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BACCALAUREATE NURSING STUDENTS' EXPERIENCES WITH CLINICAL HUMILITY AMID SIMULATION-BASED LEARNING: A QUALITATIVE THEMATIC ANALYSIS

A dissertation submitted to the Caspersen School of Graduate Studies

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ABSTRACT

Baccalaureate Nursing Students' Experiences
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A Qualitative Thematic
Analysis

Doctor of Medical Humanities Dissertation by

Mary Clare Smith

The Caspersen School of Graduate Studies
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In a period distinguished by dramatic transformations in the structure and scope of health care knowledge concurrent with technological and curricular innovations in nursing education, this dissertation explores the nature of humility in clinical education. Humility can be understood as a "quiet virtue" based on a fundamentally caring stance that manifests as a focus on others and draws on an accurate understanding of one's strengths and limitations (Worthington, 2007). Humility is gaining interest in health care scholarship for its potential value in managing the uncertainties and complexities of patient care. Within this context, this dissertation sought to answer a compelling question: How do baccalaureate nursing students who participate in a simulation-based learning experience and perceive clinical humility?

The methodology applied an in-depth qualitative thematic analysis of data from semi-structured interviews with 19 baccalaureate nursing students who participated in a high-fidelity simulation. Findings disclose multiple perspectives. Humility was experienced as a catalyst for learning, compassion, caring, and teamwork. Students identified aspects of psychological safety, including transparency, role clarity,

confidentiality, and the faculty's openness to student errors and uncertainty as influences on their ability to critically self-reflect, accept feedback, and seek assistance. Notably, students assigned some positive value to experiences with embarrassment in their simulation, suggesting that psychological safety need not preempt student errors or negative feedback amid simulation-based learning.

This research has implications beyond nursing academia. Humility, increasingly acknowledged in health care scholarship and the medical health humanities, is crucial for navigating the complexities of patient care. This qualitative exploration of nursing students' experiences with humility in simulation offers key insights into how professional formation may enlist critical self-awareness and openness—qualities that underpin safe, effective, and humanistic practice.

Keywords: baccalaureate nursing students, humility, simulation-based learning, qualitative analysis, clinical education, psychological safety, self-reflection, feedback, openness, medical humanities, professional formation, compassion, teamwork

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LIST OF ABBREVIATIONS AND ACRONYMS

AACN – American Association of Colleges of Nursing

ABSN – Accelerated Bachelor of Science in Nursing

ANA – American Nurses Association

BSN – Bachelor of Science in Nursing

CEO – Chief Executive Officer

COVID-19 – Coronavirus Disease of 2019

CNA – Certified Nursing Assistant

HUMBLE – Humility, Understanding, Mindfulness, Balance, Limited Lifelong Learning, Engagement

ICA – Inductive Content Analysis

INACSL – International Nursing Association for Clinical Simulation and Learning

INACSL – International Nursing Association of Clinical Simulation Learning

IOM – Institutes of Medicine (now the National Academies of Medicine)

IPE – Interprofessional Education

IPE – Interprofessional Education

IPEC – Interprofessional Education Collaborative

IRB – Institutional Review Board

LEH –Leader Expressed Humility

MA – Medical Assistant

MAR – Medication Administration Record

NRSC – Nursing Resource and Simulation Center

PCT – Patient Care Technician

PEARLS – Promoting Excellence and Reflective Learning in Simulation

RQ – Research Question

SBAR – Situation – Background – Assessment – Recommendations

SBLE – Simulation-Based Learning Experience

SBT – Simulation-Based Training

SET-M – Modified Simulation Effectiveness Tool

SLE – Simulated Learning Experience

SSOBP – Simulation Standards of Best Practice

DISSERTATION GLOSSARY

- **Clinical (Clinical Experience)** – Mode of training that pertains to caring for patients in a hospital or other patient care setting. (Hsieh & Lee, 2018; Lioce et al., 2025)
- **Clinical Humility** – The capacity of a clinician to accurately self-assess, maintain low self-focus, acknowledge limitations, and remain open to new perspectives and competing viewpoints (Huynh et al., 2021).
- **Conceptual Fidelity** – In a health care simulation scenario, the degree to which details of the scenario or patient's case (the patient's vital signs and his diagnosis) relate to each other to produce a cohesive whole that mirrors real-life practice (Watts et al., 2021).
- **Confederate (Embedded Participant)** – An individual who supports learners during a simulated patient encounter in an ancillary role such as a charge nurse, family member of the patient, laboratory technician, etc.), and helps to advance the scenario progression by providing needed contextualized cues to learners (Lioce et al., 2025).
- **Content Expert (Subject Matter Expert)** – An individual with specialized knowledge of a relevant aspect of clinical practice, who acts as a resource to simulation facilitators and designers, and assists to prepare, support, and debrief learners in a simulation-based learning experience (Lioce et al., 2025).
- **Cue** – Information communicated with or shared with learners during a simulation to assist them to progress through the scenario and achieve the learning

objectives (International Nursing Association of Clinical Simulation Learning [INACSL] Standards Committee, 2016).

- **Cultural Humility** – A conceptualization of humility proposed by physicians Melanie Tervalon and Jann Murray-García (1998) as a dynamic state that incorporates continuous self-reflection, self-critique, and a learning orientation toward the cultural values and perspectives of others. The aim of cultural humility is to establish and support trusting relationships and to deconstruct biases and hierarchies that undermine effective care and patient advocacy.
- **Debriefing (Debrief)** – A structured process that engages participants in facilitated, reflective discussion of a simulation-based learning experience (Lioce et al., 2025).
- **Empathy** – The capacity to envision oneself in the position of another person, and comprehend their sentiments, motivations, ideas, actions, and worldview (Britannica, 2025; Hofmeyer, 2025).
- **Epistemic Humility** – Awareness of limitations in one's knowledge and the precarity of knowledge in general. More narrowly construed than intellectual humility since it includes self-awareness of limits but not openness.
- **Facilitator** (Simulation Educator) – A trained person who assists with or executes the implementation and delivery of simulation-based learning activities (Lioce et al., 2025).
- **Fiction Contract** – An explicit understanding between simulation facilitators and learners that all agree to suspend disbelief and to engage with the exercise as though it were real (Lioce et al., 2025).

- **Fidelity** – The capacity of a simulation to reproduce or replicate reality in representing physical, psychological, and environmental aspects of a real-world event or setting (Lioce et al., 2025).
- **Formative Assessment** (**Formativity**) – A type of evaluation that focuses on the learner's development and progress according to specific objectives and criteria; offers constructive feedback to the learner or groups of learners (Lioce et al., 2025).
- **General Humility** – The capacity, according to self-evaluation, or the evaluation of others, to exhibit humility in every circumstance (Worthington, 2017).
- **High-Fidelity Simulation** – Highly realistic simulation-based learning experiences that provide a high level of learner engagement and interactivity. This can be achieved with a variety of modalities. The level of fidelity does not necessarily prescribe the modality of the simulation technology. For example, a high-fidelity simulation can be designed to use a standardized patient, a manikin, or a task trainer (Lioce et al., 2025).
- **Humility** – Possessing an accurate self-appraisal that includes an awareness of one's limitations, holding low self-interest (Worthington, 2017).
- **Hybrid** – A term used to represent a simulation-based learning activity that combines more than one modality within the same activity (Lioce et al., 2025).
- **Intellectual Humility** – The capacity of an individual to comprehend that their beliefs may be wrong, coupled with a dispositional openness to new learning, perspectives, and worldviews when presented with novel ideas or new knowledge.

Intellectual humility expands on epistemic humility as it introduces the concept of openness (Leary, 2018).

- **Leader Humility (Humble Leadership)** – Having an accurate estimation of oneself, and demonstrating a learning orientation and openness to new perspectives while possessing a high value for the contributions of others (Luo et al., 2022).
- **Low-Fidelity Simulation** – A simulation-based learning experience that does not need to be highly interactive, or use equipment that is programmed or externally controlled. Examples include a tabletop discussion, case study, or role-play (Lioce et al., 2025).
- **Manikin-Based Simulation** – A teaching/learning practice that employs manikins to represent a patient. Manikins may integrate technology that allows them to represent physical findings such as breathing sounds, pulses, speech, and movement, that can be programmed or controlled by a facilitator or software (Lioce et al., 2025).
- **Mixed Reality Simulation** – A type of simulation that employs visualization technology to blend virtual environments with reality to connect what is physically present in the participant's environment with what is created by a computer (Lioce et al., 2025).
- **Modality** – A platform or approach employed to deliver a simulation-based learning activity, incorporating simulation tools such as live actors, manikins, avatars, task trainers, etc. Examples of modality include virtual reality, mixed reality, in situ, or hybrid simulation. The objectives of the simulation-based

learning activity should guide the choice of modality (INACSL Standards Committee et al., 2021).

- **Moral Imagination** – The ability to generate or apply ideas, not grounded moral principles, personal experience, or observations, to arrive at moral truths or drive moral action (Heath, 2023).
- **Narrative Humility** – A conceptual cousin of cultural humility, narrative humility urges clinicians to engage with patients' stories as complex, often ambiguous and contradictory entities that are multifaceted and evolving (DasGupta, 2008). A conceptualization of humility advanced by Sayantani DasGupta (2008), narrative humility recognizes the inherent power imbalances of the clinician-patient relationship, and asserts that the clinician must adopt a stance of transparency and receptivity to create fruitful clinical partnerships with all patients.
- **Perspective-Taking** – The act of perceiving and temporarily adopting the worldview of another individual. Perspective-taking is thought to enhance empathy, reduce bias and stereotyping, and enhance relationships with individuals from other groups (Shaffer et al., 2019).
- **Physical Fidelity (Environmental Fidelity)** – The degree to which the physical aspects of the simulation activity mimics the actual environment in which the scenario would occur, and cues the learner to interpret the scenario as real (Watts et al., 2021). Examples include the manikin or standardized patient's capacity to represent a clinical presentation or finding, the availability of real patient care equipment that would be used in practice, the presence of embedded actors

(standardized patients/confederates) to play family members, and needed props to amplify realism and support learner engagement (Watts et al., 2021).

- **Prebriefing (Prebrief)** – An informational meeting that precedes a simulated patient encounter and provides participants with relevant information about the simulation-based learning activity. The aim of prebriefing is to support the psychological safety and success of the learners, and to establish clear expectations for the simulation-based learning experience (INACSL Standards Committee et al., 2025; Lioce et al., 2025).
- **Psychological Fidelity** – The capacity of a simulation to optimize contextual aspects according to the realities of the clinical practice environment to promote engagement. Examples include time constraints, distractions, sounds, and realistically scripted conversations (Watts et al., 2021).
- **Psychological Safety** – A sentiment (either implied or expressed) among simulation participants that they feel comfortable engaging in the simulation activity, and can confidently challenge others' ideas, candidly share their reactions, raise questions, and express their needs during the SBLE without fear of embarrassment or retaliation (Lioce et al., 2025).
- **Reflective Practice** – A metacognitive activity that encourages clinicians to think about their thinking to deepen understanding and guide future patient encounters (Sandars, 2009).
- **Relational Ethics** – Proposes that ethical decision-making occurs in the context of relationships, emphasizes the importance of mutual respect and engagement,

and acknowledges embodied experience and interdependence between the patient and the caregiver (Tomaselli et al., 2020).

- **Relational Humility** – Humility within the context of relationships (Worthington, 2017)
- **Scenario** (Clinical Scenario, Simulation Scenario) – Algorithm, script, or story used to support and instruct learners who participate in a simulation-based learning activity, or to guide facilitators and program simulation technology to interact with learners. A detailed outline that includes roles, notes, objectives, instructions, patient history and presentation, a description of the environment, preparation activities, and needed props and equipment. (Lioce et al., 2025; Meakim et al., 2013).
- **Simulation (Clinical Simulation, Simulation-Based Education, Simulation-Based Learning Experience)** – An activity within the range of planned learning experiences that mirror or represent actual or possible situations. These permit participants to cultivate and nurture knowledge, skills and attitudes, or practice responding to real-life scenarios in a controlled environment (Lioce et al., 2025).
- **Thematic Analysis** – A foundational method for locating, organizing, and analyzing patterns in qualitative data to produce meaning. The method or approach for thematic analysis can vary (Braun & Clarke, 2006).
- **Virtual Reality Simulation** – A simulation activity that employs head-mounted devices (Immersive VR), such as goggles, or multiple screens (Non-Immersive VR) to provide a 3D, realistic experience for participants who simulate in a 360-degree, highly visual environment (Hamad & Jia, 2022).

- **Virtual Simulation** – A simulation that employs computerized technologies to centrally situate human participants, who use voluntary motor control and communication and decision-making skills to engage in on-screen training (Lioce et al., 2025).

Chapter 1

INTRODUCTION

I propose to explain the secret of life,

said the professor, enjoying a joke.

The grace of humility is a precious gift.

Uncertainty pertains to our hopes and fears.

Said the professor, relishing a joke,

Cultivate, gentlemen, the art of detachment.

Amid fear of uncertainty, hope remains.

Obtuseness applies in judicious measure.

Cultivate, gentlemen, the art of detachment;

that is, an external view from within,

applying your obtuseness judiciously.

The past is with us, never to be escaped.

To adopt an external view from within

is necessary, but difficult to attain.

The inescapable past remains with us.

Its gentle influence makes life worth living.

How necessary, but difficult, to attain

a steady foothold for our stricken souls

and the gentleness that makes life worth living.

The faculties upon which we all depend

pace unsteadily through our stricken souls,

bringing disappointment and perhaps failure.
The faculties upon which we all depend
(Oh, that I had the heart to spare you grief!)
disappoint us in the end, and my failure
to teach you the secret of life and explain
my heart more fully may have caused you grief.
The grace of humility is a precious gift.
(Coulehan, 2009)

When an excessive dose of medication lethally harmed his simulated pediatric patient, a senior nursing student confronted unanticipated humility—and in that instant, uncovered the most meaningful form of learning. Humility enables individuals to acknowledge deficits in knowledge and skills, which fosters openness to feedback and other perspectives. Simulation is a teaching/learning technique that creates an environment that replicates a situation or experience to support learning and evaluation (Lioce et al., 2025). Simulation can incorporate lifelike manikins, live actors, or other modalities, and includes structured reflective debriefing discussions with feedback. The use of simulation to prepare nurses has increased significantly, with broad implications for students, educators, health care organizations, and patients (Edwards et al., 2023). Nonetheless, many aspects of student experiences with simulation remain underexplored. Within the context of simulation pedagogies, humility can be understood to intersect with essential clinical capacities for consciousness of one's limitations and openness to feedback and learning from others. This dissertation examines nursing students'

experiences with humility amid simulation-based learning and aims to cultivate a more refined understanding of the dynamics of humility within the simulated clinical environment.

Background

Humility and Lifelong Learning

I began my journey into professional nursing when I enrolled in a four-year baccalaureate nursing program at 18. I expected that I had much to learn about my intended profession, and knew that I would need to study the sciences, liberal arts, and humanities, and practice clinical nursing skills for hundreds of hours in hospitals and clinics. I looked forward to all of those experiences and was excited to wear my student nurse's uniform and carry a stethoscope for the first time. Of course, there would be challenges along the way—I knew I would need to work and study hard to meet the rigorous standards of the profession. I was correct in many of my expectations of my nursing education, with one glaring exception. As a novice, I believed my education would be essentially finite. It would begin and end with formal training, bookended by convocation and commencement, and punctuated with ceremonies and rites of passage. I was dreadfully wrong.

I had failed to realize that to choose a career in health care was to choose the path of a perpetual student. After graduation, I began work in the step-down area of a neonatal intensive care unit in a university medical center in New York. I had sailed through the interview. My college work-study grant in a similar unit afforded me opportunities to practice many of the skills I would need in my new specialty. My employer provided an

intensive eight-week orientation, and I was eager to get started. I anticipated a smooth transition to practice. Wrong again.

Humility and Accurate Self-Assessment

As a new graduate and orientee, I was challenged to perform even the most basic care activities. I struggled to set priorities and manage multiple patient assignments. My colleagues seemed to practice at warp speed, whirring around me while I lumbered through the basics—vital signs and bottle feeding. Although other nurses and the unit's nurse educator were all supportive, pride often precluded help. The experience exhausted and demoralized me. Without an accurate assessment of my clinical strengths and limitations, and unforgiving expectations of myself as a new nurse, I felt unmoored. Flailing, I transitioned from an orientee to a staff nurse, changed shifts, changed hospitals, and persevered, all the while questioning my fitness for my chosen profession.

Humility and Help-Seeking

The most personal impetus for this research study dates back decades. At the time of my second pregnancy, I had been practicing as a neonatal intensive care nurse for nearly a decade. I had worked in leading medical centers and had cared for the sickest newborns and their families. In my professional clinical practice, I have cared for fragile newborn infants with severe cardiac defects, rare congenital anomalies, and extremely low birth weights. I was trained as a specialist in extracorporeal membrane oxygenation, or heart-lung bypass, for newborns with critical lung conditions.

When my second pregnancy became complicated by placental failure that caused our baby's slowed growth, I consulted with my provider, and we agreed that I should deliver early by elective cesarean section. Molly weighed three pounds, seven ounces,

and was a mere 15 inches long. Tiny for her gestational age, at just over 34 weeks of gestation, she emerged with a shock of blonde hair and a lusty cry. Her perfectly formed, although diminutive, body was wrapped in translucent, ruddy skin. I remember the neonatologist assured us, “She will be fine,” before we packed her into a tiny car seat and brought our second daughter home at barely four pounds, only a few weeks later.

Given my professional nursing experience and as a second-time parent (we were already parents to a healthy toddler), I was ashamed to admit that I felt less confident about bringing Molly home. A few weeks later, Molly exhibited poor feeding, irritability, and even more concerning physical signs. These included a rapidly growing head circumference and a bulging anterior fontanel (the soft spot at the top of an infant’s head where the skull bones eventually fuse together). We rushed Molly to our pediatrician. A battery of tests at the hospital that afternoon proved inconclusive, and we took Molly home and began a long process of diagnostic inquiry with a battery of pediatric neurologists and neurosurgeons.

Despite multiple physical exams, diagnostic tests, and consultations with specialists, there was no consensus about a plan of care for Molly. I left every neurological consultation bewildered and embarrassed to ask for more clarity. During a follow-up visit with one neurologist, I confided that I felt overwhelmed by concern for our daughter. I was alarmed by the bulging, tortuous vessels that crisscrossed over her taut, translucent scalp. I asked the neurologist to explain his evaluation of Molly that day in plain language. His dismissive response changed my views about what constitutes high-quality health care. The physician responded that he made it a rule never to “talk down” to his patients, and that we should “invest in bonnets.” We never returned.

Humility and Centering the Patient

My request for a second opinion brought us into the singularly compassionate care of Dr. Arnold P. Gold, a widely recognized physician advocate for humanism in medicine who worked at the University Medical Center. Dr. Gold spent nearly three hours interviewing us and examining Molly. Afterward, he reviewed her diagnostic reports with us, drew some diagrams of cranial anatomy to describe some possible diagnoses, and explained that while he did not know what was causing Molly's difficulties, he would present her case at grand rounds to seek the input of other members of the medical team and confer with his colleagues in pediatric neurology. Further, he referred us to a neurosurgeon who had more experience with similar cases. Days later, we had a working diagnosis and a solid plan of care for our baby. Molly remained in Dr. Gold's care for 18 years. On every visit, he spent more than two hours with us, completed a full examination, and was always intentional in asking for updates about the whole family. How was everyone doing? How did we think Molly was progressing? What was new at home, at work, and in our extended family and community? He advised us about Molly's education; advocated for early intervention; and recommended that Molly receive occupational, speech, and physical therapy throughout primary school.

Throughout our time with him, Dr. Gold inspired our confidence, not just because of his professional reputation for excellence and expertise as a pediatric neurologist, but because he demonstrated clinical humility. He centered his care on Molly and our family. He acknowledged and embraced his limitations as a clinician, he sought the help of others when needed, and he viewed us as part of the health care team.

Gap in Research

As an area of interdisciplinary study, the medical and health humanities draws upon knowledge from the health care disciplines and the humanities to explore and achieve a deeper understanding of subjective human experiences of health, illness, and health care. Extant research on health care simulation, a pedagogy that integrates guided reflective practice, has largely addressed its impact on learner self-confidence, technical skills, communication, and teamwork, leaving humanistic capacities, such as self-awareness and humility, neglected. Consequently, there is a deficient understanding of how nursing students perceive and experience humility in the context of simulation-based learning. To address this gap, my research views health care simulation through a medical and health humanities lens to query student nurses' experiences with humility, a caring competency and a professional ethical value.

