, RN, MSN, CHSE
Ph.D. Nursing Student
Matthw2@unlv.nevada.edu
(209) 535-3146

APPENDIX B

LETTER OF INFORMATION TO PARTICIPANTS

Letter of Information

Exploring Gen Z Nursing Students' Experience and Emotional Processing in Simulation: A Grounded Theory Study

Investigator: Wendy Matthew, RN, MSN, CHSE

I would like to invite you to participate in a research study. I am a Registered Nurse completing my Doctor of Philosophy degree in Nursing at the University of Nevada, Las Vegas under the supervision of Dr. Andrew Reyes. The purpose of this study is to learn about emotional experiences in simulation for Gen Z nursing students and how their emotions are processed during the learning event. It is my hope that the results of this study will contribute to the development of learning experiences that align with the distinct needs of the Gen Z nursing student in simulation.

If you are interested in taking part of this study, you will complete an online questionnaire followed by an online interview with me. Prior to participation, you will be given information about the study; then, an informed consent to participate in the study will be obtained. The interview will last about 1 hour. You will be asked questions about your experience with emotions in simulation and how you have managed those emotions. Following completion of all interviews, you will be invited to take part in a follow-up interview to discuss the findings of the data analysis and to verify if the findings are consistent with your experience. This follow-up interview may last for 30 minutes to 1 hour. The interviews will take place online through Zoom. The interview will be recorded so that I may be able to pay careful attention to what you are saying.

During the interview, it is possible that you may experience psychological discomfort and may not want to continue our interview. To the best of our knowledge, there is minimal risk associated with participating in this study. If you should require supplementary emotional support after the interview, I can provide you a list of counseling and other support services both offered by the university and other community agencies. On the other hand, having a chance to talk about important experiences may be helpful for you and it is possible that by talking about your experiences, you will begin to understand them in new or different ways. Most likely, the issues we will talk about are ones you have thought about before, but may not have had an opportunity to talk about with others.

Participation in this study is voluntary. You are free to stop the interview at any time, and for any reason. You do not have to answer any questions that you do not want to answer. If you change your mind and decide that you do not want to take part in this research, you may do this at any

time. Your participation or non-participation will have no academic consequence on any of your course or your program. You will receive a $30 Amazon gift card as a token of appreciation for participating in the study.

Anything you tell me will be strictly confidential and no real names will be used in reports of the study. All information that you provide about yourself will be kept in a password protected computer. After the transcription of the data is complete, all identifying information will be removed. You will also be given a choice of a pseudonym you would like to have. A summary of what we have learned from this research will be given to you when the study is over. If you have any questions, please feel free to contact Dr. Andrew Reyes my research supervisor, or me. We can be reached at either of the addresses/phone numbers listed.

If you have questions about the conduct of this study or your rights as a research participant, you may contact the Director of the Office of Research Ethics at the University of Nevada, Las Vegas at (702) 895-2794 or email at irb@unlv.edu. This letter is yours to keep for future reference. Thank you for your interest.

Sincerely,

Wendy Matthew, RN, MSN, CHSE
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University of Nevada, Las Vegas, School of Nursing
4505 S. Maryland Pkwy
Las Vegas, Nevada 89154
Phone: 209-535-3146
Email: matthw2@unlv.nevada.edu

Andrew Thomas Reyes, PhD, MSN, RN
Assistant Professor
University of Nevada, Las Vegas, School of Nursing
4505 S. Maryland Parkway Box 453018
Las Vegas, Nevada 89154-3018
Office telephone number: (702) 895-5094
Email: andrewthomas.reyes@unlv.edu

APPENDIX C

INFORMED CONSENT

Informed Consent
School of Nursing

Title of Study: Exploring Gen Z Nursing Students' Experience and Emotional Processing in Simulation: A Grounded Theory Study

Investigator(s): Wendy Matthew, RN, MSN; Andrew Thomas Reyes, PhD, RN
For questions or concerns about the study, you may contact Wendy Matthew at **209-535-3146** or Andrew Thomas Reyes (Dissertation Chair) at **702-895-5094.**

For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted, contact **the UNLV Office of Research Integrity – Human Subjects at 702-895-2794, toll free at 888-581-2794 or via email at IRB@unlv.edu.**

Purpose of the Study
You are invited to participate in a research study. The purpose of this study is to learn about emotional experiences in simulation for Gen Z nursing students and how their emotions are processed during the learning event.