Conceptual Foundations

Humility is well aligned with the concerns of the medical and health humanities. Medical humanities scholars have, for more than a century, extolled the value of humility in preparing clinicians for practice. William Osler (1905), an early medical humanist and medical historian, wrote, "The hardest conviction to get into the mind of a beginner is that the education upon which he is engaged is not a college course, not a medical course, but a life course, for which the work of a few years under teachers is but a preparation" (as cited in Craxì et al., 2017, p. 295). Osler understood that the medical humanities offer more than an adjuvant to traditional biomedical education. Rather, the applied medical humanities provide an avenue to develop essential skills for understanding, and tools for those who care for patients—effective listening, compassion, critical thinking, and

"interpersonal competence" (Craxì et al., 2017, p. 296). In short, he understood that the preparation of clinicians required an enlightenment of their hearts.

Within the medical health humanities, humility can be viewed as a virtue that recognizes human fallibility and the intrinsic uncertainties of biomedical knowledge. In a farewell address to medical students in 1905, Osler wrote, "Only steadfastness of purpose and humility enable the student to shift his position to meet the new conditions in which new truths are born, or old ones modified beyond recognition" (Osler, 2014, para. 2). From this perspective, humility may enhance self-regulation through self-awareness, perspective-taking, and an ongoing self-inerrogation of one's knowledge, skill, and position.

While physician education was the impetus for the formation of the medical humanities, the relevance of humanistic perspectives to nurses' training is central to the discipline (Dellasega et al., 2007). Florence Nightingale, known to many as the foundress of contemporary nursing, included humility among humanistic stances that are vital to nurses' education and practice. She exhorted nurses: "Let us never consider ourselves finished nurses…we must be learning all of our lives" (Nightingale, 1992, p. 17). Nightingale's statement reflects her advocacy for nurses to engage in ongoing training and lifelong learning to improve patient care. Nightingale (1992) also emphasized a humble stance for nurses and others who interact with patients:

> No mockery in the world is so hollow as the advice showered upon the sick. It is of no use for the sick to say anything, for what the adviser wants is, not to know the truth about the state of the patient, but to turn whatever the sick may say to the

> support of his own argument, set forth, it must be repeated, without any inquiry whatever into the patient's real condition. (p. 57)

Clearly, Nightingale understood that nurses would need to think self-critically and act with humility. Humanistic perspectives support nurses to resist reductionist mindsets and to remain focused on the critical importance of human values and experience.

Tools for meaning-making employed in the medical and health humanities align well with those employed in health care simulation. For example, narrative medicine and reflective writing enable learners and clinicians to decode their own emotions, thinking, and actions. Health care simulation also invites meaning-making through reflection in post-simulation debriefing discussion that prompts learners to ask: "What was I thinking?," "What did I miss?," and "What were my assumptions?"

Significance/Rationale

Health care is a human endeavor practiced by fallible human beings. Improved insight into students' perceptions of humility in the context of simulation-based learning is essential to fostering practices that equip students with the self-objectivity needed to meet the demands of a complex, dynamic clinical practice environment. It is important to identify how baccalaureate nursing students experience humility amid clinical simulations, and how they believe these experiences might influence their future professional practice. I hope that an improved understanding of nursing students' experiences with humility in high-fidelity simulations will lead to more effective simulation practices. These practices should equip learners to cultivate self-awareness, accurately assess their knowledge and skills, safely navigate uncertainty, and normalize help-seeking.

An exploration of students' experiences with humility in health care simulation challenges the notion that health care simulation is only a tool to rehearse technical skills and procedures, when training with live patients is not safe or practical. Shining a medical humanities light onto health care simulation reimagines simulation pedagogy as a potentially narrative space with the potential to illuminate human aspects of caregiving and care-receiving.

Research Aims and Objectives

Research Aim

This research aims to establish the value of students' experiences with humility in simulation-based learning.

Research Objectives

Clarify the ways in which baccalaureate nursing students define humility.

Illustrate students' experiences with humility within the context of simulated clinical practice.

Contrast students' experiences with humility in clinical agencies with those experienced during simulation.

Differentiate the value of each of the five phases of simulation-based learning to students' clinical humility.

Summarize students' perceptions of the value of clinical humility to compassionate care.

Highlight students' perceptions of the relevance of clinical humility to professional identity.

Propose novel approaches to simulation and debriefing to support and cultivate clinical humility among nursing students.

Research Questions

This research aims to answer the following questions:

Research Question 1

How do baccalaureate nursing students who participate in clinical simulations perceive and experience humility?

Research Question 2

What specific aspects of simulation design and implementation can contribute to the development of clinical humility among baccalaureate nursing students?

Research Question 3

What insights does participation in a clinical simulation provide for baccalaureate nursing students about the relevance of humility in their professional development and/or professional identity?

Overview of Methodology

This research applied a general qualitative study design with an inductive thematic analysis of transcripts from semi-structured interviews with 19 baccalaureate nursing students who participated in high-fidelity simulation in a pediatric clinical course.

Structure and Organization

This dissertation comprises five chapters, including this introductory Chapter 1. Chapter 2 presents a comprehensive review of the literature to support this research and highlights gaps in research that contributed to the selection of a qualitative methodology. Chapter 3 details the methods applied to collect, code, and analyze the interview data.

Chapter 4 begins with a review of descriptive statistics for demographic survey data, followed by a discussion of emergent themes from my analysis of the interview transcripts. In Chapter 5, I will render and critically discuss the study's findings for each of the research questions and describe recommendations for future research.

Conclusion

Conventional norms in health care education may cause learners and educators to confound confidence with competence, and to disincline admissions of uncertainty, doubt, or even error. Conceivably, a stance that promotes the value of humility in health care simulation may disrupt these norms and deconstruct hierarchies that can undermine psychological safety, inhibit professional development, and obstruct collaboration. Nursing and health professions education must answer the call to prepare learners using methods that attend equally to their competence and character, so that clinicians are imbued with a moral imagination and are prepared to be reflective and open to uncertainty.

Chapter 2

HUMILITY IN NURSING WITHIN THE CONTEXT OF SIMULATION-BASED LEARNING: A REVIEW OF LITERATURE

Statement of the Problem

Humility has long been a focus of discourse and study in the disciplines of philosophy, psychology, and theology as scholars in those fields have wrestled with important existential and practical questions in those fields. The topic of humility has begun to gain attention in the health care disciplines, and there is a growing body of literature on this topic. Complexities and uncertainties generated by the post-COVID sociopolitical landscape, an aging nurse workforce, and the rapid development and introduction of new technologies have made uncertainty a certitude for health care professionals (Perryman, 2023). The phenomenon of clinical humility has been used to describe the capacity of clinicians to recognize and acknowledge their own limitations (Lim, 2017). Research has suggested that humility permits nurses to be attentive and value what others—team members and patients—offer (Lim, 2017). Humility underpins vital communication skills, such as the capacity to listen to the patient and the viewpoints of others (Lim, 2017). Openness to new information, the capacity to admit errors and apologize, and the ability to hear and accept constructive criticisms—all traits that are essential to ethical, person-centered care—require humility (Lim, 2017).

Across the social and health care disciplines, researchers have begun to study humility. Many have employed quantitative approaches or created instruments to measure clinicians' self-perceived humility, cultural humility, and perceptions of

humility in others, or to assess patients' perceptions of humility in their providers (Foronda et al., 2020; Ruberton et al., 2016). Others have employed qualitative or mixed methods approaches to look specifically at clinicians' experiences with humility within the context of practice competencies such as collaboration or leadership (Michalec, Cuddy, et al., 2024; Sasagawa & Amieux, 2019; Wadhwa & Mahant, 2022). Aside from more narrowly focused inquiries centered on culture, most discussions related to humility within health professions education have been theoretical discussions, editorials, and personal reflections, emphasizing its utility in professional and personal development (Michalek, Xyrichis, & Arenson, 2024; Zinan, 2021). Yet, a review of the literature, as discussed in this chapter, reveals that nursing education has failed to focus on humility as an important professional value and a key competency in preparing nursing students for practice. Moreover, the voices of nursing students are noticeably absent from current humility literature.

Simulation—a teaching/learning technique that immerses students in lifelike settings that imitate practice environments—has emerged as an imperative for clinical education within the health professions. A study conducted by the National Council for State Boards of Nursing asserts that up to 50% of clinical learning may be delivered in the clinical simulation laboratory (Hayden et al., 2014). Simulation-based learning experiences (SBLEs) are intended to confront learners with low-frequency, high-risk care experiences that can enhance students' clinical competencies in a controlled, psychologically safe educational setting. Given the prevalence of simulation in health care professions education, and the emerging value of humility as a trait to support

professional competencies, there is a need to explore simulation as a tool to foster clinical and intellectual humility among nursing students.

This dissertation will center on the experiences of baccalaureate nursing students with humility in the simulated learning environment. The research aims to assess the nature of clinical humility and how it manifests in the context of the simulated clinical learning environment.

Purpose and Scope

As an interdisciplinary field, the medical and health humanities seeks to enhance care quality by illuminating and improving our understanding of human experiences of health, illness, and care. Across disciplines, humility has gained increasing relevance for its potential contributions to human endeavors, and within health care, research suggests that humility underlies essential competencies for effective communication and teamwork. Grounded on experiential learning theory, SBLEs have become a gold standard for clinical education. Given its focus on the study of individuals' social realities to better comprehend their attitudes, perceptions, beliefs, and motivation, qualitative research represents a useful tool to better understand the unique human perspectives that can inform both the medical and health humanities and simulation education.

The purpose of this qualitative study is to explore the experiences of baccalaureate nursing students with humility during simulation-based learning activities. By interviewing senior baccalaureate nursing students who are participating in a high-fidelity simulation as part of their pediatric clinical rotation, I will describe nursing students' experiences with clinical humility in SBLEs. The results of this study may better equip nurse educators to understand how their students experience humility as

participants in SBLEs. This, in turn, may help health care educators and simulation facilitators to better design learning experiences to foster clinical humility. The question "What is the lived experience of nursing students with clinical humility in simulation-based learning?" is the focus of this inquiry.

Conceptualizing Humility

Contours of Humility: Definitions, Dimensions

Humility Defined

Humility presents an elusive construct for research and scholarship, as a variety of definitions exist. Many relate humility to lowliness. For example, some sources define humility as having low self-interest, while others equate humility with being humble (Worthington, 2017). Humbleness is often understood as an inclination toward self-abasement, an absence of confidence, a state of unworthiness, penitence or sinfulness, insignificance, and poor self-regard (Tangney, 2000). These less-than-desirable constructions of humility may be linked to theology and religious teachings, which may explain in part why humility has only recently begun to gain attention as a personal or professional strength, and as a topic for research (Hess & Ludwig, 2017).

Alternative constructs of humility strike a more positive tone. For instance, more recently, humility has been defined as an inclination toward accurate self-assessment (Hess & Ludwig, 2017; Teo et al., 2022). In their book *Humility Is the New Smart: Rethinking Human Excellence in the Smart Machine Age*, Hess and Ludwig (2017) proposed that humility is an open-minded, self-accurate mindset about the self that is outwardly focused and supports skill sets that are crucial to human flourishing in the age of smart machines and artificial intelligence. Humility, according to the authors, may also

be a much-needed antidote to rising rates of ego-defensiveness and self-serving biases, which are after-effects of society's hyper fixation on promoting self-esteem. This may fuel self-enhancement biases that interfere with our ability to recognize our failures and to recognize and embrace opportunities for growth (Hess & Ludwig, 2017).

Theoretical Perspectives on Humility

Theorists have expanded on conceptualizations of humility across a variety of fields. These address specific contexts, such as health care and leadership. For example, contemporary scholars have proposed models for humility within the context of caring. Nora Zinan's (2021) humility in health care model identifies six pillars for humility in health care that can be operationalized at all levels of practice. Zinan posited that the structures of humility include self-reflection, questioning, active listening, teachability, praise of others, and service. Several studies have called attention to the role of humility in fostering essential skills for practice, such as problem-solving, collaboration, and team building. The current body of humility scholarship spans multiple disciplines and comprises qualitative and quantitative research that strives to illuminate the multifaceted role of humility. To facilitate synthesis, this review will address theories of humility according to four central themes: humble leadership, cultural humility, intellectual

Humble Leadership. Leader humility has become a valued topic for research across disciplines (Owens & Hekman, 2012). A search was conducted in the Drew University Library online database between December 2024 and April 2025. The initial query sought full-text sources in academic journals and included the following terms: "leader," "humble," and "humility," which yielded 4,193 articles. Given the vast return of available resources on leader humility, the search was narrowed to include more recent

scholarship from within the past 5 years, which produced 1,825 results. When the terms "qualitative" and "phenomenological" were added to the title field, the search yielded 668 articles. A backward citation search method was also incorporated to locate earlier relevant scholarship. While a comprehensive focus on leader humility exceeds the scope of this review, an overview of recent scholarship on humble leadership follows.

Scholars in health, business, and psychology have explored the consequences of humble leadership. Humble leadership may positively influence key traits for effective leadership, including creativity, innovation, longevity, and problem-solving. In a meta-analysis that sought to affirm workplace outcomes of humble leadership, Luo et al. (2022) reviewed 53 studies and concluded that leader humility may positively impact individual and organizational outcomes, with positive correlations to workplace commitment, trust, engagement, job satisfaction, empowerment, creativity, and task performance.

Several studies have explored the perceived manifestations of humility in leadership. Subordinates and leaders consistently associate having an accurate perception of oneself, acknowledging one's limits, calling attention to the strengths of others, and modeling a learning orientation or teachability as humility behaviors (Chintakananda et al., 2023; Hu et al., 2023; Owens & Hekman, 2012). To solidify and expand upon the work of earlier research, Chintakananda et al. (2023) surveyed developed two scales for leader expressed humility (LEH). The LEH Scale and the Brief LEH Scale aim to identify behaviors within nine dimensions associated with leader humility, including accurate self-view, recognizing others' strengths and achievements, modesty, setting a

humble example, team orientation, empathy, respect for others, mentorship, and teachability (Chintakananda et al., 2023).

At least one study has qualified the impacts of leader humility on follower career outcomes to acknowledge the effects of leader humility with leader narcissism on followers' work behaviors and project outcomes (Cavazotte et al., 2023). Scholarship has also begun to consider antecedents to leader humility to include other factors, such as perceived psychological closeness with team members (Liborius et al., 2025). However, as a construct, leader humility challenges researchers, as it is not easily isolated from other related theories of leadership, such as servant leadership and transformational leadership (Luo et al., 2022).

Within health care contexts, intellectual humility among leaders may foster improved collaboration, enhance inclusivity and belonging among team members, protect vulnerable and marginalized groups, and improve communication between clinicians and their patients (Krumrei-Mancuso & Begin, 2022). However, researchers surveying nurses could identify no correlation between leader humility and nurses' psychological safety (Mrayyan & Al-Rjoub, 2024). Research within the business sector suggests that leader humility correlates conditionally with follower job satisfaction, positive follower career trajectories, improved perceived leader competence, and proactive career behaviors, depending on factors such as follower narcissism and workplace power gradients (Zhong et al., 2024).

Cultural Humility. Research on cultural humility, a humility subdomain, has examined its impact on cross-cultural relationships. Physicians Melanie Tervalon and Jann Murray-Garcia proposed cultural humility as a means to prepare medical students to

effectively manage the care of increasingly multicultural populations within the United States (Tervalon & Murray-García, 1998). Cultural humility aims to build and repair trusting relationships in a variety of settings through continuous self-reflection; self-critique; and a lifelong orientation toward discovering others' customs, values, and perspectives (Foronda et al., 2015; Yeager & Bauer-Wu, 2013).

In their landmark paper, Tervalon and Murray-Garcia (1998) posited that a more self-reflective, process-oriented approach was needed as an alternative to cultural competence as a desired physician training outcome. Cultural humility differs from cultural competence, in that the former seeks not only to help providers acknowledge and correct biases, but also to rectify consequent power imbalances to potentiate provider-patient advocacy. Unlike cultural competence, cultural humility is conceptualized as a dynamic rather than a fixed state, that requires a commitment to lifelong self-reflection and learning (Tervalon & Murray-García, 1998). Tervalon and Murray-Garcia asserted that key components of cultural humility are veracity, self-awareness, egolessness, self-reflection, supportive interactions, and critique. While cultural humility was first conceptualized to deconstruct and prevent harmful impacts of bias and positionality in health care settings, there has been growth in scholarship to establish its applicability outside of the health professions (Visintin et al., 2024).

A search was conducted in the Drew University Library online databases including CINAHL, MEDLINE, Academic Search Premier, and Google Scholar between December 2024 and May 2025. The initial query sought full-text, peer-reviewed sources in academic journals and included the keywords, "humility" and "culture" with expanders for related terms, using Boolean operators and modifiers, which yielded 2,180 articles.

Results included an array of resources that focused on modesty rather than humility. Therefore, a second search used Boolean operators to exclude results with “modesty” in all fields. The revised search produced 214 full-text articles that spanned 1985 to 2025. Limiting a search for the same keys to the title fields further limited the results to 30 articles. A final search added “simulation” as a keyword, with the same limiters for full text, peer-reviewed articles, and Boolean operators and modifiers to locate the body of literature related to cultural humility and health care simulation. No date restrictions were applied. That search yielded only seven peer-reviewed articles. Citation searches within located articles added depth to this inquiry. A brief overview of relevant cultural humility scholarship follows based on the results of the latter two queries.

The scope of cultural humility literature is considerable, as it is relevant across multiple disciplines, but predominantly in clinical psychology, social work, and mental health (Chong et al., 2025; Galán et al., 2024), medicine, research, and nursing (Crath & Rangel, 2020; Garner et al., 2021; Nolan et al., 2021;Yeager & Bauer-Wu, 2013). Cultural humility scholarship takes both qualitative and quantitative approaches, and the antecedents and consequences of cultural humility are fairly well studied (Garner et al., 2021).

Subsequent foundational works on cultural humility have sought to clarify the concept. Yeager and Bauer-Wu (2013) expanded upon the work of Tervalon and Murray-García (1998) with a call to incorporate the concept into nursing research. The authors cited the “practical relevance” of operationalized cultural humility to human subjects research, given its capacity to help researchers build awareness of their values, assumptions, and biases (Yeager & Bauer-Wu, 2013, p. 2). In 2015, Foronda et al.

published a concept analysis for cultural humility. Guided by Rodgers and Knafl's method, the authors examined 62 articles published between 2009 and 2014, and identified attributes of "openness, self-awareness, egolessness, supportive interactions, and self-reflection and critique" (Foronda et al., 2015, p. 211). Foronda et al. (2015) described cultural humility as a lifelong process that could be applied to multiple contexts from individuals with racial, ethnic, or sexual preference differences, to differences in social status and interprofessional roles, to health care provider–patient relationships.

Recently, scholars have queried the value of cultural humility instruction in a variety of settings and disciplines. Several investigations have centered on the effects of cultural humility training on deconstructing biases and cultural responsiveness self-efficacy. Visintin et al. (2024) utilized the "imagined intergroup contact technique" to simulate an encounter with an outgroup member to test the influence of cultural humility training on reducing the effects of bias (p. 3). The authors concluded that the use of a culturally humble imagined contact reduced prejudice, decreased intergroup contact anxiety, and improved future contact intentions (p. 3). Chong et al. (2025) examined the impact of cultural humility, sociocultural awareness, and cultural concealment on 91 counseling trainees' self-efficacy in managing conflicts with multicultural clients. The researchers concluded their data provided supportive evidence for the positive contributions of cultural humility modeling to group supervision (Chong et al., 2025). Salazar Preciado et al. (2025) performed a case study analysis to explore the efficacy of varied modalities for cultural humility training in pharmacy education, to conclude that in-person, online, and hybrid approaches can effectively support interprofessional education (IPE; Salazar Preciado et al., 2025).