Participants
You are being asked to participate in the study because you fit these criteria: (a) undergraduate pre-licensure student of baccalaureate nursing program, (b) born between 1997 and 2012, (c) over the age of 18 years old, (d) and participation in at least one simulation event in the current nursing education program.

Procedures
If you volunteer to participate in this study, you will be asked to do the following:
(1) Complete an online demographic questionnaire.
(2) Complete an online simulation reflection questionnaire
(3) Participate in an online audio-visual recorded interview lasting about 1hour and share your experiences in simulation regarding emotions and emotional processing.

(4) Participate in an online follow-up interview lasting about 30 minutes in order to clarify questions that came up from the preliminary analysis of your initial interview.

Benefits of Participation

The potential benefits for participating in the study include increased insight and understanding about how you experience and manage emotions in simulation. The experience you share while you participate in the study will provide us information about how Gen Z nursing students experience simulation and the influence that emotions may have during the learning event.

Risks of Participation

There are risks involved in all research studies. This study may include only minimal risks. You may become emotionally and/or psychologically uncomfortable when answering some questions. We will provide you a list of counseling and other support services offered by the university and other community agencies whether or not you require supplemental emotional support after the interview.

Cost /Compensation

There are no financial cost to you for participating in this study. The study will take about 1 hour of your time for the first interview, and about 30 minutes for the follow-up interview. You will be given a $30.00 Amazon gift card for participating in the study. The gift card will be given to you after the interview sessions. If you decide to withdraw from the study in the middle of the interview, you will still be provided your gift card. You will also get to keep the gift card if you decide to withdraw your data after the interview. There are no academic credits as compensation for participating in the study. Lastly, there will be no academic or monetary penalty for withdrawing from the study.

Confidentiality

All information gathered in this study will be kept as confidential as possible. No reference will be made in written or oral materials that could link you to this study. All records will be stored in a locked facility for two years after completion of the study. After the storage time, the information gathered will be destroyed (i.e., written notes and journaling materials will be shredded at a designated confidential document shredder, and digital files of interview sessions and completed questionnaires will be destroyed by a digital scrubbing software).

Voluntary Participation

Your participation in this study is voluntary. You may refuse to participate in this study or in any part of this study. You may withdraw at any time without prejudice to your relations with UNLV. You are encouraged to ask questions about this study at the beginning or any time during the research study.

Participant Consent:

I have read the above information and agree to participate in this study. I have been able to ask questions about the research study. I am at least 18 years of age. An electronic copy of this form has been given to me.

By typing your name below, you are consenting to participate in this study.

_____

Typed name of Participant

Audio-visual recording:

I agree to audio-visual recording for the purpose of this research study.
By typing your name below, you are consenting to audio-visual recording.

_____

Typed name of Participant

APPENDIX D

DEMOGRAPHIC QUESTIONNAIRE AND INITIAL REFLECTION

Introduction:
I would like to thank you for participating in this study to explore how Gen Z nursing students experience and process emotions in simulation.

Please provide the following demographic data:

1. Age
2. Level in nursing program
3. Gender
4. Cultural or ethnic background

Instructions:
Please refer to your simulation experience(s) and respond to the following questions. Your responses will be referenced during our online interview session.

1. Please tell me about your experiences in simulation.
2. What factors contribute to your performance in simulation? Please explain.
3. When you think of simulation, what comes to mind?
4. Describe for me any emotions you may have felt during the simulation event.
5. Tell me how you manage the simulation experience, specifically as it relates to any emotions you may be feeling.
6. Is there anything else you would like to tell me?

APPENDIX E

SEMI-STRUCTURED INTERVIEW GUIDE

Introduction:
I would like to thank you for participating in this study to explore how Gen Z nursing students experience and process emotions in simulation.

Before we begin, do you have any questions pertaining to the study?
- Ensure participant has signed consent form
- Restate permission to an audio-visual recording of the interview

Questions:

1. Please tell me about your experiences in simulation.
   Probe: You described your experiences in simulation as _____, can you tell me more about _____.
2. What factors contribute to your performance in simulation? Please explain.
   Probe: You identified _____ as factor(s) that contributed to your performance in simulation. Will you please explain more about these factor(s)?
3. When you think of simulation, what comes to mind?
   Probe: What specific meaning(s) does simulation have for you?
4. Describe for me any emotions you may have felt during the simulation event.
   Probe: You stated you experienced _____ during the simulation, how does that affect the experience for you?
5. Tell me how you manage the simulation experience, specifically as it relates to any emotions you may be feeling.
   Probe: What characteristics about yourself would you say contribute to the way you manage (or not) emotions in simulation?
6. Is there anything else you would like to share with me regarding your simulation experience, emotions, and/or emotional processing in simulation?

APPENDIX F

LETTER OF PERMISSION TO CONDUCT THE STUDY

Date:

Dear Dean or Director,

As a student in the Doctor of Philosophy in Nursing program at the University of Nevada, Las Vegas, I am conducting a qualitative research project as part of my program requirements under the supervision of Dr. Andrew Reyes. The study will gather information about Gen Z nursing students' emotions and emotional processing in simulation. The title of the research study is "Exploring Gen Z Nursing Students' Experience and Emotional Processing in Simulation: A Grounded Theory Study."

I would like to conduct my research study by asking at least twenty nursing students (juniors and seniors) enrolled in your Bachelor of Science in Nursing Program to participate in an individual interview. This individual interview will last about 1 to 1 ½ hours. They will be asked questions about their experience with emotions in simulation and how they process their emotions during the event. There will also be follow-up individual interviews with the participants in order to verify with the participants if the emerging categories and codes from the data analysis are consistent with their experience.

If you permit me to conduct the study, I would like to ask for your assistance through one of your staff members who will be the designated person to directly contact potential study participants through communicating with students and informing them about the study. I would like to send a letter of information and flyer through email and post to the School of Nursing Facebook page.

It will be emphasized that participation in the study is voluntary. Students may refuse to participate or withdraw from the study at any time. Their responses will remain anonymous and confidential. Their study participation or non-participation will have no academic consequence on their courses or program. Study participants will be provided a $30 Amazon gift card as a token of appreciation for participating in the study.

If you have questions about the conduct of this study please contact the Director of the Office of Research Ethics at the University of Nevada, Las Vegas at (702) 895-2794 or email at irb@unlv.edu.

I thank you in advance for your time and consideration of my request. If you have any questions regarding this study, please do not hesitate to call me at 209-535-3146.
Sincerely,

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APPENDIX G

IRB Approval

UNLV Biomedical IRB - Exempt Review
Exempt Notice

DATE:	June 9, 2021
TO:	Andrew Reyes
FROM:	Office of Research Integrity - Human Subjects
PROTOCOL TITLE:	[1749692-3] Exploring Gen Z Nursing Students' Experience and Emotional Processing in Simulation: A Grounded Theory Study
ACTION:	DETERMINATION OF EXEMPT STATUS
EXEMPT DATE:	June 9, 2021
NEXT REPORT DUE:	June 8, 2024
REVIEW CATEGORY:	Exemption category # 2i

Thank you for your submission of Revision materials for this protocol. This memorandum is a notification that the protocol referenced above has been reviewed as indicated in Federal regulatory statutes 45CFR46.101(b) and deemed exempt.

We will retain a copy of this correspondence with our records.

PLEASE NOTE:
Upon final determination of exempt status, the research team is responsible for conducting the research as stated in the exempt application reviewed by the ORI - HS and/or the IRB which shall include using the most recently submitted Informed Consent/Assent Forms (Information Sheet) and recruitment materials.

If your project involves paying research participants, it is recommended to contact the ORI Program Coordinator at (702) 895-2794 to ensure compliance with the Policy for Incentives for Human Research Subjects.