Additional studies have examined the quality of cultural humility curricula in health care training programs. In a multistate study that employed anonymous online surveys of 300 graduate students in doctoral programs for clinical psychology, Galán et al. (2024) sought to evaluate a conceptual model for cultural humility for trainees who practiced with patients from marginalized groups. The study findings identified significant gaps between the need for instruction on cultural humility practices and what the participants' curriculum and programs offered (Galán et al., 2024). One notable omission the authors identified was a discussion of the trainees' own cultural identity during training vs. attention to their clients' cultural identity (Galán et al., 2024). Among scholars, there is wide agreement that ongoing self-examination is critical for the effective implementation of cultural humility processes (Foronda et al., 2015; Tervalon & Murray-García, 1998).

Intellectual Humility. Conventionally, psychologists have excluded from studies characteristics that might be considered virtuous, possibly to avoid the appearance of taking a moral stance on attitudes and behavior (Leary, 2018). In the past two decades, scholars have increasingly turned their attention to positive behaviors as well as undesirable ones (Leary, 2018). The growing body of research on intellectual humility reflects this approach.

Intellectual humility is a complex construct with significant implications for individual and collective well-being (Leary, 2018). Church and Barrett (2017) described the philosophy of intellectual humility as a "wild frontier" (p. 70). The predominant view of intellectual humility describes it as an openness to revising and fairly renegotiating one's views (Worthington, 2017). To overcome the lack of broad consensus on a

definition of intellectual humility, Church and Barrett (2017) proposed a doxastic account of intellectual humility, defined as an intellectual mean between diffidence and arrogance, in which an individual assigns appropriate value to their beliefs and intellect.

A search was conducted in the Drew University Library online databases including CINAHL, MEDLINE, Academic Search Premier, and Google Scholar between December 2024 and May 2025. The initial query sought full-text, peer-reviewed sources in academic journals and included the following keywords: “intellectual,” “humility,” and “health” within all search fields, with Boolean operators and modifiers. No time limiters were applied. The search included expanders for related terms, which yielded 45,657 articles. To narrow the search to more relevant scholarship, a second search was undertaken for the same keywords within the title fields. The revised search produced 25 full-text articles that spanned 2018 to 2024. Again, when “simulation” is introduced to expand or narrow the keyword search in both the title and all text fields, the query fails to yield resources. Citation searches added depth to this inquiry. A summary of intellectual humility scholarship follows.

The search results revealed three main categories of literature. The first group sought to define or create models for intellectual humility or related constructs. The second endeavored to understand antecedents or barriers to intellectual humility in varied contexts (leadership, among patients, and professionals). The third category of scholarship explored the consequences of intellectual humility.

Scholars agree on key features of intellectual humility. Many take a psychological perspective on intellectual humility and contrast it with general humility, emphasizing its connection to individuals’ belief systems (Leary, 2018; Schei et al., 2018; Schwab &

Silva, 2023). Authors have acknowledged that intellectual humility may be both a state and a trait (Porter, Baldwin, et al., 2022). At its core, intellectual humility requires a belief that one's views and thinking are fallible. Johnson (2022) took an editorial position to expand on and refine intellectual humility to include not only a belief in the fallibility of one's thinking, but also an acknowledgement of the limits of expertise and evidence. Hoyle et al. (2016) proposed a distinction between general intellectual humility and specific intellectual humility, in which one possesses an intellectually humble attitude toward certain specific beliefs.

Some qualitative scholarship has explored the contingencies for intellectual humility, while much of the scholarship for intellectual humility falls within the categories of theoretical and conceptual analysis, reviews, and editorials. In many of these works, authors have explored antecedents and barriers to intellectual humility. Leary (2018) proposed that intellectual humility has cognitive, motivational, emotional, and behavioral features. Intellectual humility can be linked with attention to evidence, intellectual curiosity, less emotional reactions to contradictions, and an active drive toward seeking out the views of others (Leary, 2018). Johnson (2022) proposed behaviors that can help to cultivate intellectual humility. These include embracing curiosity and taking a learning orientation, valuing listening, actively seeking oppositional viewpoints, critically analyzing the credibility of evidence and sources, and consistently considering alternatives. In a case study, Owens and Hekman (2012) interviewed 55 leaders from multiple disciplines to conclude that intellectual humility is underpinned by three core behaviors: acknowledging limits and mistakes, championing the strengths of others, and modeling teachability.

The literature surfaces positionality, occupational status, and group dynamics as potential barriers to intellectual humility (Michalec, Cuddy, et al., 2024; Porter, Baldwin, et al., 2022). In surveys of 305 physicians and nurses in the United States, Michalec, Cuddy, et al. (2024) explored the manifestations and perceptions of humility in clinical settings. The researchers identified status as an important influence on participants' perceptions of intellectual humility in health care settings. In a literature review of empirical approaches to intellectual humility, Porter, Baldwin, et al. (2022) identified that group dynamics, such as a desire for group cohesiveness, and certain environments place heavy emphasis on independence that can undercut intellectual humility. Conversely, an environment that stresses the interdependence of team members can foster intellectual humility (Porter, Baldwin, et al., 2022). An egalitarian decision-making structure may be an important tool for fostering intellectual humility among health care teams (Michalek, Xyrichis, & Arenson, 2024).

Scholars have explored the consequences of intellectual humility within health care and multidisciplinary contexts. In a review of empirical approaches to measuring humility, Porter, Baldwin, et al. (2022) asserted that intellectual humility may be associated with greater tolerance of uncertainty, cooperation, forgiveness, enhanced well-being, improved decision-making, and learning. Other research has highlighted psychological freedom, follower engagement, benefits to intrinsic motivation, and taking ownership of one's work as outcomes for leadership with intellectual humility (Owens & Hekman, 2012). However, perceptions of a leader's competence, sincerity, and appreciation of followers served as moderators of the efficacy of intellectual humility (Owens & Hekman, 2012).

Scholars agree that more research is needed to define and identify the antecedents, liabilities, and consequences of intellectual humility. Intellectual humility may offer important opportunities for improving relationships, individual and professional well-being, and team collaboration (Leary, 2018). As with other humility constructs, challenges to research include conceptual ambiguity, the perils of self-report and confirmation bias, and the relative dearth of tools for measurement (Leary, 2018). Nonetheless, a movement away from understanding medical knowledge as declarative, disembodied objective truths may lay a foundation for health care models that value and integrate intellectual humility and realize its benefits for clinicians, patients, and populations.

Clinical and Professional Humility. Clinical humility is a subdomain of humility that refers to a humble self-view within the context of health care settings and interprofessional and clinical-patient interactions. The construct has recently gained attention in health care literature across disciplines, especially within medicine (Bhandari & Abu Sayf, 2013; Jain, 2024; Lim, 2017). How health care professionals respond to complexities and uncertainties in clinical settings has captured the attention of health care leaders and consumers, especially since the COVID crisis (Jain, 2024).

A search was conducted in the Drew University Library online databases including CINAHL, MEDLINE, Academic Search Premier, and Google Scholar between December 2024 and May 2025. The initial query sought full-text, peer-reviewed sources in academic journals and included the subject term “clinical humility” with expanders for related terms, using Boolean operators and modifiers, which yielded 7 articles including reviews and commentary. The search for “clinical humility” in peer-reviewed, scholarly

journals with full text was expanded to find related words, to yield 20 resources which included reviews, commentary, and conceptual explorations, with one anecdotal case report and one qualitative research study. The search yielded no empirical or qualitative research on the topic of clinical humility.

Although research on the topic is scant and varied in focus, scholars exploring clinical humility make compelling arguments for its relevance. Bhandari and Abu Sayf (2013) explored the compelling case of a female patient who presented to the hospital with chest and back pain. Her case was complicated by a history of allergies to iodinated dyes used in imaging studies, and her doctors misdiagnosed her with a pulmonary embolism (blood clot situated in the pulmonary system). After the standard anticoagulation therapy was begun, the patient worsened and was prophylactically prepared for contrast imaging. The imaging study revealed a ruptured aortic aneurysm and a consequential collection of blood in the chest which had compressed and occluded the right main pulmonary artery. The effects of the clot had mimicked a pulmonary embolism in the earlier imaging and laboratory studies, and the operative repair of the patient's aneurysm failed to save her. The authors' error was caused by a willingness to make a presumptive diagnosis based on limited information, and the anticoagulant treatment they prescribed likely hastened the patient's demise (Bhandari & Abu Sayf, 2013).

In clinical settings, diagnostic foreclosure may reflect deficits in characteristics that scholars argue comprise humility in health care and other contexts: openness to the viewpoints of others, acceptance of the fallibility of one's views (Schei et al., 2018; Schwab & Silva, 2023; Senger & Huynh, 2020), and awareness of limitations in the

quality of evidence supporting one's positions (Hoyle et al., 2016). In practice, the absence of these qualities may rupture the clinician-patient relationship; impede safety; or, as in the case of the patient described by Bhandari and Abu Sayf (2013), cause serious, irrevocable harm.

In her commentary in the field of psychoanalysis, Orange (2017) drew on fallibilism, and argued for more ethical practice grounded in the feminine and maternal. She posited that vulnerability, which requires clinical presence with the patient's suffering, is requisite for ethical responsiveness in psychoanalysis:

> We are not the strong and capable Superwomen and Supermen, rushing in to solve all problems. Instead, we hold in our arms those who grieve unbearable losses, just as the emergency workers do in the French Alps after the airplane destruction. Or we stand as silent and reverent witnesses to their mourning. Only acceptance of our shared human vulnerability really helps. (Orange, 2017, p. 426)

For Orange, psychoanalytic clinical humility begins with identifying one's biases and limitations and adopting a posture of acceptance and honesty regarding flawed thinking and consequent failures. Holding one's theories lightly can open pathways to healing and authentic connection.

In an adjacent context, Tippins and Wittmann (2005) contemplated clinical humility within the context of psychiatric evaluations employed in legal determinations of child custody in family courts. The authors critically examined psychological examinations performed by mental health professionals to make custody recommendations. The authors proposed a four-step model to evaluate clinical inferences, and caution their use, arguing that often values-laden prescriptive custodial advice is not

empirically sound, and is therefore unethical (Tippins & Wittmann, 2005). Gould and Martindale (2005) opined on Tippins and Wittmann's position on the evidentiary relevance and recommendations for clinical humility among mental health professionals called as experts in child custody actions. They qualified their recommendations, emphasizing the need for scientific rigor and transparency in expert testimony considering the unreliability of extant assessment tools, limitations on parenting research, and the potential for consumer-driven bias in mental health (Gould & Martindale, 2005). Subsequent articles have responded to Tippins and Wittmann's advocacy for the stratification of the evidentiary value of expert testimony in custody disputes and called for clinical humility among experts (Grisso, 2005). In each case, the authors stress the importance of mental health experts who serve as custody evaluators acknowledging the finite nature of their knowledge.

Other scholars have explored the perceptions and experiences of clinicians with humility in health care environments more broadly (Michalec, Cuddy, et al., 2024; Wadhwa & Mahant, 2022). Wadhwa and Mahant (2022) sought to apprehend a deeper understanding of humility within the context of clinical practice. Using transcripts from an earlier study, the researchers analyzed interviews with 13 peer-recognized excellent physicians who worked at the same academic center. The researchers applied a constant comparative approach to locate and compare humility-sensitive codes, which were grouped to form broader themes that captured the role of humility in clinical medicine (Wadhwa & Mahant, 2022). Two overarching categories emerged: inward-oriented and outward-oriented perspectives on humility. Wadhwa and Mahant identified an inward orientation to humility that related to clinician self-awareness and self-confidence, and

awareness of the finite evolving of medical knowledge. The researchers noted an outward, social aspect of humility that included valuing the contributions of others, receptivity to views of patients and colleagues, and valuing patients as a source of knowledge and learning (Wadhwa & Mahant, 2022). The authors recommended, based on their research and given its potential implications for improving learning and patient care, humility should be integrated into medical education (Wadhwa & Mahant, 2022).

In their investigation of perceptions and experiences of clinicians with humility, Michalec, Cuddy, et al. (2024) undertook a survey to explore experiences with and perceptions of humility among 305 U.S. physician and nurse participants. Taking quantitative and qualitative perspectives, the researchers' survey utilized closed and open-ended questions to examine the perceptions of participants (Michalec, Cuddy, et al., 2024). The Honesty-Humility Subscale of the HEXACO-PI-R was used to measure participants' humility levels, and participants also rated the humility of different professions within health care (Michalec, Cuddy, et al., 2024). Inductive thematic analysis underscored emergent themes in open-ended questions, and deductive coding was applied to humility-oriented responses (Michalec, Cuddy, et al., 2024). Noting important implications for occupational status, the authors concluded that humility can foster improved relationships between patients and clinicians, and that it can act as a leveler among interprofessional teams (Michalec, Cuddy, et al., 2024). Additionally, the authors identified an important role for humility in the creation and maintenance of a psychologically safe environment that can positively impact teamwork and collaboration (Michalec, Cuddy, et al., 2024).

While Wadhwa and Mahant's (2022) study and Michalec, Cuddy, et al.'s (2024) research underscore the value of humility for health care professionals, it is also evident that more research is needed to explore methods to teach and foster humility for health care professionals. Little is known about how humility may influence decision-making or how feedback is received. Although scant, clinical humility scholarship suggests it may positively contribute to important outcomes in health care: ethical practice, teamwork, collaboration, professional development, patient-centered care, and psychological safety.

Competing Conceptualizations of Humility. While this review suggests that a large body of humility research takes a positive view of the psychological constituents of humility—an accurate self-view, acceptance of one's fallibility, and openness to others' viewpoints—a comprehensive understanding of humility must acknowledge competing perspectives. Historically, conceptualizations of humility rooted in philosophy and theology defined humility not as a positive virtue, but as an absence of negative traits: pride, arrogance, hubris, and similar vices (Nadelhoffer & Wright, 2017).

Although most religions position humility as essential and central, often religious conceptualizations of humility subscribe to a transformative if self-abasing construction (Porter et al., 2017). In Judaism, humility is construed as opposing arrogance, but is tolerant of "healthy pride" in one's spiritual potential and growth (Porter et al., 2017, p. 53). In the Christian tradition, humility directly opposes pride, and, as such, is a gateway to spiritual and moral redemption (Nadelhoffer & Wright, 2017). St. Thomas Aquinas proclaimed that humility was not an expression of temperance but an expression of theological righteousness toward accepting one's subjectivity to God (Aquinas, 1265). In this conception, and in that of the New Testament, the self-effacing perspective on

humility which equates with lowliness and comparative insignificance to God's omnipotence and a rejection of sinful pride, presents an avenue toward salvation (Nadelhoffer & Wright, 2017). Buddhists include egoic conceit among 10 fetters that prevent one from achieving the highest levels of spiritual enlightenment (Porter et al., 2017). In the Islamic faith, the Qur'an takes a similar perspective on humility, as antithetical to arrogance, which is "humanity's deadliest flaw" (Porter et al., 2017, p. 57).

In psychology, philosophy, and theology, scholars agree that humility, whether a state, a trait, a disposition, a virtue, or a competency, can enhance personal, spiritual, and social growth and support well-being. It has relevance in multiple contexts: relationships, workplace, religion, and health care. However, the numerous extant conceptualizations of humility can present significant obstacles for researchers. These challenges may be most apparent in studies that aim to quantify humility.

Measuring Humility

Empirical research has largely overlooked humility, in part due to the lack of instruments for its measurement (Hill et al., 2017). Inherent in the concept of humility itself are barriers to our understanding. For example, if one equates humility with low self-focus, one is challenged to self-identify as having humility, and measures for self-assessment of humility may be inherently flawed. Humility is widely understood to describe one's estimation of one's position relative to others, yet there are challenges associated with measures that incorporate self-report. Consider the paradox within the statement "I am a humble person" (Wright et al., 2017). Additionally, devising an accurate measure of humility is complicated by the construct's multifaceted nature, as it may relate to an accurate self-view (Davis et al., 2011), other orientation (Davis et al.,

2011), attentiveness to or taking ownership of one's limitations (Hoyle et al., 2016), recognizing the strengths and contributions of others (Owens & Hekman, 2012), and openness to learning and feedback (Wright et al., 2017). Despite the implicit challenges of quantifying humility, researchers have worked to devise and validate reliable measurement tools.

A search was conducted in the Drew University Library online databases including CINAHL, MEDLINE, Academic Search Premier, and Google Scholar between December 2024 and May 2025. The initial query sought full-text, peer-reviewed scholarly sources in academic journals and included the following keywords: "humility" and "measurement" within all search fields, with Boolean operators and modifiers. No time limiters were applied to the initial search. The query included expanders for related terms, which yielded 3,960 articles. To narrow the search to more relevant scholarship, a second search was conducted for the same keywords within the title fields. The revised search produced 188 full-text articles that spanned 1966 to 2025. To further refine the references, the same search was conducted again with time limiters for the past 10 and 5 years, yielding 89 and 17 articles respectively. Citation searches and secondary sources added depth to this inquiry. A summary of current scholarship concerning measures for humility follows.

The development of measures of humility has accelerated recently. An exhaustive, comprehensive review of humility measures is outside the scope of this project. However, a discussion of the trends in humility measurement provides insight for its conceptualization. This section will present measures that address the domains and subdomains of humility, and some contexts in which humility measures are most

relevant. In their study, McElroy-Heltzel et al. (2018) conducted a systematic literature search, and evaluated 22 measures of humility for reliability and validity. The measures evaluated general humility surveys, humility subdomain surveys, indirect measures of humility, and measures of humility states, and categorized the measures into eight content domains (McElroy-Heltzel et al., 2018). The eight subdomains: Openness, Other-Orientedness, Interpersonal Modesty, Accurate Self-View, Admitting Mistakes, Global Humility, Spiritual Humility, and Regulating the Need for Status formed the basis for construct validity (McElroy-Heltzel et al., 2018). The review identified the Expressed Humility Scale, the Relational Humility Scale, and the Honesty-Humility Subscale of the HEXACO as comparatively stronger assessments of humility (McElroy-Heltzel et al., 2018).

Some instrument development has targeted general humility as a personality trait. According to Ashton and Lee (2008, as cited by Hill et al., 2017), the Honesty-Humility Subscale of the HEXACO Personality Inventory was one of the earliest instruments devised to measure dispositional humility. The 10-item Honesty-Humility Subscale interrogates four components: sincerity, fairness, greed-avoidance, and modesty, and integrates a 5-point self-rated Likert scale (Hill et al., 2017). Davis et al. (2011) developed a 16-item Relational Humility Scale, with three subscales: global humility, superiority, and accurate self-view. Others construe humility as epistemic and ethically linked. In their Dual Dimension Humility Scale, Wright et al. (2017) proposed a dual construct of general humility with two dimensions: attentiveness to others and low self-focus.

Other scholars have more narrowly focused on measuring humility in specific contexts. Among these, cultural humility measures predominate (Foronda et al., 2015; Whatley et al., 2023; Zhu et al., 2024). Foronda et al. (2015) proposed the Cultural Humility Scale for use in health care and education to enhance multicultural relationships, while Whatley et al. (2023) developed the Cultural Humility Self-Assessment Scale as a tool for researchers and educators to prepare students to work in diverse contexts and improved international education. Zhu et al. (2024) introduced the Cultural Humility Enactment Scale, which assesses teachability, superiority/disrespect, and relational engagement to better prepare counseling trainees to support multicultural clients.

Researchers' efforts to measure humility in an array of contexts beyond culture suggest it has relevance in specialized disciplines. Even in varied contexts, scholars attribute the same or similar constituent factors to the concept. Coppola et al. (2020) created and validated a musical humility scale. The 30-item Musical Humility Scale focused on five factors: purposeful musical engagement and collaboration, other orientation, lack of superiority, acknowledgment of shortcomings, and healthy pride/appropriate confidence (Coppola et al., 2020). Ou et al. (2024) developed and tested a tool that used behavioral measures to unobtrusively measure humility among corporate chief executive officers (CEOs). In a study of 197 firms and 275 CEOs between 2002 and 2015, the researchers found a lower incidence of corporate social irresponsibility and improved outcomes and performance among firms led by humble leaders (Ou et al., 2024). Hoyle et al. (2016) developed the Specific Intellectual Humility Scale (SIHS) to measure specific intellectual humility, which relates to one's ability to recognize the

fallibility of a discrete point of view within a given domain (politics, education, and religion). No measures for clinical humility were identified in the search.