Any changes to the application may cause this protocol to require a different level of IRB review. Should any changes need to be made, please submit a **Modification Form**. When the above-referenced protocol has been completed, please submit a **Continuing Review/Progress Completion report** to notify ORI - HS of its closure.

If you have questions, please contact the Office of Research Integrity - Human Subjects at IRB@unlv.edu or call 702-895-2794. Please include your protocol title and IRBNet ID in all correspondence.

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4505 Maryland Parkway . Box 451047 . Las Vegas, Nevada 89154-1047
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CURRICULUM VITAE

Wendy A. Matthew, PhD(c), MSN, RN, CHSE
Assistant Professor, Simulation Program Director
California State University, Stanislaus
wmatthew@csustan.edu

Education:

2018- 2022	PhD Nursing Education, University of Nevada, Las Vegas. Dissertation: *Exploring Gen Z Nursing Students' Experience and Emotional Processing in Simulation: A Grounded Theory Study.*
2016	Educational Doctorate, EdD, California State University, Stanislaus. Two courses: Models of Inquiry and Social Foundations of Education.
2012- 2015	Masters Degree in the Science of Nursing, Nursing Education and Nursing Administration, California State University Stanislaus, Turlock, CA. Thesis/ Project: *Development of a tool to guide best practice in simulation debriefing for nursing faculty.*
2007- 2010	Baccalaureate Degree in the Science of Nursing, California State University, Stanislaus, Turlock, CA
2003- 2007	CSU Transfer, Nursing Focus, Modesto Junior College, Modesto, CA

Teaching Experience:

2021	Seminar in Nursing Education, MSN Education, California State University, Stanislaus. This seminar is designed to include role socialization, classroom management, active learning, assessment and evaluation, counseling, and valuing diversity in student populations.
2020	Practicum in Contemporary Practice, MSN Clinical, California State University, Stanislaus. Applies advanced theoretical knowledge in a select focus area. The focus will be on integration of clinical practice with evidence-based practice.
2018-current	Adult Health 1 Clinical Coordinator, California State University, Stanislaus.

Coordinates second semester clinical rotation, loading days, orientation, and simulation dates. Serves as a resource for adult health 1 clinical faculty.

2017-current — Seminar, Online RN-BSN, California State University, Stanislaus.
Seminar discussion of theoretical components of nursing applied in clinical practice. Problems and experiences in the clinical setting are correlated with current literature and theories.

2017 — Transcultural Nursing, California State University, Stanislaus.
Theoretical and experiential foundation for nurses to effectively meet the healthcare needs of culturally diverse patients, families, and populations in a variety of practice settings.

2017 — Community Health Nursing Clinical Practicum, Online RN-BSN, California State University, Stanislaus.
Clinical experience in community health settings. Focus is on population-based health. Analysis of community determinants of health and case management.

2017 — Emanuel Medical Center Nurse Educator
- Nurse Skills Fair Instructor
  Developed and taught peritoneal dialysis procedure to all licensed staff at EMC
- Heart Code BLS and ACLS Instructor

2016-2017 — New Nurse Residency Program Coordinator, EMC
- Developed the curriculum for the program
- Taught in the program weekly throughout the 16 week curriculum.

2015- 2020 — Foundations of Clinical Nursing Practice, California State University, Stanislaus.
Focus is on acquisition of the skills and abilities essential to clinical nursing. Skill acquisition is based on mastery of core scientific principles.

2013- Current — Simulation Director- School of Nursing, California State University, Stanislaus
- Strategically plan and facilitate simulation, utilization, growth and effectiveness related to student success and clinical

effectiveness
- Develop and implement clinical simulation curricula in order to meet accreditation standards
- Develop and implement technical training in simulation technology for faculty
- Seek additional funding sources such as grants and community partnerships

2013- 2018 Advanced Practicum Placement Coordinator- School of Nursing, California State University, Stanislaus lecturer

Clinical Experience:

2015- 2018 Per diem Staff Nurse- Float Pool
Emanuel Medical Center, Turlock, CA
- Telemetry, surgical, medical, and progressive care
- Provision and coordination of patient-centered care
- Provision of leadership
- Delegation and collaboration with ancillary nursing
- Collaboration with an interdisciplinary team
- Professional nursing practice