Given its potential relevance in clinical contexts, continued research is needed to more clearly conceptualize clinical humility so that improved tools for measurement can be developed and operationalized. The development and validation of reliable measures to assess clinical humility may assist researchers in generating interventions to cultivate it, which may have important applications for practice in health care and health professions education (Naumova, 2023). Only with effective measurement tools for clinical humility can we objectively determine its consequences for professional practice.

Significance of Humility in Nursing and Health Care Disciplines

Nursing Characteristics and Behaviors Associated With Humility

At first blush, a discussion of the convergence of nursing and humility may conjure the profession's humble beginnings. Society once held little regard for nurses, who are now among the world's most trusted professionals (American Nurses Association [ANA], 2024). Caring for the sick was once a duty relegated to members of society who needed shelter or were consigned to serve the larger community, such as religious, deaconesses, penitents, and soldiers (Dillard-Wright, 2023; Masters, 2024). Victorian society considered the work of nurses so undesirable, especially by the affluent and educated, that Florence Nightingale's parents opposed her plans to train and work as a nurse (Dillard-Wright, 2023). Robb (1901) explained Victorian beliefs about the nursing profession:

> The hospitals stood for all that was bad; they were lazar-houses not only of physical horrors, but also of moral iniquity; the nursing was relegated to those

> among women who were not considered of sufficient respect to be entrusted with the most menial of domestic work, and whose moral turpitude was equaled only by their incompetence. (as cited in Dillard-Wright, 2023, p. 7)

Nightingale persisted and led the way to the creation of formal training for nurses, which was an important step toward earning recognition for the nurses as members of a distinct profession with a unique scope of practice and professional identity (Dillard-Wright, 2023).

Nursing Ethics

In its Code of Ethics, which sets forth non-negotiable standards for practice, the ANA asserts that humility underpins care by laying the foundation for the discipline's core values:

> Virtues in nursing and caring practices are learned, habituated attributes of moral character developed in the context of nursing practice, education, and identity formation. Virtues predispose persons to behave in ways that meet their moral obligations as understood by the moral community of nursing; these virtues grow with experience as the nurse moves from novice to expert practice. Virtuous nursing expresses core values, including compassion, caring, dignity, integrity, and respect. As a profession that serves the public, there are certain attributes of moral character nurses ought to possess. These include the application of knowledge and skill in pursuit of wisdom, humility, and moral fortitude. Additionally, virtues are necessary for the affirmation and promotion of the values of human dignity, well-being, health, and other ends that nursing seeks. (ANA, 2018, 6.1)

It is understood that humility in the context of professional nursing does not relate to status or meekness. Humility is instead understood as a desired virtue that need not be innate but may be instilled or imbued through training. The code asserts that nurses require and help to cultivate a moral milieu for care that itself relies on attributes such as humility (ANA, 2018, 6.1).

The inclusion of humility within the profession's Code of Ethics has, according to this review, and apart from cultural humility, failed to propel much contemporary scholarship within the nursing discipline. This may, in part, relate to discord between what Dillard-Wright (2023) has called the "Nursing Imaginary," the profession's version of its historical ontology, and its struggle for "professionalization and respectability" (p. 1). Nursing has labored to sanitize and elevate its image, and to maintain perceptual distance from its historical origins (Dillard-Wright, 2023). Nonetheless, this review has uncovered several desired nursing characteristics, attributes, and behaviors that are associated with humility.

Self-Awareness

Nurses must routinely engage in self-assessment and demonstrate self-awareness, which humility scholars frequently list among exemplars of humility (Chong et al., 2025; Kaplan et al., 2023; Nolan et al., 2021; Wright et al., 2017). In a meta-analysis, Nolan et al. (2021) proposed that self-awareness is a "cornerstone of patient-centered care" for nurses who practice cultural humility (p. 4). According to the ANA (2024a), competence requires knowledge of one's strengths and weaknesses, and nurses must frequently self-assess, seek feedback, and be open to ongoing learning.

Teamwork

Teamwork is essential for nurses working in increasingly specialized and complex health care environments. Scholars include humility as a contingency and a consequence of effective teamwork in health care settings (Michalec, Cuddy, et al., 2024; Naumova, 2023; Owens & Hekman, 2012). Michalek, Xyrichis, and Arenson (2024) introduced the concept of professional humility to advance interprofessionalism and deconstruct hierarchies that exclude team members and distance patients from shared decision-making.

Empathy and Centering the Patient

In his influential essay first published in 2010, Jack Coulehan wrote: "Humility in medicine manifests itself as unflinching self-awareness; empathic openness to others; and a keen appreciation of, and gratitude for, the privilege of caring for sick persons" (p. 201). Some scholars construe humility as a construct that is inclusive of other-orientedness, respect, and empathy (Davis et al., 2011). A review of professional nursing standards asserts that nursing shares a similar ethos of empathic patient-centeredness. Provision 2 of the Code of Ethics states "A nurse's primary commitment is to the recipient(s) of nursing care, whether an individual, family, group, community, or population" (ANA, 2018, Provision 2 section). Openness to the patient's perspective permits a more empathic connection and potentiates a compassionate response (Stone, 2017).

Humility in Action

Transparent Fallibility

The public trust, so critical to society's acceptance of and participation in health care, hinges on our ability to reliably and accurately represent and communicate what we know and what we do not know (Lumbreras et al., 2023). Arguably, an acknowledgement of the importance of humility in any scientific endeavor aimed at the production of knowledge and an improved understanding of human experiences would bolster its credibility (Lumbreras et al., 2023).

Contemporary scholarship urges that scientists can better serve the aims of science by integrating humility into scientific practices. Recent shifts in social, behavioral, and life sciences have led to calls for more transparency in processes that produce scientific knowledge. For example, a Mayo Clinic inquiry located more than 146 changes in practice between 2000 and 2010 (Lumbreras et al., 2023). "About face" upheavals in health care guidelines have created seismic shifts in safety recommendations for blood transfusions, pediatric nut allergy prevention, and hormone replacement therapy for perimenopausal women (Makary, 2024). To remain credible, health care professionals and scientists must aim for transparency about the boundaries and limits of our knowledge and our work.

Humility scholarship suggests that true clinician humility may require more than recognizing one's limits or the limits of one's discipline. Humility in health care requires us to openly confront our limitations. In health care settings, humility yields benefits when we "own our limits" by acting with transparency. Scholars within health care have acknowledged the importance of transparent fallibility. Schwab and Silva (2023)

proposed that enhanced intellectual humility among physical therapists may help to counter entrenched, medicalized views of disability that privilege ableist "functionality traps" and undermine agency (p. 4). The authors urged that owning one's limits regarding perspectives and practices may improve relationships between physical therapists and persons with disabilities (Schwab & Silva, 2023). In their qualitative study of physicians, Wadhwa and Mahant (2022) noted that humility is not only an approach but an activity with both internal and outward, social perspectives. According to their study, humble physicians openly seek the views of patients and colleagues as valuable sources of learning.

In a commentary on practices in public health, Naumova (2023) noted practical applications for humility that require transparency: engaging the community in public health initiatives, openly acknowledging limitations of research studies, insisting on accurate authorship designations, and revealing uncertainty regarding proposed models, opinions, and estimates. Owens and Hekman (2012) applied a case study approach to examine leader humility across disciplines to develop a model for humble leadership. The authors surmised three transparent behaviors comprised leader humility: acknowledging faults, spotlighting the strengths of followers, and modeling teachability (Owens & Hekman, 2012). Scholars have consistently noted that more research is needed to determine how humility can be cultivated and operationalized, especially in health professions education (Schwab & Silva, 2023; Wadhwa & Mahant, 2022).

Barriers to Humility

If humility can be generally understood to comprise an accurate self-view, then barriers to humility oppose an accurate estimation of self. Humility scholars have listed

multiple barriers to humility. Van Tongeren and Meyers (2017) cited self-serving biases among the first to obstruct accuracy in one's self-perception. Self-serving biases permit individuals to accept credit for their successes, which they attribute to their efforts and aptitudes, but deflect responsibility for failures onto misfortune or independent and insurmountable external influences (Van Tongeren & Myers, 2017).

Other barriers complicate our capacity to act with humility. The "better than average" effect enables individuals to see themselves more favorably (Van Tongeren & Myers, 2017, p. 152). For example, after college board exams, most students estimate themselves to have tested better than average, and their faculty estimate their teaching to be above average (Van Tongeren & Myers, 2017). Overconfidence and unrealistic, unfounded optimism represent two additional hurdles for humility. These are hard-wired, future-oriented biases that allow us to distort realistic time projections and overestimate our abilities (Van Tongeren & Myers, 2017). For example, unrealistic overconfidence might permit a doctoral candidate to predict that she might complete four chapters of her doctoral thesis within a few short weeks. Perhaps most potent of all barriers to humility is the "bias blind spot," which allows us to perceive ourselves as comparatively unbiased even when our biases are made apparent to us (Van Tongeren & Myers, 2017, p. 153).

These obstacles can obstruct humility for health care professionals, just as they do for others. Clinicians who aim to cultivate a culture of humility within care settings may face additional barriers, according to some scholars. Entrenched hierarchies, "turf wars" between professions or team members, and systemic barriers undermine interprofessional collaboration and professional humility (Michalek, Xyrichis, & Arenson, 2024, p. 589).

Humility in its multiple conceptualizations bears significance and value for key competencies for health professionals. Surveys of nurses, physicians, and clinicians from multiple disciplines have shown that humility is essential for effective patient-centered care and teamwork and should be taught in health professions training (Michalec, Cuddy, et al., 2024). Scholars have included these attributes as well among the components of various conceptualizations of humility (Michalek, Xyrichis, & Arenson, 2024; Senger & Huynh, 2020; Wadhwa & Mahant, 2022; Wrench et al., 2019). Yet, to date, and apart from conceptual explorations and commentary, this review shows that scholarship on humility in nursing and health care education is relatively scarce.

A Scarcity of Evidence: Humility in Simulation-Based Learning

While the conceptual explorations and commentaries provide some insights, there is little context for how humility manifests in the clinical milieu, and far less information about the contours of humility within clinical education or health care simulation. This review demonstrates that humility can take a variety of forms: cultural humility, narrative humility, humble leadership, intellectual humility, and clinical humility. Each has potential value and relevance for enhancing the human experiences of health and illness. The current body of humility scholarship suggests that humility in leadership, intellectual humility, cultural humility, and clinical humility can each benefit human experiences by enhancing communication, improving collaboration, reducing power imbalances, and strengthening trust.

Simulation, a teaching/learning technique that applies immersive practice in a highly realistic setting to prepare clinicians to refine their practice and enhance patient outcomes, has been heavily researched. The body of simulation scholarship suggests that

learners perceive several benefits to participating in health care simulation. However, this review located scant scholarship related to humility within the context of health care simulation. Within the limited body of simulation-humility scholarship, research was confined to cultural humility and medicine. Given that this review located literature that interprets humility as a means to positively impact the experience of caregiving and care receiving, and that simulation aims to cultivate skills to improve care, more research is needed to illuminate if and how humility manifests within simulation-based learning.

Medical and Health Humanities

The medical humanities, which aims to infuse medical education, scholarship, and practice with knowledge from the humanities, developed in response to the impacts of the Carnegie Foundation's Flexner Report (Klugman & Lamb, 2019, p. 1). In 1910, Abraham Flexner, a critic of American higher education, was hired by the American Medical Association's Council on Medical Education to study medical schools in the United States (President and Fellows of Harvard College, 2020). Flexner recommended comprehensive reforms and restructuring of medical education, to include strong preparation in the sciences, clinical education partnerships, coeducation, segregated practice for Black physicians, and the closure of schools that could not afford to make these changes (President and Fellows of Harvard College, 2020). In turn, premedical curricula began to focus almost exclusively on preparing students in the sciences.

By the mid-1920s, medical schools, historians, and Flexner himself voiced concern that medical students lacked preparation in the humanities. Beginning in the 1930s, several medical colleges responded with measures to fortify medical curricula with humanities education (Berry et al., 2017; Klugman & Lamb, 2019). The medical

humanities underwent exponential growth between 1967, when Pennsylvania State University College of Medicine created the first humanities department within a medical school, and 2011, when elective or required humanities education had infiltrated approximately 90% of curricula within American schools of medicine (Klugman & Lamb, 2019, p. 2).

While the medical humanities began as a reimagining of medical education, it has since evolved further to give rise to the medical health humanities, also known as the health humanities (Berry et al., 2017). The health humanities emerged in recognition of the many contexts in which people experience health and illness, but targets an audience beyond students in premedical and medical programs (Berry et al., 2017). In contrast to the medical humanities, the health humanities centers approaches from the humanities, fine arts, and social sciences to cultivate insights for professional health care providers, caregivers, patients, legislators, and all who encounter human suffering (Klugman, 2017). According to Klugman and Lamb (2019), four foci that distinguish the health humanities from the medical humanities are its concern with matters of social justice, its holistic perspective on health, its concern for sociocultural influences on the human condition, and its focus on applying humanities knowledge to critique and transform practice.

Medical and Health Humanities as a Framework for Understanding Humility

The medical and health humanities offer a natural framework within which to explore and situate humility. First, the study of humility is congruent with the primary concerns of the medical and health humanities, which are to promote empathic, prosocial, patient-centered perspectives among clinicians, lay caregivers, and stakeholders to advance quality in health care. Health humanities offer students and professionals

opportunities to engage with diverse perspectives on health, illness, and medicine (Berry et al., 2017, p. 354). Klugman and Lamb (2019) explained, “Health humanists do not force their visions on others, but engage with communities to identify concerns and empower them to enact change toward greater social justice” (p. 4). This aligns with the work of many humility scholars who assert that perspective-taking, a component of many forms of humility, can meaningfully improve human experiences in numerous contexts (Leary, 2018; Michalec, Cuddy, et al., 2024; Schwab & Silva, 2023; Wadhwa & Mahant, 2022).

While across disciplines, many scholars have examined humility within the contexts of leadership (Cavazotte et al., 2023; Chintakananda et al., 2023; Hu et al., 2023; Krumrei-Mancuso & Begin, 2022; Liborius et al., 2025; Mrayyan & Al-Rjoub, 2024; Owens & Hekman, 2012; Zhong et al., 2024), psychology and spirituality (Senger & Huynh, 2020; Wrench et al., 2019), and culture (Yeager & Bauer-Wu, 2013; Zhu et al., 2024), less is known about the ways humility is experienced during clinical encounters. The medical and health humanities seek to critically examine human experiences of health and illness to foster “empathic engagement” (Charon, 2001, p. 1898). Thus, the health humanities offer a consonant framework through which to examine the contours of clinical humility.

Foundational works within the medical and health humanities point to the discipline’s value of humility. Physician Rita Charon’s groundbreaking work in the field of narrative medicine examines patient and physician narratives as well as art that depicts their unique experiences. Narrative practice, the engagement with and analysis of patient

stories, aims to cultivate physicians' skills of observation and interpretation through engagement and self-reflection:

> Altruism, compassion, respectfulness, loyalty, humility, courage, and trustworthiness become etched into the physician's skeleton by the authentic care of the sick. Physicians absorb and display the inevitable results of being submerged in pain, unfairness, and suffering while being buoyed by the extraordinary courage, resourcefulness, faith, and love they behold every day in practice. Through authentic engagement with their patients, physicians can cultivate affirmation of human strength, acceptance of human weakness, familiarity with suffering, and a capacity to forgive and be forgiven. Diagnosis and treatment of disease require schooled and practiced use of these narrative capacities of the physician. Indeed, it may be that the physician's most potent therapeutic instrument is the self, which is attuned to the patient through engagement, on the side of the patient through compassion, and available to the patient through reflection. (Charon, 2001, p. 1899)

Medical narrative has since become a standard in medical education programs to prepare physicians to self-reflect, engage with patients' perspectives, and act with self-awareness (Charon, 2001).

In her later work, *Narrative Medicine: Honoring the Stories of Illness*, Charon (2006) speaks with more specificity to the value of medical narrative for fostering humility and other humanistic capacities among physicians, nurses, and other health professionals:

> Strengthening our narrative capacities can, I suggest in this book, help in all these efforts. My hypothesis in this work is that what medicine lacks today—in singularity, humility, accountability, empathy—can, in part, be provided through intensive narrative training. (p. viii)

Clinician humility aligns with the goals of medical narrative and the medical and health humanities to ease therapeutic relationships and enhance providers' abilities to connect with and earn the trust of their patients, colleagues, and the public (Charon, 2006). Charon (2006) asserted that, as "curators of the body," health care professionals must practice humility as they assist patients to grapple with the limits of medical knowledge and the specter of human mortality (p. 44).

The works of other authors in the medical and health humanities integrate medical narrative and demonstrate the prevalence of themes of humility, self-awareness, and perspective-taking. In his collection of essays, Anatole Broyard wrote of his experience as a patient with a terminal illness. Broyard's provocative work captured the vulnerability experienced by patients suffering from serious illnesses and made a compelling case for the need for more humanism in health care: "A doctor's job would be so much more interesting and satisfying if he simply let himself plunge into the patient, if he could lose his own fear of falling" (Broyard, 1992, p. 49). Broyard's reflections on his experience with terminal prostate cancer suggest that physicians should reject the conventional authority associated with physician-patient positionality, and consequent reductionist approaches to illness. Broyard's perspective underscores the need for clinician humility to enhance patients' and clinicians' experiences in health care. This approach, Broyard posited, permits clinicians and patients to forge deeper relationships that more fully

contemplate the spiritual, existential, and emotional facets of illness, and give it meaning (Wohlmann, 2022).

Integration of Medical Health Humanities Into Health Professions and Nursing Education

Both medical and nursing literature describe the integration of the humanities. While medical inquiries seem to prefer quantitative approaches, nursing research more often incorporates qualitative methods (Frei et al., 2010). Within disciplines, the search located scholarship with varied foci and that applied a range of approaches. A brief overview of the integration of the medical and health humanities into health professions education follows.

Medical Education

Although early research identified scant evidence of long-term positive impacts for the integration of the medical health humanities into curricula, medical and health professions education has made strides in integrating the humanities into clinical education (Ousager & Johannessen, 2010). Health humanities scholars have studied the incorporation of humanities concepts and strategies into health professions training programs across disciplines and levels of study (Carr et al., 2021; Guo et al., 2025; O'Doherty et al., 2019; Ousager & Johannessen, 2010; Zimmerman & Marfuggi, 2012). Medical education's incorporation of MHH content in its curricula is perhaps the most well examined among the health professions.

Several authors have studied the integration of the medical and health humanities into medical education, and they have reported complementary findings. In a commentary exploring the role of the medical humanities in medical education,

Zimmerman and Marfuggi (2012) proposed innovative pedagogical approaches to incorporate the medical humanities in the medical school curriculum. These include an early clinical rotation in a hospice setting; the provision of a student-centered learning environment that manifests the values of the organization and the profession; and frequent exposure of students to art, theater, and film (Zimmerman & Marfuggi, 2012).

Moniz et al. (2021) conducted a scoping review of the incorporation of the humanities and the arts into physician and interprofessional health education, concluding that while the biomedical perspective remains the predominant approach, humanities offerings were episodically present. The review combined statistical and descriptive analyses, as well as stakeholder interviews. The majority of the 769 relevant articles, published between 1991 and 2019, were conceptual works and program descriptions, followed by publications that described the integration of literary and visual arts (Moniz et al., 2021, p. 1213). Most records focused on physician training at the undergraduate level, and they detailed medical faculty-led initiatives.

Other scholars have focused on the efficacy of integrating humanities content into curricula for undergraduate and graduate medical education. O'Doherty et al. (2019) employed a qualitative, focus group design to study third-year medical students and graduates to examine medical students' experiences with completing a compulsory medical humanities assignment. The researchers found that students perceived that the humanities assignment added value as an opportunity for reflection and to develop new skills. This also mirrors the conclusions drawn by Moniz et al. regarding the episodic presence of health humanities in medical curricula.

In 2020, the Association of American Medical Colleges issued a report to stress the critical impacts of arts and humanities instruction on the development of well-prepared physicians (Howley et al., 2020). The Fundamental Role of the Arts and Humanities in Medical Education report recommends the development of tools to research, facilitate, and assess integrative learning, and a new paradigm for medical education to acknowledge that effective medical practice relies on humanistic literacy (Howley et al., 2020).

Chen et al. (2025) examined the academic records of 1364 medical students in Taiwan within eight years of admission and reported that medical humanities content in preclinical education was positively associated with students' internship performance. In a quasi-experimental study, Guo et al. (2025) concluded that the outcomes of medical students whose skills training integrated medical humanities concepts were superior to those of students who underwent conventional skills training using simulation. The authors concluded that students whose instruction included the medical humanities showed improved satisfaction, self-efficacy, and empathy when compared to the control group (Guo et al., 2025).

Altogether, these studies urge that integration of the humanities into medical education may positively contribute to professional development and humanistic professional competencies for medical students. However, there is some lack of consistency related to the timing and the method by which the humanities are integrated into medical education, which indicates the need for additional research to compare integration strategies and outcomes.

Nursing Education

Schools of nursing have begun to integrate the health humanities into their curricula. The American Association of Colleges of Nursing (AACN, 2023) includes a foundation in the liberal arts among the pillars enumerated in its essentials for professional nursing education. Liberal education expands a student's worldview and introduces ways of knowing, and vital information about human cultures, spirituality, history, politics, fine arts, literature, and languages. These, when coupled with the sciences and disciplinary knowledge of nursing, "are key to understanding one's self and others . . . and forms the basis for clinical reasoning and subsequent clinical judgments" (AACN, 2023, p. 4). Schools of nursing began to integrate the liberal arts into their curricula after the Goldmark report in 1923, which encouraged nursing education to move to university settings (Drevdahl & Canales, 2025). Schools of medicine formulated the term "humanistic medicine" in the 1970s in response to the transformative proliferation of health care technologies, and humanities curricula in nursing were applied to fulfill general education requirements (Dellasega et al., 2007, p. 174). Although the humanities are understood as a subset of the liberal arts, this review demonstrates that the nursing discipline was comparatively late to integrate concepts from the medical and health humanities (Dellasega et al., 2007).

A search was conducted in the Drew and Felician University Libraries online databases including CINAHL, MEDLINE, Academic Search Premier, JSTOR, and Google Scholar between December 2024 and June 2025. The initial query sought full-text, peer-reviewed sources in academic journals and included the following subject terms: "nursing," "health humanities," and "medical humanities," and keyword "nursing

education," with Boolean operators and modifiers. No time limiters were applied. The search included expanders for related terms, which yielded 52 articles. Again, when simulation is introduced to expand or narrow the keyword search in both the title and all text fields, the query failed to return resources. Citation searches added depth to this inquiry. A summary of selected relevant scholarship on the integration of the medical and health humanities into nursing education curricula follows.

Byma and Lycette (2023) conducted an integrative review of humanities integration into baccalaureate nursing education to detail the types of humanities interventions employed by schools of nursing and the outcomes of these programs. The authors' review of 19 studies applied a variety of humanities-based content, including content grounded in art, literature, music, and dance. A central theme emerged that the humanities interventions enhanced outcomes related to ethical behavior, the therapeutic use of self, and scientific competence (Byma & Lycette, 2023). Collectively, qualitative data revealed that students perceived benefits related to their emotional maturity, communication skills, learning, and understanding of the discipline's best practices (Byma & Lycette, 2023).

The database search and citation searches also produced articles that focused on specific examples of humanities interventions for nursing education programs. Several scholars reported that the incorporation of the arts, visual (Frei et al., 2010; McCaffrey et al., 2017; Slota et al., 2022), dance (Byma & Lycette, 2023; Dimonte et al., 2021; Gallagher & Flint, 2016; Hong et al., 2024), poetry (Healy & Smyth, 2017), and literature (McKie & Naysmith, 2013) may enrich nursing curricula by enhancing students' awareness of the human experience of illness. Although it provided a compelling case for

the variety of methods by which the humanities may be integrated into or augment nursing curricula, most of the located literature centered on data collected from a single institution or students within a singular cohort who were studying a specific clinical specialty. The search failed to locate longitudinal studies to establish consistent outcomes. More research is needed to fortify extant qualitative and empirical evidence to support the integration of humanities content in nursing curricula and to create assessment measures for humanities-related student outcomes (Byma & Lycette, 2023).

Simulation and Humility

Health care simulation has been integrated across the health care disciplines to prepare clinicians to competently and confidently respond to high-risk, low-frequency scenarios. Through exposure to and reflection on curated, critical patient care scenarios in the controlled simulation laboratory environment, simulationists hope that participants will develop the knowledge, skills, and attitudes to deliver high-quality patient care. But can simulation prepare participants to effectively respond to the inevitable unknowns they will face in clinical practice? This section investigates how clinical humility is represented within simulation scholarship.

A search was conducted in the Felician and Drew University Libraries online databases including CINAHL, MEDLINE, Academic Search Premier, JSTOR, and Google Scholar between December 2024 and June 2025. The initial query sought full-text, peer-reviewed sources in academic journals for title term “simulation,” and keywords “humility” and “nurse” with Boolean operators and modifiers. No time limiters were applied. The search included expanders for related terms, which returned six articles published between 2021 and 2023. The search was revised to query title term

"simulation," and keyword "humility," and returned 15 articles published between 2021 and 2025. Citation searches added depth to this inquiry. An overview of selected relevant scholarship on simulation and humility follows.

The largest proportion of articles located in the research focused on articles that investigated simulation participants' experiences with cultural humility, cultural competence, or related constructs (Buchanan & O'Connor, 2020; Luctkar-Flude et al., 2022; Moore et al., 2021; Smallheer et al., 2022; Tyerman et al., 2021; Walshe et al., 2022). The search located two systematic reviews (Smallheer et al., 2022; Walshe et al., 2022), and one theoretical essay (Jones & Schoonen, 2024). Located research applied a variety of approaches: qualitative (Buchanan & O'Connor, 2020; Tyerman et al., 2021), quantitative (Guo et al., 2025; Moore et al., 2021), and mixed methods (Llewellyn et al., 2023; Luctkar-Flude et al., 2022). The population of interest varied. Three articles examined physicians' or medical students' experiences amid simulation (Guo et al., 2025; Happ et al., 2025; Moore et al., 2021). Several resources centered on nursing students' experiences with cultural humility in simulation, concluding that cultural humility frameworks and non-technical skills could be readily and effectively integrated and evaluated in health care simulation learning experiences (Buchanan & O'Connor, 2020; Luctkar-Flude et al., 2022; Tyerman et al., 2021). One source investigated health professions education collectively in a scoping review and concluded that health care simulation offers a useful opportunity to create supportive environments for the development of cultural humility (Smallheer et al., 2022).

Predominant findings suggest that SBLEs can positively impact participants' ability to communicate, interact, and deliver care that is culturally humble. Scholars

extolled simulation pedagogies as effective means to enhance cultural humility (Buchanan & O'Connor, 2020; Moore et al., 2021; Smallheer et al., 2022) and to improve communication and technical and nontechnical skills such as empathy, courage, composure, and clarity (Happ et al., 2025; Moore et al., 2021). According to one source, pre- and post-surveys of surgical residents who participated in SBLEs demonstrated that participants exhibited improvements in humility (Happ et al., 2025). However, the authors did not otherwise define or qualify humility in their research. Additionally, the authors listed poor interrater reliability for the attribute of humility in their survey as a limitation (Happ et al., 2025).

A single commentary presented a model for effective simulation debriefing framed around humility. In his essay, Phrampus (2023) proposed an acronym, HUMBLE, to describe characteristics of effective simulation facilitators. The model stresses the importance of facilitator approachability and creating a nonthreatening learning environment free of hierarchical structures (Phrampus, 2023). The author advised facilitators to adopt a mindful approach to their preparation for SBLEs, and to endeavor to provide an authentic balance between positive and negative feedback during debriefing to promote ongoing learning and avoid student disengagement (Phrampus, 2023). While intriguing, the persuasive value of this resource is diminished by its subjective nature, as the author failed to include evidence and its foundations remain unverified.

In sum, the body of research around humility in SBLEs is somewhat scarce according to this review. Extant literature appears to predominantly center on cultural humility and related concepts amid simulation experiences, and it fails to expressly contemplate participants' experiences with clinical humility. While this literature review

points to some commonalities between clinical humility and its conceptual cousins, such as low self-focus, self-awareness, and openness to others, important aspects of clinical humility are largely overlooked in simulation scholarship. Evidence suggests that skill performance developed through simulation training translates to better patient care (Stefanidis et al., 2024). Clinical humility may support nontechnical skills that enhance patient trust, improve teamwork, reduce clinician burnout, support knowledge development, and underpin ethical comportment among health professionals. More research is needed to explore if and how humility manifests and operates in simulated clinical settings.

Overview of Simulation in Health Care and Nursing Education

Simulation-based training (SBT), a teaching method in which realistic situations are reproduced in interactive practice environments, has long been incorporated into training across industries, from health care education to aviation, to improve quality and safety (Bienstock & Heuer, 2022). Uptake has been swifter in some industries than in others. The aviation industry credits its use of simulation in training with significant improvements in quality and safety (Bienstock & Heuer, 2022). The first simulations in health care began with static educational models built more than 1,000 years ago to teach anatomy and assessment skills (Owen, 2012). Stone and clay carvings estimated to date from thousands of years ago (24,000-22,000 B.C.E.) are believed to have been used to teach pathophysiology (Bienstock & Heuer, 2022, p. 2). Lao Tzu described “automation machines” constructed from natural materials to mimic human behavior (Bienstock & Heuer, 2022, p. 2). Hippocrates, whose influence on medicine is well established, was an early advocate for incorporating simulation into medical training, and Aristotle stressed

the value of repetitive practice with feedback in cultivating skill proficiency and expertise (Bienstock & Heuer, 2022). Historically, health care has endeavored to enhance health care outcomes through SBT (Bienstock & Heuer, 2022). Since their earliest inception, medical simulators became more realistic and interactive to help prepare trainees for emergencies (Bienstock & Heuer, 2022). For example, 18th-century obstetric models used to train midwives demonstrated fetal anatomy and incorporated simulated amniotic fluid and blood (Owen, 2012).

While the 18th century brought many early innovations and the broad adoption of simulation as an approach to training in health care across Europe, enthusiasm for simulation slowed significantly for much of the 19th century (Owen, 2012). Since then, increased complexity within health care and the integration of new technologies, coupled with growing consumer awareness of errors associated with health care errors and iatrogenic harms have driven new paradigms for health care education that prioritize safety (Wang et al., 2024). Support for simulation in health care training took a significant step forward in 2000, when the National Academies of Medicine, formerly the Institute of Medicine (IOM), published a landmark report to recommend an overhaul of the health care system to improve patient safety. In their report, *To Err is Human: Building a Safer Health System*, the IOM identified simulation training as an imperative measure for health care education to implement to improve teamwork and safeguard patients (IOM Committee on Quality of Health Care in America, 2000).

Competition among training programs for access to limited clinical experience in health care agencies has also led to a resurgence in the utilization of high-fidelity SBLEs to train clinicians within medicine, nursing, and a variety of health care disciplines. The

scarcity of available clinical practice sites was exacerbated by interruptions in clinical education experiences during the COVID-19 pandemic (Bienstock & Heuer, 2022). Today, in many states, pursuant to the recommendations of a study commissioned by the National Council of State Boards of Nursing, a professional body responsible for standardizing nurse licensure requirements, simulation may replace a portion of required face-to-face clinical practice for students studying nursing (Hayden et al., 2014; International Nursing Association for Simulation and Clinical Learning [INACSL] Simulation Regulations Committee, 2021). A summary of extant research on student perceptions of simulation-based learning follows.

Confidence and Self-Efficacy

Previous research has queried students' perceptions of experiences with self-confidence or self-efficacy in simulation. Garvey et al. (2020) interviewed a purposive sample of 14 undergraduate nursing students to explore their experiences in mental health simulations. Participants reported improved self-confidence related to preparedness for caregiving and management of patients with mental health disorders and improved confidence in clinical settings. While this research included a similar population of undergraduate nursing students in a purposive convenience sample, both its focus on mental health and its comparatively small sample size limit its transferability. Other recent studies echo the value of simulation for building clinical confidence among nursing students.

Bø et al. (2021) queried nursing students' experiences with simulation in low-resource settings in a mixed-methods study that included questionnaires and focus group interviews. The research revealed themes that included an increased sense of confidence

and improved self-perceived competence among student participants in the simulations (Bø et al., 2021). The researchers' comparatively large sample of 99 nursing students and detailed methodologies which included descriptive statistics and applied the Standards for Reporting Qualitative Research convey the transparency and strong credibility of this research (Bø et al., 2021). It is particularly relevant that student participants articulated a desire for instructor feedback and encouragement to assist them to identify and address their weaknesses as clinicians (Bø et al., 2021). However, the study focused on a unique population of students in Madagascar and Tanzania and applied a unique standardized patient modality in which students acted as simulated patients (Bø et al., 2021). Additional factors limit this study's trustworthiness. The researchers were not native speakers of the populations' language, and the selected questionnaire was designed for high-resource settings (Bø et al., 2021).

Several researchers assessed nursing students' perceptions of virtual simulation-based learning. Siah et al. (2022) surveyed nursing students who participated in didactic instruction followed by a perioperative virtual SBLE to explore their perceptions of self-efficacy, confidence, and attitudes. The study of 228 nursing students found that participants' self-confidence and readiness for practice in perioperative settings could be improved by participating in simulations (Siah et al., 2022). However, the study focused only on a virtual simulation modality within the context of a specialized perioperative setting. The study employed a pre- and post-survey design using researcher-constructed surveys for which there was a low response rate (Siah et al., 2022).

Burrell et al. (2023) surveyed nursing students on virtual simulation-based experiences with managing oncologic emergencies to reveal improved perceived self-

confidence and critical analysis ability among participants. While the population of 19 senior nursing students mirrors our community of interest, the distinctive video-delivered simulation modality and oncologic focus may limit the transferability of the study's findings (Burrell et al., 2023).

An and Koo (2022) employed narrative survey analysis and focus group interviews to examine the experiences of 27 third- and fourth-year nursing students in Korea. The students, who participated in a neonatal simulation using a unique peer-tutoring format, expressed growth in self-confidence, improved emotional self-regulation, and increased motivation to learn (An & Koo, 2022). While the design of the study and the transparency of its rigorous analysis methods lend commendable credibility and some transferability, other aspects of the study design, including the peer-tutoring structure employed for the simulation activity, as well as its finite Korean population, limit its utility (An & Koo, 2022).

Further studies employed quantitative designs to explore nursing students' perceptions of the effectiveness of health care simulation and revealed that students perceived broad benefits in addition to improved self-confidence. Ablao et al. (2023) surveyed a random sample of 128 nursing students at the University of Tabuk in Saudi Arabia using the Modified Simulation Effectiveness Tool (SET-M), a validated tool used to assess simulation participants' experiences with simulation-based learning. The students reported improvements in key aspects of clinical practice, including decision-making, clinical judgment, self-reflection, and improved self-confidence in evidence-based practice (Ablao et al., 2023).

Kassabry (2023) employed a pretest-posttest, quasi-experimental design to examine the effect of SBT for advanced cardiac life support on self-efficacy and anxiety among 60 undergraduate nursing students in Palestine. Kassabry used four instruments, including the Resuscitation Self-Efficacy Scale and the State-Trait Anxiety Inventory to survey students at the Arab American University/Palestine, revealing improved self-efficacy and diminished anxiety among students who engaged in SBT. The distinct populations of the studies of both Ablao et al. (2023) and Kassabry, specialized phenomena of interest, and absence of control groups limit the utility of these findings to other settings and populations. While both explored students' perceptions of SBLEs, neither addressed students' experiences with clinical humility.

Role Development, Teamwork, and Collaboration

There is accumulating evidence to show that students perceive that simulation-based learning may positively impact role development. James et al. (2021) conducted pretest and posttest surveys with 65 baccalaureate nursing students to explore participants' attitudes toward working in teams in a mass casualty simulation. The results revealed emergent themes of self-awareness and professional identity. Students perceived that communication was valuable to their practice, that they were made more aware of strengths and limitations as well as their need to seek direction from others, and that the experience increased their appreciation for teamwork (James et al., 2021). The researchers used the KidSim Scale, which assesses attitudes toward teamwork, and researcher-developed open-ended survey questions. Limitations of this research include its homogeneous population of predominantly White and Hispanic female nursing

students who worked with Master of Athletic Training Students at a Texas university (James et al., 2021).

Role development has emerged as a theme in recent research conducted around pediatric simulations. Teles et al. (2020) conducted semi-structured interviews with 10 undergraduate nursing students in Brazil to explore students' perceptions of high-fidelity manikin simulations used to prepare them to deliver nursing care to children and their families. As in previous studies, the students in this study perceived that the simulation experience improved their self-confidence and preparedness for practice (Teles et al., 2020). Participants assigned meaning to the experience of portraying different roles, including family members, and stated that the simulation and debriefing experiences helped them to better understand and attend to their patients' needs (Teles et al., 2020). However, the small sample size and differences in the Brazilian university setting limit the transferability of this research (Teles et al., 2020).

Matsuda et al. (2023) queried 73 undergraduate nursing students to understand their experiences with community health simulations. In the descriptive, qualitative study, the researchers analyzed the students' responses to three survey questions with conventional content analysis (Matsuda et al., 2023). The students reported that simulation was effective for teaching the roles of nurses and nurse faculty in managing the environment, and that the prebriefing, the phase of the experience in which the simulation facilitators introduce the simulation objectives and expectations, was important to student satisfaction with their SBLE (Matsuda et al., 2023). Experimenter effects may have influenced the outcomes of this study, as the subjects had significant interactions with researchers: The simulation educator acted as the patient in the

scenarios, and data collection was simultaneous with course evaluations (Matsuda et al., 2023). Additionally, the researchers did not collect and share demographic data, which may limit both accurate assessment of participant characteristics and contextual understanding of the data (Matsuda et al., 2023).

Several researchers have argued that simulation can improve attitudes toward teamwork and collaboration. Student nurses in multiple qualitative and mixed methods studies perceived that participating in a SBLE helped them to improve their ability to function as part of an interdisciplinary team. Ruetter and Alexander (2021) surveyed nursing students who collaborated with dental hygiene students in an IPE simulation to assess the attitudes of the participants in the IPE simulation about interprofessional collaboration. Participants engaged with an online learning module as a presimulation activity, and then completed an Interprofessional Education Collaborative (IPEC) survey to assess interprofessional interaction and values. Recruits' attitudes about interprofessional teamwork were reassessed with a repeated survey after the IPE simulation activity (Reutter & Alexander, 2021). Participants reported improved attitudes toward teamwork and collaboration, and the post-IPEC surveys indicated significantly increased value for effective interprofessional communication and knowledge professional roles (Reutter & Alexander, 2021). Limitations of the study include the relatively small sample size, response bias due to self-reporting, and low survey response rates (Reutter & Alexander, 2021). The authors also conceded that the design and timing of the study limit its generalizability, since only one scenario was included; further, the authors acknowledged that since the data were collected at the end of the semester just

prior to final exams and graduation, learning from other coursework might have impacted students' attitudes, positively skewing survey responses (Reutter & Alexander, 2021).

Washington et al. (2021) explored the experiences of 49 nursing students and 36 occupational therapy students in an IPE simulation with a standardized patient in a mixed methods pre/posttest quantitative study using an interprofessional socialization tool and a questionnaire. The study aimed to discover how professional students' attitudes toward IPE changed after participating in an IPE hospital-based simulation that used a standardized patient modality. The authors also examined how students internalized knowledge gained from their IPE experience, and the ways in which students planned to apply the IPE experience to clinical practice (Washington et al., 2021). Qualitative results of the study showed that students perceived that they improved their interprofessional socialization—that they better understood their own roles as well as those of other team members (Washington et al., 2021). Some survey respondents reported that the experience helped them to recognize the expertise of other interdisciplinary team members (Washington et al., 2021), a trait Wadhwa and Mahant (2022) have since attributed to clinical humility. Limitations of the study by Washington et al. include the homogeneity of its predominantly female sample, and that the study included a relatively small sample size from a single institution.

Student Perceptions of Learning

Recent studies have suggested that simulation supports knowledge transfer from didactic learning to clinical practice. Johnston et al. (2019) explored student nurses' perceptions of clinical reasoning and learning transfer after standard debriefing and a debriefing that was designed to enhance learning transfer. In a mixed-methods pretest and

posttest survey study with focus group interviews, all 256 students perceived that assessment and communication skills successfully transferred from simulation to patient care (Johnston et al., 2019).