2012- 2013 Staff Nurse- Community Hospice
Alexander Cohen Hospice House, Hughson, CA
- Coordinate physical care of the patient including end of life
- Palliative Care
- Attend weekly interdisciplinary meetings to coordinate care
- Assign and supervise CNA and LVN care
- Teach patients, families, CNAs, LVNs, and volunteers

2010- 2012 Staff Nurse- Progressive Cardiovascular Unit
Doctors Medical Center, Modesto, CA
- Coordinate physical care of the cardiac patient
- Open Heart Surgery preparation, cardiac catheterization, nuclear stress, telemetry
- Completed American Association of Critical Care Nurses Course "Essentials of Critical Care Orientation"
- 12 lead EKG
- Quality Committee- Consents

Certifications and Awards:

2021	ACUE, the Association of College and University Educators, Effective College Instruction for Remote Teaching.
2021	Faculty Scholarship Nursing $1000, NEC
2021	Dean Faculty startup funds, $2500
2020	Faculty Scholarship Nursing $1000, WIN
2020	Quality Teaching and Learning (QLT) Certification o Introduction to Online Teaching
2018	CITI: Collaborative Institutional Training Initiative. Responsible Conduct of Research and Biomedical IRB
2017	Foundations of Public Health Certificate
2017	Quality Matters (QM) Online Instructor Certificate
2016- Current	Certified Healthcare Simulation Educator
2014	Outstanding Student Leader of the Year Nomination
2010- Current	American Heart Association Basic Life Support
2010- Current	California State Board of Nursing, Registered Nurse
2010	Magna Cum Laude
2007- Current	American Heart Association Basic Life Support
2007- 2010	Deans List
2007	National Institute of Health Office of Extramural Research

Professional Organizations and Activities:

2021	American Psychiatric Nurses Association
2017-2018	Secretary, Sigma Theta Tau, Rho Tau Chapter
2015	Phi Kappa Phi, Honor Society
2014- Current	Society for Simulation in Healthcare
2013- Current	Western Institute Nursing Research
2011	Doctors Medical Center, Core Measure- Quality, Consent Committee
2009- Current	Sigma Theta Tau, Rho Tau Chapter

Publications

2021	Banks, S., Stanley, M., Matthew, W., & Peltier, J. (2021). Collaborative Simulation with Allied Professionals Drive Pedagogic Evolution. Manuscript ID JEE-21-0094 Submitted on 08/07/21 to Journal of Experiential Education. (pending review).
2020	Stanley, M., Banks, S., Matthew, W., & Brown, S. (2020). Operationalization of Bandura's social learning theory to guide inter-

	professional simulation. *Journal of Nursing Education and Practice, 10*(10), 61–68. https://doi.org/10.5430/jnep.v10n10p61
2020	Matthew, W. A., Serratos, J. L., & Seacrist, M. J. (2020). Making research real: Innovative approaches for graduate-level nursing research. *Journal of Professional Nursing*, *36*(2), 39–42. https://doi.org/10.1016/j.profnurs.2019.08.008
2019	Banks, S., Stanley, M. J., Brown, S., & Matthew, W. (2019). Simulation-based inter-professional education: A nursing and social work collaboration. *Journal of Nursing Education*, *58*(2), 110–113. https://doi.org/10.3928/01484834-20190122-09
2018	Stanley, M. J., Serratos, J., Matthew, W., Fernandez, D., & Dang, M. (2018). Integrating video simulation scenarios into online nursing instruction. *Journal of Nursing Education*, *57*(4), 245–249. https://doi.org/10.3928/01484834-20180322-11