Phan et al. (2020) assessed baccalaureate nursing students' knowledge and attitudes about the social determinants of health after a public health and health equity simulation. In the mixed methods evaluation that included a voluntary post-simulation survey and a required post-simulation debriefing discussion, 44 respondents reported that they perceived that the simulation was beneficial for students learning about health equity (Phan et al., 2020). Significant limitations of this research include its relatively low (22%) response rate, the lack of a pretest to assess beginning knowledge of health equity, and a possible social desirability bias in which respondents elected to answer according to what they perceived would be favorable to the research and researcher (Phan et al., 2020).

Hustad et al. (2019) studied second- and third-year Norwegian baccalaureate nursing students' perceptions of learning transfer from simulation experiences to practice settings in a qualitative descriptive study. Thematic analysis of focus group interviews uncovered three themes to describe how simulation learning manifests in their patient care (Hustad et al., 2019). Participants expressed that the high-fidelity simulation training with deteriorating patient scenarios promoted their self-confidence and self-awareness in stressful clinical situations, developed helpful clinical skills, improved their decision-making, and improved their understanding and awareness of communication in clinical settings (Hustad et al., 2019). Importantly, the authors concluded that the abilities and approach of the simulation facilitators were key to learning outcomes for the students.

Students specified that facilitators' positive attitudes and encouragement in debriefing were essential to their learning outcomes (Hustad et al., 2019). Strengths of this research include that the study's population of interest imbricates a similar group—upper-level nursing students in a baccalaureate program of study. In addition, the authors described a rigorous, systematic methodologic approach to data analysis using Braun and Clarke's methodology (Hustad et al., 2019). Design aspects of the study, including possible focus group dynamics coupled with participant recall issues related to a months-long delay between the simulation and interviews, may impact the trustworthiness of the data. Several authors conducted interviews, which potentially impacted the data's reliability.

Some recent studies have revealed that students perceive benefits from simulation across subcategories presented here. Saitoh et al. (2024) found that learners perceived benefits of improved self-efficacy, improved competence, and gains in learner satisfaction when they used textual analysis of quantitative, descriptive questionnaires to assess the perceptions of 159 second-year nursing students in Japan during the COVID-19 pandemic. Hillier et al. (2021) used the SET-M survey tool and the Pediatric Intensive Care Unit End-of-Life Simulation Evaluation Survey in research to examine the use of high-fidelity simulation to prepare newly graduated nursing students for practice in a pediatric oncology setting. The authors reported that students perceived improvements in their self-confidence to deliver care to children and their families, perform end-of-life tasks, navigate charged interpersonal interactions, and answer challenging questions (Hillier et al., 2021). While both the Saitoh et al. and Hillier et al. studies bear commonalities in findings of improved self-confidence, self-efficacy, preparation, and learning, their utility may be limited by their selected populations (post-graduate, post-

licensure nurses in the Hillier study, and students studying in Japan during the COVID-19 pandemic in the Saitoh et al. study).

Overall, the literature suggests that health care simulation offers trainees opportunities for growth in knowledge, skills, and attitudes that may improve patient care. There is broad agreement among scholars that participants within nursing, medicine, and other health care disciplines, perceived that participating in SBLE enhanced their self-confidence and self-efficacy and helped them to build key skills in teamwork, communication, assessment, and decision-making, and that trainees can transfer those benefits to clinical practice. The body of simulation scholarship offers some evidence, albeit more limited, that nursing students perceive that participating in an SBLE enhanced their self-awareness, knowledge of their strengths and limitations, role development, and understanding of their patients' needs. In summary, many of the constituents and consequences associated with humility (accurate self-view, awareness of self and others) are mirrored in participants' perceptions of their experiences with health care simulation. Yet, we failed to locate research to expressly link clinical humility and health care simulation.

Synthesis

Intersections of Central Concepts: Medical and Health Humanities, Nursing, Simulation-Based Learning in Nursing Education, and Humility

The growth of knowledge and technology in health care has advanced exponentially in recent decades, yet to effectively translate advancements into safe practice, educators must prepare clinicians who embody humanistic values. Humanities in health care professions education aims to advance intellectual skills "in the spirit of

sincere concern for the centrality of human values in every aspect of professional activity" (Pellegrino, 1979, p. 118). The work of medical and health humanities scholars, including Charon (2006) and Broyard (1992), underscores the relevance of humility to authentic engagement in clinical encounters. Charon (2001) argued that only with skilled self-reflection, the physician's best instrument, himself, becomes available to the patient. Accordingly, the study of students' experiences with humility amid health care simulation is well aligned with the concerns of the medical and health humanities.

Despite its long history as a caring profession, nursing education lagged somewhat behind medicine and other allied health fields in formally integrating the medical and health humanities into its scholarship and curricula (Dellasega et al., 2007). Yet a humanistic perspective has long been central to the practice of nursing. The work of Nightingale (1992), the ANA (2018) in its Code of Ethics, and the AACN (2023) echo values that center the patient call upon nurses to critically self-evaluate their strengths and limitations, and to strive for continued production of knowledge and professional growth. From these perspectives, the study of humility is profoundly relevant to the preparation of nurses who will practice with integrity.

This review demonstrates that health care simulation has been well studied. Several studies converge on the utility of simulation as a method to ready clinicians for real-world practice. Existing scholarship highlights key concepts. These include the value of SBE to enhance student self-confidence and self-efficacy; improve teamwork and collaboration; contribute positively to self-awareness, professional socialization, and role development; and deepen clinical reasoning and communication skills (Ablao et al., 2023; An & Koo, 2022; Bø et al., 2021; Burrell, 2023; Diaz et al., 2023; Garvey et al.,

2020; Happ et al., 2025; Hayden et al., 2014; Hillier et al., 2021; Hustad et al., 2019; James et al., 2021; Johnston et al., 2019; Kaplan et al., 2023; Kassabry, M. 2023; Llewellyn et al., 2023; Luctkar-Flude et al., 2022; Matsuda et al., 2023; Moore et al., 2021; Phan et al., 2020; Saitoh et al., 2024; Saleem et al., 2023; Siah et al., 2022; Teles et al., 2020; Wang et al., 2024; Washington et al., 2021).

A single editorial discussed the need to leverage simulation-based education to teach cultural humility in nursing education (Foronda & MacWilliams, 2015). A review of simulation literature failed to identify research related to learner humility except for a limited number of articles that explored simulation and cultural humility (Llewellyn et al., 2023; describing changes in weight biases after simulation; Luctkar-Flude et al., 2022, discussing the impact of virtual simulations on cultural humility in the care of gender diverse clients).

Given its integration of guided self-reflection with expert feedback, health care simulation aligns well with the aims of the medical and health humanities to prepare health care professionals who exhibit humility—self-awareness and openness to the perspectives of others. While this review uncovered only one study that sought to integrate medical humanities education into health care simulation, methodological differences of the quantitative, quasi experimental design, and its population—master's students in China—limit its relevance here (Guo et al., 2025). While some researchers examined the value of simulation in training for non-technical skills (Happ et al., 2025), simulation scholarship exploring general humility is notably absent.

Like simulation scholarship, the body of humility research is growing. As discussed, much of the research focuses on conceptualizing types of humility. Additional

research focused on the development and validation of tools to measure humility (Davis et al., 2011; Hill et al., 2017; McElroy-Heltzel et al., 2018). Still more research proposed measures of humility for use within specific contexts, such as music (Coppola et al., 2020), business (Ou et al., 2024), and culture (Foronda et al., 2015; Whatley et al., 2023; Zhu et al., 2024).

Predominant conceptualizations of humility presented in this review share the positive attributes of low self-focus, accurate self-view, acceptance of fallibility, and openness to feedback and learning. Humility presents an elusive topic for research, as it is multifaceted and not well defined (Davis et al., 2011). Moreover, humility presents a paradoxical challenge for self-report (Wright et al., 2017). Scholars have asserted that humility can strengthen relationships, improve communication, and fortify teams (Michalec, Cuddy, et al., 2024). Some authors also identified an important role for humility in the creation and maintenance of a psychologically safe environment that can positively impact teamwork and collaboration (Michalec, Cuddy, et al., 2024). Scholars have described clinical humility as a humble self-view within the context of health care settings and interprofessional and clinical-patient interactions, with profound implications for health care consumers and professionals (Bhandari & Abu Sayf, 2013; Jain, 2024; Lim, 2017). Health care professionals' responses to clinical uncertainty and complexity have received intense scrutiny since the COVID crisis (Jain, 2024).

Health care scholarship has just begun to contemplate the contributions, manifestations, and liabilities of humility for professional practice in medicine in editorials and essays (Chochinov, 2010; Lim, 2017), and in empirical (Michalec, Cuddy, et al., 2024) and mixed methods studies (Sasagawa & Amieux, 2019). Only one article

focused on general humility exclusively in nursing practice, and this was conceptually focused (Zinan, 2021, proposing a model for humility in health care and describing its benefits to interprofessional relationships, communication, leadership, and decision-making).

Research Gaps

While previous studies have explored both humility and simulation for health care professionals, there has been insufficient attention to experiences of humility among baccalaureate nursing students who participate in simulation. This review reveals that, separately, the body of health care simulation scholarship and that of humility scholarship have grown. There is ample evidence to support the value of simulation in health professions education, and there is growing support for the value of humility as a caring competency that is crucial for humanistic health care. Still, little is known about nurse learners' experiences with humility in health care simulation, apart from its relevance to intercultural care.

Conclusions and Recommendations

Emergent trends in the literature have begun to question prevailing frameworks for simulation pedagogies that make sacrosanct the comfort of participants, perhaps at the expense of the professional and intellectual growth that vulnerability offers (Ford et al., 2024). The potential value of simulation-based learning to the development of transformative, humanistic caring competencies has been largely overlooked. This research offers an opportunity to explore simulation learning spaces as fertile ground for nursing students to contemplate, experience, and perhaps even embody humility.

Chapter 3

METHODOLOGY

This chapter aims to detail a qualitative methodology, including inductive content analysis (ICA), to explore baccalaureate nursing students' experiences with clinical humility in the realm of clinical simulation. The value of simulation pedagogies for improving technical skills, learner self-confidence, and teamwork is well studied (Hayden et al., 2014). Yet, health education programs must also prepare students as lifelong learners who are prepared to continuously self-evaluate, objectively identify knowledge gaps, and embrace and apply humanistic skills that foster patient-centered care and improved outcomes. This study aims to amplify the lived experiences of baccalaureate nursing students with humility in clinical simulation.

Research objectives drive design (Hyatt & Roberts, 2024). As little is known about nursing students' perceptions of self-objectivity and the capacity for openness and self-reflection in the simulated care environment, a descriptive qualitative approach allowed me to surface and achieve a more comprehensive understanding of nursing students' perspectives on these concepts (Hyatt & Roberts, 2024). Data were gathered using semi-structured interviews. The following sections detail the research procedures, including the methodology, study population and participants, procedures for data collection, method for data analysis, and ethical safeguards incorporated to protect human research subjects.

Research Questions

This research aimed to answer the following questions:

- How do baccalaureate nursing students who participate in clinical simulations perceive and experience humility?
- What specific aspects of simulation design and implementation can contribute to the development of clinical humility among baccalaureate nursing students?
- What insights does participation in a clinical simulation provide for baccalaureate nursing students about the relevance of humility in their professional development and/or professional identity?

Rationale and Assumptions for Qualitative Design

Quantitative research approaches focus on relationships between variables, while qualitative research allows investigators to explore topics from the perspective of another (Hyatt & Roberts, 2024). Specifically, qualitative research proposes to surface and interpret lived experiences (Hyatt & Roberts, 2024). Simulation is an experiential learning technique and a pedagogy that generates or replicates an immersive representation of a health care encounter to permit learners/trainees to engage in a lifelike event to practice skills and deepen their capacity to reflect on the experience, their thinking, and their actions (Lioce, 2020). Participants in simulation construct learning and apprehend meaning from experiences that mirror and amplify clinical practice in a physically and psychologically safe environment (Rudolph et al., 2014). A confluence of factors including a nurse and nurse-faculty shortage, competition for clinical practice sites, an increasingly dynamic and complex care environment, and technological advances have made simulation an essential tool for health care and nursing education (Hayden et al., 2014). Current simulation research extols the benefits of simulation for students' knowledge and skill acquisition (Leal-Costa et al., 2024). As discussed in this

study's review of the literature, less is known about simulation participants' and nurses' perceptions of humanistic skills, such as the capacity for reflection, self-objectivity, and humility in simulated clinical spaces. The purpose of this research is to explore the experiences of baccalaureate nursing students with clinical humility in high-fidelity human patient simulation and to propose ways to cultivate and enhance nurses' clinical humility with the aim of improving the quality of care. As the focus of this research is to examine nursing students' perceptions of simulated learning experiences (SLEs), an interpretive, qualitative approach is the most suitable design choice.

Type of Design

This research employed a general qualitative study design using ICA of transcripts of audio-recorded, semi-structured interviews (Vears & Gillam, 2022). This approach is ideal for developing a deeper understanding of human experiences—in this case, humility in the simulated learning environment, from the perspective of multiple individuals who share an experience (Creswell & Poth, 2016).

ICA is appropriate for this investigation, as there is little existing literature on nurses' and nursing students' experiences with humility, and ICA does not predetermine or delimit themes; instead, ICA allows themes to emerge from data (Vears & Gillam, 2022). Semi-structured interviews permit investigators to control the scope of conversation but afford respondents latitude to address topics within the defined range (Klugman & Lamb, 2019). In this way, the researcher can delve into deep understanding through a dialogue with participants on the research topic. The interviews took an emic perspective, using open-ended interview questions to center and bring clarity to the participants' perspectives and lived experiences (Klugman & Lamb, 2019).

Researcher's Role

I possess the knowledge, training, and experience required to conduct the designed study. I am a registered nursing professional nurse with more than 25 years of clinical experience who holds a Bachelor of Science in Nursing (BSN) and a Master of Science in Nursing with a focus on nursing education. I am an experienced nurse educator, with certification in health care simulation from the INACSL, and over a decade of experience in simulation design, facilitation, and evaluation. As an experienced health care professional, simulation debriefer, and simulation laboratory director, I have experience with conducting interviews. I successfully completed a qualitative research course as part of my doctoral preparation and had the support and mentorship of expert health humanities researchers on my doctoral committee. I did not teach courses in which the study participants were enrolled, and no participant had a reporting or contractual relationship with me that would introduce bias into the study.

Research Ethics and Human Subjects Protection

The primary ethical concerns for this research include participant privacy and researcher bias. To safeguard participants, and to ensure the integrity and trustworthiness of the data, I followed and adhered to a formal ethics procedure in accordance with the regulations and approval of the Institutional Review Boards (IRBs) of both Drew University and Felician University (See Appendices A and B). Respondents participated only with informed consent. All participants were greater than 18 years old as a qualification for inclusion in the study. The informed consent form was read to all participants prior to their interview and included a comprehensive explanation of the objectives and procedures for the study, as well as reasonable risks and benefits for the

participants. The informed consent document provided assurances that participation is entirely voluntary, and each participant was free to withdraw from the study at any time. Additionally, the informed consent document detailed the researcher's contact information and an offer to provide additional information about study procedures.

Anticipated risks to human subjects were minimal. Perceived risks included feelings of vulnerability due to breaches of confidentiality of participant data and performance anxiety related to participation in a simulated learning activity. The privacy and confidentiality of participants was also safeguarded. Audio recorded materials were maintained in a password-protected device in the researcher's private, locked office. The records will be deleted after three years to minimize breaches of confidentiality. Participants were advised that confidentiality would be safeguarded in all aspects of the study. Except for the informed consent documents, participant names did not appear on any of the forms. Identifiers on additional documents were encoded numerically. I kept a document with a list of codes correlated to participants' names in a locked file box in my home.

I successfully completed the required human subjects research training at no cost. Human patient simulation scenarios take measures to achieve an elevated level of realism in simulated patient encounters, to suspend disbelief, foster student engagement, and encourage transfer of learning. The simulation activity design and procedures integrated measures to align with the International Standards for Health Care Simulation to ensure that the psychological safety of student participants is protected. A structured presimulation and prebriefing introduced facilitators; asserted the basic assumption that the simulation is for learning and not an evaluation; and detailed the simulation learning

objectives and role expectations for participants, logistics for the simulation day, and a thorough orientation to the simulated environment and manikin patient (INACSL Standards Committee, 2016). However, it was possible that some students would experience feelings of anxiety or sadness related to their performance and participation in the simulation scenario. Student participants were advised that their participation in the simulation and research activity would not be graded. In addition, all students had access to student health services, including on-demand mental health services, through Felician University. I coordinated with the Director of the Center for Health to ensure that any possible negative experiences for students related to participating in the research, simulation, and interviews could be immediately addressed and mitigated.

Site and Sample Selections

The setting for the research was the Nursing Resource and Simulation Center (NRSC) at a university in the northeastern Mid-Atlantic region of the United States. The population of interest included second-, third-, and fourth-year nursing students in the BSN program and the Accelerated Second Degree Bachelor of Science in Nursing Program (ABSN) who participated in the simulation activities. A convenience sample of 19 students who participated in clinical simulations between June and December 2024 in the NRSC were recruited from the available population. Inclusion criteria were: (a) Student in the Felician BSN or ABSN program for more than one year, (b) had participated in high-fidelity simulations in the NRSC at least once previously, and (c) age equal to or greater than 18 years. Exclusion criteria were: (a) Student at Felician School of Nursing for less than one year, (b) had not previously simulated at Felician in the NRSC, and (c) younger than 18 years of age.

The selected population supported the aims of this study, as they were not novice learners, and had previously experienced high-fidelity simulation in earlier coursework in the program. In addition, this group also had previously cared for patients outside the lab in in-vivo clinical settings. As this study aimed to examine objectivity and openness among students, the selection of this population served to remove the potentially confounding variables that might be introduced by a lack of experience with simulation, debriefing, and clinical patient care.

Once approval was received from Drew and Felician Universities' IRBs , recruitment began using fliers, email, and word of mouth, techniques common to convenience sampling methodologies (see Appendix C for recruitment flier; Klugman & Lamb, 2019). Students were asked to view the recorded presimulation PowerPoint and video included in their regular presimulation activities. Students then participated in their scheduled group simulation experience (facilitated by a certified health care simulation educator) and debriefing. At the completion of the debriefing session, participants were asked to participate in 30-minute, audio-recorded in-person semi-structured interviews with me by appointment. Each participant met individually with me (see Appendix D for my CITI certifications) or a CITI-certified staff member and was asked to execute the informed consent document after their regularly scheduled SLE. All research materials were maintained in a locked drawer in my office.

Simulated Learning Experience Design

Students participated in a planned high-fidelity SLE that employed a high-fidelity human patient simulation manikin. The simulation scenario occurred as part of the BSN curriculum. INACSL standards assert that a SLE should include specific components

(INACSL Standards Committee, 2016). These include presimulation with a prebriefing and orientation, a simulated care experience, and a debriefing. According to the Simulation Standards of Best Practice, SLEs should be facilitated by a trained, experienced health care simulation facilitator (INACSL Standards Committee, 2025).

Scenario Design

The study employed a simulation scenario already integrated into the BSN curriculum. This section will describe the scenario selected and principles of simulation scenario design and formatting, and will detail the rationale for the selection. The INACSL Simulation Standards provide guidance for scenario design and selection (Watts et al., 2021). Primarily, the standards direct that the learning objectives, level of learner knowledge and experience, and learning outcomes should drive the scenario design (Watts et al., 2021). Elements of scenario design include the modality (the simulation tool to be used), the level of realism, the scenario or patient case details, and prebriefing and debriefing session activities. The scenario contextualizes the SLE. Scenarios are designed in consultation with content experts and simulationists who are knowledgeable of simulation theory, modalities, and best practices (Watts et al., 2021). In addition to program outcome data and clinical practice guidelines, needs assessments of stakeholders, learners, faculty, and clinicians inform topic and scenario selection (Watts et al., 2021). Other drivers for scenario design include available resources.

Scenarios require a start point with the patient's initial clinical presentation, learner activities such as expected psychomotor skills to be performed, and an endpoint when the scenario is expected to end. The scenario ends when the expected learning objectives are met. Each simulation scenario requires a backstory or situation to provide a

realistic context for the simulated patient encounter; a script or case that is readily reproducible to enable standardization; and a script for the simulated patient and any supporting confederates, or characters embedded in a scenario to add realism and aid in scenario progression, such as a parent in a pediatric simulation (Watts et al., 2021).