Research

2021	Exploring Gen Z Nursing Students' Experience and Emotional Processing in Simulation: A Grounded Theory Study. IRB # 1749692-3
2020- Current	Escape Rooms in Simulation throughout the Nursing Curriculum. In collaboration with Marla Seacrist, Jennifer Peltier, Anne Stokman, and Sherri Brown. IRB #2021-006
2019-2020	Inter-professional Experience Simulation (IPE) collaboration. Social work and nursing with M. Stanley, S. Banks, J. Peltier, S. Brown.
2018	Making Research Real. In collaboration with Marla Seacrist and Jennifer Serratos.
2017	Undergraduate Nursing Student Competency with National Patient Safety Goals: A Comparative Study Using Standardized Patients and High Fidelity Simulation. In collaboration with Mary Jo Stanley and Sherri Brown.
2017	Integrating Video Simulation Scenarios into Online Nursing Instruction. In collaboration with Mary Jo Stanley, Jennifer Serratos, Dinorah Fernandez, and Michelle Dang.
2017	Evaluating Teaching Strategies to Improve Nursing Students' Documentation. In collaboration with Marla Seacrist and Debra Millar.
2016	Student Nurse Situational Awareness: An Element of Clinical Reasoning. In collaboration with Marla Seacrist and Debra Millar.
2015	Seeing the Big Picture: Tools to Increase Situational Awareness. In collaboration with Marla Seacrist, Andrea Martinez, Krista McCullough, Mohsen Izadi, and Shokoufeh Jashnani.

2014	Easing the Fear Factor in Mental Health Clinical Through Simulation. In collaboration with Carolyn Martin and Jennifer Serratos.
2014	Image of Nursing: Nursing Students Perception of the Image and Role of the Nurse. In collaboration with Jennifer Serratos.
2013	More than a CAP: Adolescent Perceptions of the Image of Nursing. In collaboration with Kristi Bahr, Roberto Gutierrez, Marla Marek, Melanie Rines, Mey Saephanh, Jennifer Serratos, and Mahsa Takhsha.

Professional Presentations:

2022	(Accepted course presenter) International Meeting on Simulation in Healthcare, IMSH, Los Angeles, CA. "Integrating Escape Rooms throughout the nursing curriculum".
2021	Presentation/Workshop, Nurse Educators Conference, Copper Mountain, Colorado. "Escaping the Simulation Lab". In collaboration with Jennifer Peltier.
2021	Presentation/Workshop, Nurse Educators Conference, Copper Mountain, Colorado. "Human Avatar Simulation for Remote Learning". In collaboration with Jennifer Peltier.
2021	Virtual Poster Presentation, Western Institute of Nursing Research, "Exploring Gen Z Nursing Students' Experience and Emotional Processing in Simulation: A Grounded Theory Study".
2021	Virtual Synchronous Presentation, Faculty Center for Excellence in Teaching and Learning (FCETL). Summer pedagogical Workshop, "Gamification and Escape Rooms". In collaboration with Jennifer Peltier.
2021	Virtual Synchronous Presentation, Scholarship of Teaching and Learning, "Exploring Gen Z Nursing Students' Experience and Emotional Processing in Simulation: A Grounded Theory Study"
2020	Virtual Poster Presentation, Western Institute of Nursing Research, Portland, Oregon. "Integrating inter-professional simulation into the curriculum".
2020	Poster Presentation: International Meeting of Simulation in Healthcare. San Diego, CA. *Creating a Teamwork Mindset through Early Inter-professional Simulation Exposure in Curriculum.*
2019	Poster Presentation, Western Institute of Nursing Research, San Diego, California. *"A Theoretical Understanding of Simulation Performance".*
2017	Poster Presentation, Western Institute of Nursing Research, Denver, Colorado. *"Implementing Simulation into Online Nursing Programs".* In collaboration with Mary Jo Stanley, Michelle Dang, Dinorah Fernandez & Jennifer Peltier

2016	Poster Presentation, Western Institute of Nursing Research Conference, Anaheim, CA. "*Easing the Fear Factor in Mental Health Clinical Through Simulation".*
2016	Poster Presentation, Western Institute of Nursing Research Conference, Anaheim, CA. "*Seeing the Big Picture: Tools to Increase Situational Awareness".*
2015	Master's Thesis Oral Presentation, California State University Stanislaus, School of Nursing, Turlock, CA. *Development of a Tool to Guide Best Practice in Simulation Debriefing for Nursing Faculty.*
2014	Podium Presentation for the 7th Annual Symposium for Nurse Leaders, Association of California Nurse Leaders, Stockton, CA. "*More than a CAP: Adolescent Perceptions of the Image of Nursing".*
2014	Poster Presentation, Western Institute of Nursing Research Conference, Seattle, WA. . "*More than a CAP: Adolescent Perceptions of the Image of Nursing".*
2013	Poster Presentation, California State University Stanislaus, Health Sciences Research Poster Presentations, Turlock, CA. "*More than a CAP: Adolescent Perceptions of the Image of Nursing"*