Planned clinical cues aid in advancing and standardizing the scenario while maintaining the level of realism in the student experience. For example, the script may plan for the patient to ask, “Who are you?” if the students do not perform hand hygiene upon entering the simulated care environment. Planned clinical progressions and scripted cues give guidance to facilitators to advance the scenario based on student actions during the case (Watts et al., 2021). For example, if the nurse applies oxygen to the patient in respiratory distress, the patient’s breathing will become less labored, and his vital signs will improve. Cues can be verbally provided by embedded participants or the patient, or visual representations of physiologic changes in response to nursing interventions or the lack of the same (Watts et al., 2021).

The scenario design should identify critical student actions to meet the learning objectives of the scenario (Watts et al., 2021). For example, in a scenario targeting a learner objective centered on safe medication administration, the critical actions would include standards of practice for safely assessing a patient’s need for the medication; interpreting the medication order; safely retrieving, calculating, and preparing the correct medication dose for the prescribed route; safely administering the medication; properly documenting the medication; and accurately evaluating the patient’s response to the medication. The design must employ types of fidelity to convey the necessary level of realism, include facilitation by a trained facilitator, engage a prebriefing plan that

establishes a psychologically safe environment for learners, and include a debriefing or guided reflection exercise to follow the SBLE (Watts et al., 2021).

As discussed earlier, the selected scenarios are well integrated into the BSN and ABSN curriculum. They were chosen as they support the curriculum and course objectives. The selected scenarios require students to deliver care to Sabina Vasquez, a child experiencing exacerbation of asthma due to pneumonia; and Jackson Weber, a child experiencing seizures. The scenarios were selected from a library of peer-reviewed, evidence-based scenarios purchased by the NRSC through a publisher who develops and routinely updates clinical simulation scenarios for nursing education based on clinical practice guidelines. The objectives for the scenarios aligned with institutional, programmatic, and course objectives. These include that the students will demonstrate a developmentally supportive assessment of an acutely ill child, prioritize nursing interventions, and implement safe medication administration. Please refer to Appendix E for supporting documents for patient assessment.

The asthma and seizure scenarios offer ideal vehicles through which to engage in discussions of clinical humility. They interrogate the care of acutely ill children in high-risk care scenarios. The scenarios include verbal cues from embedded participants, such as Sabina's and Jackson's parents, who would question and challenge the student's plan of care.

Presimulation Procedure

Presimulation activities contextualize and frame the students' learning experience and support the creation and maintenance of a "safe container" for learning (Rudolph et al., 2014, p. 339). One week in advance of the scheduled simulation, students received a

presimulation email with instructions and attachments to prepare before participating in the simulated learning activity. The presimulation activity included a PowerPoint with a short video to introduce students to the concept of clinical humility. Additionally, the presimulation email provided a synopsis of the patient's story, including a hand-off report or Situation – Background – Assessment – Recommendations (SBAR) communication (Jarvis & Eckhardt, 2024). The students also received a list of the patient's prescribed medications. The SBAR detailed the patient's current situation, background, relevant physical assessment findings, and recommendations for care (Jarvis & Eckhardt, 2024). Students created a concept map as part of their presimulation preparation to identify priority problems, nursing diagnoses, and priority nursing interventions for the simulated patient, and brought the completed assignment with them to their simulation in the NRSC. Please refer to Appendices F, G, and H for the presimulation PowerPoint, SBAR documents, and Concept Map template, respectively.

The presimulation materials aimed to assist students to become familiar with the patient's case and the objectives of the simulated learning activity. The philosophy and assumptions of the simulation program at the NRSC prioritize students' psychological safety in simulation-based learning activities and take a formative rather than a summative approach. Students who did not review and complete presimulation materials were permitted to participate in the simulation. This policy reflects our philosophy, basic assumption, and core value that each participant is "intelligent, capable, cares about doing their best, and wants to improve" (Center for Medical Simulation, 2024). This basic assumption was shared at the start of each simulation day in prebriefing, and was intended to prioritize and maintain trust and build a supportive, emotionally safe

environment among participants (Carvalho et al., 2018). During the prebriefing and orientation activities on the day of simulation detailed later in this chapter, all student participants collaborated with the faculty to discuss care priorities and design a plan of care or the simulated patient.

The INACSL standards emphasize the importance of a structured prebriefing in advance of the simulation day. When students arrived at the simulation lab, the group and their faculty were greeted by the simulation facilitator in a private, dedicated classroom space. Simulation theory emphasizes the importance of structured prebriefing to create an environment in which students feel comfortable fully engaging despite distractions (Rudolph et al., 2014). Barriers to student engagement may include the unfamiliar or artificial aspects of the simulated environment; a challenging, complex clinical scenario; and perceived interpersonal risks related to the possibility of making errors in a clinical setting (Rudolph et al., 2014). Several components were planned to mitigate these distractions to build student confidence and encourage their full engagement in simulation during prebriefing.

Prebriefing

Prebriefing aims to prime learners with educational content to inform and contextualize the SLE. In addition, prebriefing sets expectations for participants by defining the scope of the simulated learning activity. Disclosures shared during prebriefing offer clarity and are essential to creating a "safe container" for participants to practice at the edge of their abilities and optimize their opportunities for self-assessment and new learning (Rudolph et al., 2014, p. 339). During prebriefing, the facilitators in the NRSC displayed a standardized PowerPoint slide deck which outlined the steps of the

prebriefing to ensure that each aspect is addressed in sequence. Please refer to Appendix I for the simulation prebriefing and debriefing PowerPoint.

Logistics

On the day of the simulation, students arrived at the simulation center in full clinical uniform and were signed in by NRSC staff and directed to a private debriefing classroom for prebriefing. The simulation facilitator welcomed the student participants and their clinical faculty in the debriefing classroom, and explained that the plan for the day, included that the students would participate in one simulated learning activity, that the day's activities were planned to take approximately four hours from start to finish, the time for lunch breaks and bathroom breaks, and the location of restrooms at the front and rear of the lab. The facilitators shared the NRSC simulation policies, including that cameras and recording were not permitted during simulation to protect the confidentiality of all participants, and that all participants were expected to engage with one another respectfully by taking turns speaking, and listening attentively.

The staff distributed prebriefing and debriefing materials to student participants, including an emoji icebreaker hand out, a debriefing worksheet for notetaking, and a copy of the patient SBAR and a medication list. Simulation facilitators began prebriefing by introducing themselves and their roles in the simulated learning activity. A dual facilitator model incorporated simulation lab staff, who operated the high-fidelity manikin and led the orientation and debriefing activities. Course faculty functioned as topical content experts during the simulation and provided analysis and feedback to learners during the debriefing discussion after the simulated patient encounter.

The facilitators explained that the role of the patient would be played by a high-fidelity manikin, and that students would be oriented to the manikin and the simulated care environment prior to the start of the simulation. Next, the facilitators informed students that some would be asked to volunteer to function as nurses and family members during the simulated patient encounter, while the remaining students observed a livestream video of the simulation scenario in real time.

The NRSC facilitator read the simulation learning objectives to the participants. The simulation learning objectives were simultaneously displayed on the prebriefing PowerPoint to enumerate and inform learners of the aims of the simulated learning activity.

Fiction Contract

To further promote trust, the NRSC facilitator next displayed and read aloud the lab's Basic Assumption for Simulation, which states: "We believe that everyone participating in simulation activities at [the simulation center] is intelligent, capable, cares about doing their best, and wants to improve" (Center for Medical Simulation, 2024). The Basic Assumption is also displayed on posters at the entrance to the lab and in all debriefing classrooms.

The facilitators next defined and explained the simulation fiction contract. The fiction contract is a verbal acknowledgment on the part of simulation participants that, despite best efforts, some aspects of SLEs may not appear to be realistic, and that all participants agree to do their best to behave as they would in an authentic patient encounter, despite the limitations of the simulated care environment and simulation technology.

Orientation

The lab facilitator and faculty led the learners to the simulated care environment, where they were oriented to the patient room and the high-fidelity manikin. During the interactive orientation, facilitators directed students to available patient care equipment, the simulated phone/intercom which could be used to contact a provider or call for emergency assistance, the patient monitor, IV pumps, patient bed, headwall with simulated oxygen, vacuum, and air flow, the simulated electronic medical record, medications, and barcode scanning system, and resuscitation supplies. Finally, the facilitators fully oriented the students to the high-fidelity manikin/patient. Students had the opportunity to practice listening to the patient with a stethoscope to assess pulses, heart sounds, breath sounds, and bowel sounds.

Report to Students and Role Selection

The simulation facilitator read the scenario report, known as an SBAR report, to students. Students were then asked to choose roles for the simulation. Students chose to function as Nurse 1, Nurse 2, a family member, or an observer. If students did not volunteer to function as nurses, faculty randomly drew names to assign roles. Students with scenario roles proceeded to the simulated patient room to simulate, while those who were not assigned or had not selected a role remained in the simulation prebriefing/debriefing classroom to observe a live video feed of the simulated patient encounter. Growing nursing program enrollments and finite clinical simulation resources limit the availability of opportunities for students to participate in assigned or chosen roles in simulation scenarios. Evidence has shown that student observers have similar outcomes to those who are assigned or selected roles in the scenario (Bates et al., 2018).

Observing participants were encouraged to take notes on a debriefing worksheet during the simulation to assist them to participate in the debriefing discussion that followed. Please refer to Appendix J for the simulation debriefing worksheet.

Simulated Patient Encounter

During the simulation scenario activity, faculty and staff operated the high-fidelity simulation manikin from a control room adjacent to the simulated patient room. The control room and patient room are separated by a shared wall which is outfitted with an audiovisual debriefing system and a mirrored observation window so that the faculty and staff facilitators can observe students who are providing care to the simulated patient in real time while remotely operating the manikin patient. The private control room with integrated audiovisual system configuration enhances the realism of the simulation activity as students can experience providing care without the distraction or intrusion of observing faculty, staff, and student observers.

A high-fidelity simulation manikin represented the simulation patient. There exists confusion among students and educators about two key features of simulation: fidelity and modality (Carey & Rossler, 2023). Multiple modalities and fidelity levels exist, and their selection can have critical implications for learner outcomes. Learning outcomes and objectives should, therefore, drive modality and fidelity selection during SBLE planning (Carey & Rossler, 2023).

Simulation modality describes the tool or method that educators select to deliver the SBLE. Educators select from manikin-based simulations; screen-based, digital simulations; standardized patient participant simulations that employ trained actors as patients; mixed, augmented, and virtual reality-based simulations using digital tools with

special immersive visual effects, and task trainers which use anatomical models (Carey & Rossler, 2023). Within each modality category, there exist a range of available options (Carey & Rossler, 2023). The availability of simulation modalities necessarily impacts its selection. Modality types can be combined within a simulation to achieve desired outcomes. For example, a scenario that employs a standardized patient or live actor in the role of the patient might include a task trainer, such as a simulated arm with intravenous access, to permit students to practice a skill without risk of harm to the actor. Scenarios that utilize more than one modality are termed multi-modal or hybrid simulations (Carey & Rossler, 2023).

The fidelity of a simulation refers to the degree to which it mirrors reality. Fidelity is multi-faceted and does not necessitate the selection of a particular simulation modality, as any modality can evoke sufficient fidelity depending on the desired outcomes and objectives of the SBLE (Carey & Rossler, 2023). The scenario, equipment, and environment each impact the realism of the simulation experience for learners. Moreover, simulation fidelity can describe both a type and the level of realism (Carey & Rossler, 2023). Fidelity types include conceptual, psychological, and physical fidelity (Carey & Rossler, 2023). Conceptual fidelity refers to the degree to which the scenario makes sense for learner-participants (Carey & Rossler, 2023). To recast, the scenario must logically represent clinical practice realities. Therefore, conceptual fidelity allows learners to accept synthetic aspects of the simulation experience (Carey & Rossler, 2023). Psychological fidelity conveys the ability of the scenario to evoke an affective response from learners (Carey & Rossler, 2023). Physical fidelity reflects the sensory experience the simulation creates for learners—specifically, what is seen, heard, smelled, and felt

(Carey & Rossler, 2023). Of these fidelity types, learners report that they can more easily withstand oversights in physical fidelity when cognitive fidelity is sound (Carey & Rossler, 2023). Additional terms further define specific aspects of fidelity. Functional fidelity describes the degree to which performing a task within a simulation mirrors authentic experience (Carey & Rossler, 2023). Sociological fidelity refers to the degree to which interactions between participants replicate reality for learners in an interprofessional simulation experience (Carey & Rossler, 2023).

Simulation designers can choose from among several levels of fidelity. The level of a simulation's fidelity refers to its affinity to reality (Lioce, 2020). Fidelity level is a subjective construct that is sometimes described as low-, mid-, or high-level fidelity. Impactful SBLEs occur at every level of fidelity, provided the selected level aligns with the planned learning objectives and outcomes (Carey & Rossler, 2023). Structured debriefing experiences improve outcomes for simulations of all types and levels of fidelity (Carey & Rossler, 2023). Low-fidelity, less resource-intensive simulation designs are ideal for novice learners or for the development of new skills among experienced clinicians (Carey & Rossler, 2023). These scenarios permit learners to engage in repetitive practice of skills and may use task trainers or other tools to engage students. For example, many clinicians learned to administer injections using oranges as a stand-in for a patient or more lifelike anatomic model.

Higher-fidelity simulation models suit more complex learning outcomes and objectives but may be appropriate at all levels of learning (Carey & Rossler, 2023). These designs often employ sophisticated, interactive, full-body manikins with lifelike capacities to represent physiologic representations of health and illness in realistic

simulated clinical environments (Lioce, 2020). They may embed confederate actors to play members of the interdisciplinary team, and apply moulage, or use props and makeup to achieve physical and psychological realism. Psychological fidelity achievable with high-fidelity simulations is an essential element of knowledge retrieval and transfer of learning to practice (Carey & Rossler, 2023). In summary, low fidelity simulation introduces and grows knowledge, mid-fidelity simulation aims to develop competence, and high-fidelity simulation aims to synthesize knowledge and competency to cultivate performance (Carey & Rossler, 2023).

This study employed a high-fidelity SLE. Elements of the scenario were written as a planned scenario document that used the simulation template prescribed by the National League for Nursing. The scenario document included instructions for setup; manikin programming information; a script for the patient-manikin to speak; cues for the scenario confederates to use to prompt learners if needed; and a list of equipment and props to promote conceptual, psychological, and physical fidelity.

Debriefing

Immediately after the simulated patient encounter, student participants, observers, faculty facilitators, and content experts convened in an adjacent classroom for debriefing. Simulation debriefing is a facilitated, structured, collaborative, reflective discussion that aims to examine experience (Lioce, 2020). The goal of debriefing is to allow learners an opportunity to begin to assimilate new knowledge and apprehend meaning from the simulated patient encounter that will inform and improve future clinical encounters (Lioce, 2020). Additionally, simulation debriefing can foster reflective thinking among

learners and provide them with important feedback on critical thinking and skill development (Lioce, 2020).

The debriefing was conducted by a trained, experienced simulation facilitator. Students, faculty, and facilitators were seated in a semicircular or circular configuration to promote discussion and engagement. The simulation followed the Promoting Excellence and Reflective Learning in Simulation (PEARLS) model (Eppich & Cheng, 2015). A PowerPoint display prompted participants through each stage of the facilitated debriefing discussion. The PEARLS debriefing model led participants through a debriefing process, beginning with a reactions phase, in which students share initial reactions to their experience as a participant or observer using an emoji prompt, followed by a collaborative discussion to synopsize the encounter, discuss what went well, address and analyze areas for potential growth, and summarize takeaways. Please refer to Appendix K to view the Emoji Reactions document and Appendix I to view the PEARLS Debriefing PowerPoint. At the conclusion of the debriefing discussion, participants completed a digital evaluation of their simulation experience. Please refer to Appendix L for the simulation evaluation survey questions.

Data Collection Techniques

I conducted individual, semi-structured, in-person interviews with participants by appointment within two weeks of the conclusion of the debriefing session. The interviews were conducted in private, quiet classrooms and offices adjacent to the simulation debriefing area to ensure confidentiality and respondent candor. The space was outfitted with comfortable chairs and tables that were suitable for conversation and my handwritten notetaking. Interviews were audio recorded with the consent of respondents

to promote transcription accuracy. Prior to beginning the interview, the objectives of the research were shared, and participants completed both the informed consent document and the audio recording consent form. Please refer to Appendix M for the audio recording consent form and informed consent documents. The duration of each interview was 30 minutes.

During the interview, I posed the following questions and follow-up questions to interviewees, as shown in Table 1.

Table 1

Research Aims and Corresponding Interview Questions

Research Aim	Interview Question	Follow-Up Question
How do baccalaureate nursing students who participate in clinical simulations perceive and experience humility?	Can you describe what humility means to you in the context of nursing?	Tell me more about that. Can you tell me about an experience during your nursing clinical education where humility played a significant role?
	Reflecting on the simulation activity you participated in, tell me about a time that you were uncertain about, or felt open to revisiting your perspective about the patient's care.	Can you please elaborate? Did you revise your position, and if so, how did you revise your viewpoint? How did it feel to reconsider your original point of view?
What specific aspects of simulation design and implementation can contribute to the development of clinical humility among baccalaureate nursing students?	What aspects of the simulation activity do you think contributed to your openness to others' ideas or the change in your point of view about the patient's care?	How did you feel at the start of the scenario when you received the report on the patient? How did viewing the presimulation video impact you? Tell me about your experience with the orientation. Tell me about your experience with observing/participating in the simulation. Please tell me about your experience during the debriefing discussion.
What insights do baccalaureate nursing students who participate in clinical simulation have about the relevance of humility to professional development and professional identity?	In what ways do you think humility contributes to your development as a nursing professional?	Please tell me more. How do you think clinical humility shapes the identity of a competent and compassionate nurse? How might this simulation experience impact your approach to care and decision-making when you care for patients in the future?

Managing and Recording Data

Participant confidentiality was prioritized in the management and recording of data. Except for the informed consent document, no document contained the participant's identifying information. Documents for each participant were numerically coded to conceal their sources. Audio recordings and digitally generated transcripts were maintained in a password-protected file on a device in my locked office. Corresponding handwritten interview notes were maintained in a locked file drawer in my locked office. The records will be deleted and destroyed after three years to minimize breaches of confidentiality.

Data Analysis Procedures: Thematic Coding

I applied inductive thematic coding to analyze the interview data, which were constituted from audio transcripts of interviews and my correlated handwritten notes. The inductive, emic approach permits themes to emerge from data (Klugman & Lamb, 2019). I planned a semantic approach in which the analysis relied on the participants' expressed views. I reviewed the transcribed audio text and took notes to become familiar with the data. Initial coding followed.

In the initial coding, I reviewed transcripts and notes a second time to identify emergent themes, which were entered into a codebook that described each theme. This process was repeated to the point of saturation—until no new themes emerged. Once all tests were reviewed, I collated data groups that correspond to codes.

I used ATLAS.ti, a secure, web-based coding system that utilized military-grade encryption and complied with Global Data Protection Regulations privacy standards to protect data. ATLAS.ti housed transcripts and supported a second round of manual

coding and data analysis, which was intended to reduce data subjectivity, minimize interpretation bias, and curtail confirmation bias. Table 2 shows themes, code categories, and code arranged in relation to the research questions.