Committees:

2021	College of Science, Science in the Community
2021	Clinical Coordinator, School of Nursing
2020	Program Culture, AdHoc committee
2020	Medical Surgical Tenure Track Search Committee, School of Nursing
2020	Chair, Instructional Support Technician Search committee, School of Nursing
2020	Committee Member for MSN Culminating experience, CSU Stanislaus. Yousef Sohrabi- Implementation of Bedside Handoff: To Ensure Safe Transition of Care
2019-Current	Standard 4, CCNE Nursing Evaluation
2018	Committee Member for MSN Culminating experience, CSU Stanislaus. Vera Rocco- A shared governance model to guide preceptors in mentoring novice nurses
2017	Committee Member for MSN Culminating experience, CSU Stanislaus. Krista McCullough- Developing a college externship course for student nurses to obtain experiential learning in the acute care setting
2016- 2021	Chair of Clinical Coordinator Committee, School of Nursing
2013- 2016	Clinical Coordinator Team, School of Nursing
2013- Current	Chair, Simulation Team, School of Nursing

2013- Current Medical Surgical Team, School of Nursing

Funded Activity:

2021 Deans Funds, Research start-up, research participant incentive, gift cards, $570.00.
2021 Deans Funds, Research start-up, NEC travel for research presentation, $300.00.
2021 Faculty development Funds. Spring 2021. NEC Conference, $1000.
2020 University of Nevada, Las Vegas Funds, Spring 2021. WIN Conference.
2020 Faculty development Funds. Spring 2020. WIN Conference.
2018 IRA Grant- Funding for Standardized Patient Actors, $18,000, unfunded.
2017 IRA Grant- Funding for Standardized Patient Actors. $4260, funded. In collaboration with Mary Jo Stanley.
2014 Sutter Gould Medical Foundation- Laerdal Human Patient Simulator. SimMom with birthing module. $61, 000, funded. In collaboration with Jennifer Serratos.
2013 Center for Excellence in Graduate Education- Mini Travel Grant. CSU Stanislaus, Turlock, CA. $700.00 awarded.

Community Activities:

2021 CoVid Vaccination Clinic at Stanislaus State University
2020 Nurse Educators Conference in the Rockies, Abstract reviewer.
2020 Science Day, California State University, Stanislaus Turlock, Ca. Robotics in Healthcare.
2019 Flu Clinic Coordinator with Student Health Center, California State University, Stanislaus Turlock, Ca.
2019 Science Day, California State University, Stanislaus Turlock, Ca. Robotics in Healthcare.
2018 Flu Clinic Coordinator with Student Health Center, California State University, Stanislaus Turlock, Ca.
2017 Flu Clinic, California State University, Stanislaus Turlock, Ca.
2017 Science Day, California State University, Stanislaus Turlock, Ca. Robotics in Healthcare.
2016 Science Day, California State University, Stanislaus Turlock, Ca. Fetal Development and Pediatric Injury Education with Simulation.
2015 Preview day, California State University, Stanislaus Turlock, Ca
2014 Disney's Avenger 5K Anaheim, Ca

2014	Move Your Bones 5K- Active Orthopedic Turlock, Ca
2014	Nurse Camp, Sigma Theta Tau Turlock, Ca
2014	March of Dimes Walk, Stanislaus County
2014	Science Day, California State University, Stanislaus Turlock, Ca
2013	Nurse Camp, Sigma Theta Tau Turlock, Ca
2010	Health Faire- Kaiser Community Modesto, Ca

Other Professional Activities:

2021	Scholarship of Teaching and Learning (SoTL) Develop research projects focusing on the impact of classroom practices, teaching behaviors, and learning environments on student learning.
2021	Virtual Canvas Institute (VCI)
2018	California State University Statewide Simulation Faculty Collaboration
2018	Committee member for MSN Culminating Project. Andrea Lynn. Active implementation of COMFORT communication curriculum. Western Governors University.
2016	Instructional Support Technician, Search Committee Chair
2015	Clinical Instructor Orientation Binder Project
2014	Instructional Support Technician, Search Committee Member
2014	Developed CSU Stanislaus Nursing Simulation Policy
2014	Curricula, Design, and Evaluation Course
2014	Education Practicum in Professional Nursing and Seminar
2014	Teachers as Change Agents, Course
2013	Teaching and Learning in Nursing, Course
2013	Role Development for Nursing Administration, Course
2013	Registered Nurses Day, California State Capitol
2013	Health Policy, Course
2013	Nursing Research, Course
2012	Health Disparities, Course
2012	AACN Essential Critical Care Orientation, Course

Education/ Professional Meetings:

2022	(Accepted workshop presenter) International Meeting on Simulation in Healthcare, IMSH, Los Angeles, CA.
2021	Nurse Educators Conference, Copper Mountain, CO.

2020	International Meeting on Simulation in Healthcare, IMSH, Inspired by Patients, Driven for the Future, San Diego, CA
2019	Western Institute of Nursing Research "52nd Annual Communicating Nurse Research Conference" San Diego, CA
2019	International Nursing Association for Clinical Simulation and Learning Conference, Phoenix Arizona.
2018	Western Institute of Nursing Research "51th Annual Communicating Nurse Research Conference" Spokane, WA
2018	International Meeting on Simulation in Healthcare, IMSH, Making the Impossible Possible, Los Angeles CA
2018	Simulation Users Network, Fresno Ca
2018	International Nursing Association for Clinical Simulation and Learning, Toronto, Canada
2017	Iggy's Bootcamp for Nurse Educators, Albuquerque, New Mexico
2017	International Meeting for Simulation in Healthcare, Orlando, Florida
2017	Western Institute of Nursing Research, Denver, Colorado
2016	International Meeting for Simulation in Healthcare, San Diego, CA
2015	Association of California Nurse Leaders Annual Conference, Discovering the Magic of Nurse Leadership, Anaheim, CA
2015	Association of California Nurse Leaders, Annual Conference, Stockton, CA
2014	Simulation User Network Conference, Philadelphia, PA
2014	Western Institute of Nursing Research "Communicating Nurse Research", Seattle, WA
2014	Laerdal Sim Junior User in-service, CSU Stanislaus, Turlock, CA
2014	Simulation Users Network Conference, San Diego, CA
2014	Laerdal Sim Man User in-service, CSU Stanislaus, Turlock, CA
2014	Association of California Nurse Leaders (ACNL) "The Face of Nursing Symposium", Stockton, CA
2013	Laerdal Sim Mom User in-service, CSU Stanislaus, Turlock, CA
2013	Western Institute of Nursing Research "Creating a Shared Future of Nursing: Research, Practice, and Education", Anaheim, CA

Continuing Education (Ph.D. in Nursing Education)

2021	Dissertation (6 units)
2020	Statistical Methods for Nursing Research: multivariate Methods (3 Units)
2020	Interdisciplinary Team Science (3 units)
2020	Writing a Research Grant Application (3 units)
2020	Statistical Methods for Nursing Research: Univariate Methods (3 Units)

2019	Educational Theory and Philosophy for Nursing (3 units)
2019	Qualitative research Methods in Nursing (3 units)
2019	The Nurse as Leader (3 units)
2019	Knowledge Development in Nursing (3 units)
2019	Special Topics in Nursing (3 units)
2018	Quantitative Methods in Nursing (3 units)
2018	Theory Development in Nursing (3 units)

Clinical Specialization:

Simulation
Medical Surgical
Cardiac Care
Palliative & Hospice Care

Research Interests:

Student Anxiety in Simulation
Mental Health of Nursing Students
Escape Room Education in Nursing
Simulation use throughout the Curriculum
Debriefing in Simulation
Situational Awareness
Flipped Classroom and Self-directed learning
Clinical Competence and Judgment