Table 2

Organization of Themes, Code Categories, and Codes

Research Question	Theme	Code Categories	Thematic Codes
RQ1	Self-Awareness/Recognizing Limits	Uncertainty, Fallibility, Role Limitations, Embarrassment	Being observed, boundaries, not sure, limits, feeling embarrassed, inexperience, medication errors, humbleness, not overconfident, needing assistance
RQ1	Awareness of Others/Openness	Patient-centeredness, Compassion and Respect, Teamwork and Collaboration, Normalizing Errors, Fallibility	Observing others, respect for colleagues, respect for the patient, making mistakes, openness to feedback, vulnerability, different viewpoints
RQ2	Psychological Safety/Nonjudgment	Fostering dialogue, Transparency, Setting expectations, Nonjudgment, Faculty approach	Confidential, preparation, orientation, discussion, supported, open-minded, roles, organized, ungraded, no-judgment zone, Vegas rules, faculty feedback

Research Question	Theme	Code Categories	Thematic Codes
RQ2	Normalizing/Managing Uncertainty	Complexity, Uncertainty, Knowledge gaps	Unsure, question, confusion, distraction, didn't know what to do, under pressure, OK to ask for help
RQ2	Mistakes as Opportunities	Debriefing, Critical self-reflection, Moral Imagination	Still learning, making an error was useful, realization, consequences, impactful, OK to make mistakes
RQ2	Working in Teams	Shared experience, Shared learning, Learning with (working in teams supported clinical humility)	Working as a group, learning from others, solving problems together, observing others
RQ2	Patient Centeredness/Authenticity	Fidelity, Realism	Nervous, human, real, technology issues, tech difficulty, listen, real life, felt real, felt connection, sounded real
RQ3	Lifelong Learning	Evidence-based practice, dynamic nature of science and health care knowledge	Continue learning, learning orientation, competence
RQ3	Ethical Caring	Acknowledge limits; Collaborative practice	Compassion, patient-centeredness, diversity, asking for help

Methods for Verification/Trustworthiness

Lincoln and Guba identified key criteria for assessing the trustworthiness and rigor of qualitative research. The criteria include credibility, dependability, confirmability, and transferability (Forero et al., 2018). Credibility attests to the degree to which the data accurately represent the true experience of the participants within the context that is the focus of inquiry (Forero et al., 2018). To address this criterion, I ensured prolonged engagement with the participants in the research setting to conduct in-depth interviews in person. Confirmability represents that measures are undertaken to reduce investigator bias (Forero et al., 2018). For this study, I collaborated with the reviewer, and the analysis of data was documented and shared with the reviewer. Weekly interview reflection sessions also assisted me to identify and reduce the influence of researcher bias. My use of ATLAS.ti was intended to further ensure objective data analysis and minimize the potential influence of researcher bias. Dependability refers to the extent to which the research could be repeated and yield similar results (Forero et al., 2018). To support dependability, detailed procedures for data collection and analysis were clearly documented. Finally, transferability represents the likelihood that the data generated by the study can inform practice in other settings. Qualitative research aims to describe and derive meaning from the unique experiences of participants (Klugman & Lamb, 2019). Therefore, it was not the aim of this research that its results be generalized to other populations. The study addressed the issue of transferability by engaging a substantial number of 19 interviewees (Forero et al., 2018). Multiplicity of data sources improves transferability (Forero et al., 2018).

Conclusion

Nursing education aims to cultivate knowledge, skills, and attitudes among nursing students that will enhance quality of care and patient outcomes. The demands of a continually evolving health care environment and the rapid pace of contemporary knowledge production urge an approach to nursing pedagogy that readies clinicians for the realities of practice in the face of uncertainty. Disciplines outside of health care and nursing, such as philosophy and psychology, have long valued humility as a positive quality (Wadhwa & Mahant, 2022). Within the clinical context, humility—reimagined as an attribute with features of self-objectivity, openness to one's fallibility, teachability, and willingness to revisit and reexamine one's ideas—may improve patient safety and outcomes through enhanced clinical judgment, improved teamwork and collaboration, evidence-based care, and ethical practice (Wadhwa & Mahant, 2022).

Previous research has examined conceptualizations of clinician humility from the perspective of patients and physicians. However, little is known about nursing students' lived experiences with and perceptions of humility in practice settings. This research undertook to discern the ways in which nursing students experience and interpret humility in the simulated clinical setting. The detailed methodological approach outlined in this chapter ensured ethical research practices and the quality and rigor of the data.

Chapter 4

FINDINGS

Humility has long been described within the disciplines of philosophy, psychology, and theology (Worthington, 2017). Health care disciplines have begun to use research to articulate the value of clinical humility to their practices (Michalec, Cuddy, et al., 2024). An array of studies in medicine, for example, have validated the perceived value of humility for core competencies including teamwork, collaboration, communication with patients and colleagues, empathetic patient care, and professional development (Huynh et al., 2021; Ruberton et al., 2016; Wadhwa & Mahant, 2022). Nurses are often the first health care professionals patients encounter when seeking care. They make up the largest proportion of professionals within health care, and, as such, they work as integral members of interdisciplinary teams to advance health (Smiley et al., 2023). Yet, as described in a review of the literature, there is little research that explores the contours of clinical humility within nursing. This research aimed to explore baccalaureate nursing students' experiences with and perceptions of clinical humility, and their self-awareness of their limitations as clinicians, within the context of SBLEs.

I asked:

- How do baccalaureate nursing students who participate in clinical simulations perceive and experience humility?
- What specific aspects of simulation design and implementation can contribute to the development of clinical humility among baccalaureate nursing students?

What insights does participation in a clinical simulation provide for baccalaureate nursing students about the relevance of humility in their professional development and/or

identity? The next sections will summarize the demographic survey and themes identified from the students' interviews.

Statistical Analysis and Results of Demographic Survey

Participants and Descriptive Statistics

This study included a convenience sample of 19 BSN degree students at a small, private university on the east coast of the United States. These 19 individuals participated in interviews. The response rate for the demographic survey was 100%. There were no cases of missing data. The sample comprised 15 students attending the university's traditional baccalaureate and four students enrolled in the accelerated hybrid baccalaureate nursing program.

Authenticity refers to the degree to which qualitative researchers illustrate the lived realities of participants (Amin et al., 2020). To further authenticate and contextualize the qualitative data, and to enhance transferability, the demographic survey queried respondents' work experience in detail. Participants reported varied work histories and some prior employment within health care. Sixty-eight percent (14) reported that they were employed at the time of the demographic survey. Fifty-eight percent (11) responded that they were employed part time. Five percent (1) reported full-time employment. Just over 10% (2) reported per diem employment. Twenty-six percent (5) reported that they were unemployed at the time of the interview. Nearly half (9) reported that their current employment was related to health care. Twenty-one percent (4) worked as medical assistants. Twenty-six percent (5) responded that they worked or had worked as a Certified Nursing Assistant. A combined 53% of participants indicated that they had other work experience in health care (emergency medical technician, patient care

technician, radiation therapist, scribe, student nurse extern, or veterinary technician). Twenty-six percent reported no prior health care work experience. As a consequence, the sample included participants with varied work histories and different levels of experience in health care.

Concerning gender, 79% of the participants were female and 21% were male. Fourteen of the participants' ages fell within the range of 18 to 24, and five within the range of 24 to 35. Of participants, 79% reported that they were in their fourth year of nursing school, and 21% reported that they were in their third year of study. All students were enrolled in the pediatrics course which is sequenced within the fourth year of traditional study. Students in the ABSN program may have calculated their years of study to include prerequisite preparation plus 14 months of the accelerated program they were completing.

Motivation for Studying Nursing

Humanistic adult learning theory urges that learning should be individualized and considers that adult learners are self-directed and values-driven (Mukhalalati & Taylor, 2019). Understanding motivations for nursing students' choice of career may help nurse educators (and by extension, simulation facilitators) to create curricula and design educational activities that better support success (McKenna et al., 2023). Participants reported motivations for studying nursing in the demographic survey. Sixteen (84%) credited interest in health care as the impetus for enrolling in the nursing program. The same number (84%) cited a desire to help others led them to begin nursing school, and one student (5%) reported that their need for job security prompted their enrollment. This aligns with recent studies that have suggested that intrinsic motivators such as altruism

and caring can be catalysts for students to choose to study nursing (Carillo et al., 2022; McKenna et al., 2023).

Unexpected patterns revealed in the demographic data offer insights into the students' social realities, which can illuminate understanding of their perceptions and attitudes around humility. For example, the majority of participants (74%) reported previous health care experience, and more than half (53%) reported employment in health care at the time of data collection. Many of the participants (63%) had experienced interruptions in their academic progress, which was related to unsuccessful course attempts.

Table 3 shows descriptive statistics for the study's participants. Figures 1 through 6 demonstrate descriptive statistics in graphic form.

Table 3

Descriptive Statistics of Participant Demographics and Background

Variable	Category	*%*
Age	18–24 years	74
	25–35 years	26
Gender	Male	21
	Female	79
Language at home	English	79
	Spanish	5
	Other (Serbian, French Creole, Arabic)	16
Current year of study	3rd year	21
	4th year	79
Previous health care experience	None	26
	CNA	21
	MA	16
	Other (PCT, scribe, MA, etc.)	37
Certifications	Yes	79
	No	21

Variable	Category	*%*
Employment status	Full time	5
	Part Time	58
	Unemployed	26
	Other (per diem)	11
Employed in health care	Yes	53
	No	47
Household income	25,000–49,999	42
	50,000–74,999	11
	75,000–99,999	5
	100,000 or above	21
	Prefer not to say	21
First in family to attend college?	Yes	53
	No	47
Why nursing?	Interest in health care	84
	Passion for helping others	84
	Job stability	68
	Influence from family/friends	63
	Other (medical aesthetics)	11
How was education financed?	Scholarships	68
	Grants	42
	Loans	84
	Personal savings	37
	Family support	47
	Full-time/part-time job	63
Future education planned?	Yes	79
	Undecided	21
Transferred from another program?	Yes	32
	No	68
Interruptions in progress?	Yes	63
	No	37

Figure 1

Age Group Distribution

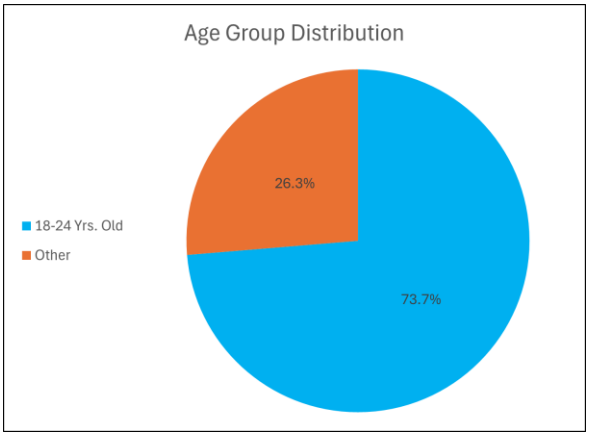


Figure 2

Gender Distribution

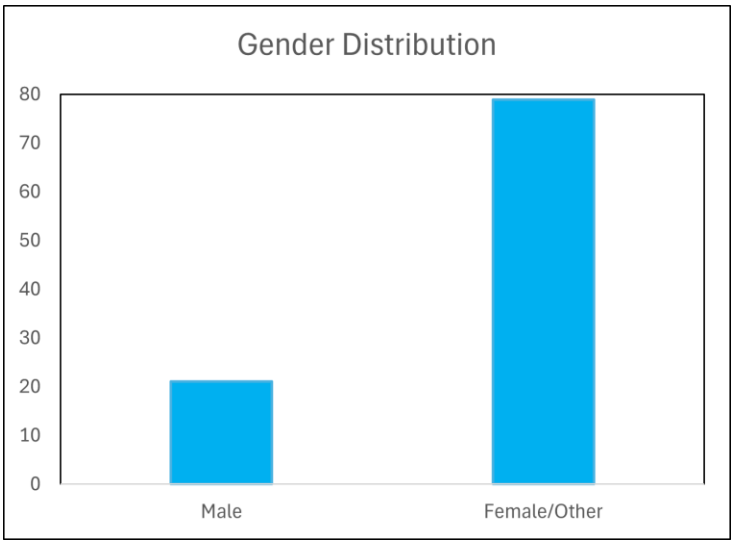


Figure 3

Language Spoken at Home

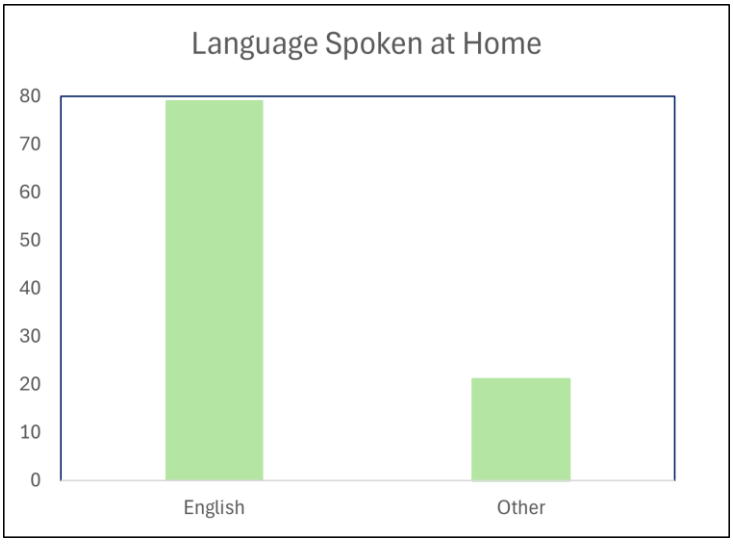


Figure 4

Current Year of Study

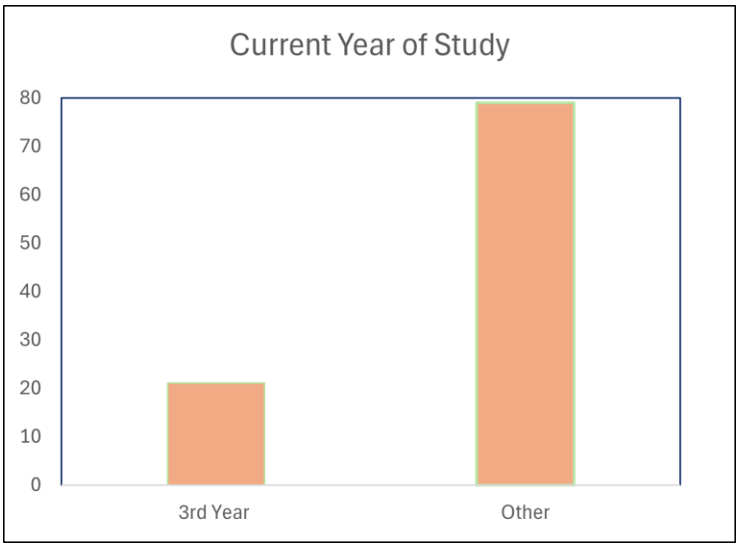


Figure 5

Previous Health Care Experience

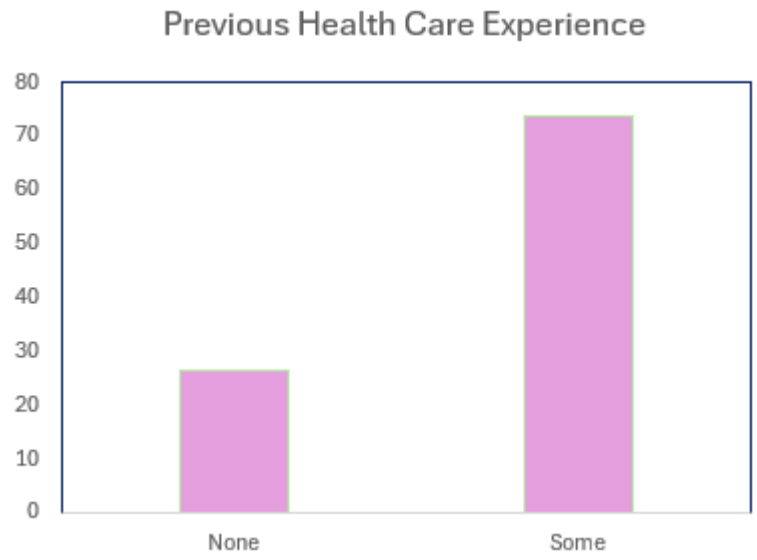
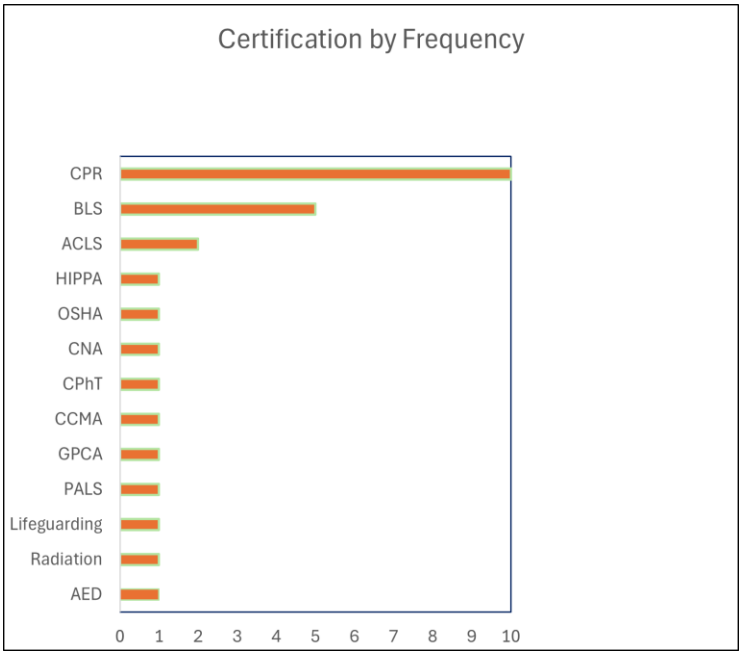


Figure 6

Certification by Frequency



Findings

The description and analysis of qualitative data provide valuable perspectives on students' perceptions of both humility and SBLEs. This section presents and defines nine themes that were developed from student interview transcripts: Humility as Self-Awareness/Recognizing Limits, Humility as Awareness of Others/Openness, Psychological Safety and Nonjudgment, Normalizing/Managing Uncertainty, Mistakes as Opportunities, Working in Teams, Patient-Centeredness/Authenticity, Lifelong Learning, and Ethical Caring. This section describes the themes organized according to the three research questions and provides illustrative quotes as exemplars for each.

Within the findings, unless otherwise defined, if only one exemplar is provided to represent students' experiences, the finding was limited to one of 19 students. This section applies the term "some" to describe response categories that apply to two to three of the 19 participants. "Several" is used to classify experiences that were recorded among four to seven participants. Response categories that were common to eight or more participants are described as "many."

Findings Related to Research Question 1

To address the first research question, I asked students, "Can you describe what humility means to you in the context of nursing?"; and, to follow up, I asked, "Can you tell me about an experience during your nursing clinical education where humility played a significant role?" Student responses coalesced into two overarching themes: Humility as Self-Awareness/Recognizing Limits, Humility as Awareness of Others/Openness.

Humility as Self-Awareness/Recognizing Limits

This theme describes simulation participants' perceptions of humility as awareness focused inward. Within the theme of Humility as Self-Awareness/Recognizing Limits, students described the relevance of clinical humility as a form of self-awareness that they associate with encounters with complexity and uncertainty in clinical environments. Code categories include uncertainty, fallibility, role limitations, and embarrassment. The frequency of responses in each of these code categories is presented in Table 4.

Table 4

Trends for RQ 1 Theme 1: Humility as Self-Awareness/Recognizing Limits

Code Category	Frequency
Uncertainty	Some
Fallibility	Some
Role Limitations	Some
Embarrassment	Several

Uncertainty. Within this code category, students' comments suggest that a humble acknowledgment of uncertainty could serve as a bridge to deeper understanding and improved care. Some students viewed recognizing uncertainty as a strength. Student 02 commented:

> It means knowing when to step back, knowing your boundaries. There are sometimes where a patient might ask you questions that you don't know the answer to, and if you don't, that's OK. You have to take yourself out of that situation, be like, "I'm not sure about that. Let me ask the doctor," or "I could get someone else to speak with you about that topic."

In this instance, the student oriented their understanding of humility around self-awareness of limitations. Although the quote illustrates an association between humility and knowledge of limitations, the student also made a positive association between humility and empathetic agency.

Student 15 described her clinical faculty's humility as a strength that engendered her confidence:

> Some leaders don't experience humility and think their role gives them license to act a certain way. I think humility in a leader is important because you need people to trust you. I really enjoyed learning from my professors because of that. One example was my maternity professor. She definitely knows what she is talking about, but sometimes she will say "I'm not sure about that—let's look it up together." Humility is acknowledging what you don't know.

Fallibility. Within this code category, students described clinical humility as an awareness of their own capacity to err or misjudge situations. Two students associated humility with fallibility. When asked to describe humility in the context of nursing, Student 08 posited that humility was "not being overconfident." Asked to elaborate, she recounted misreading an intravenous fluid label aloud to her clinical faculty in the hospital:

> Yeah, I don't know why this keeps coming to mind. It was when I was giving medication, and I was getting fluids, and she asked me to read the fluid back to her like I would in a report. OK, and I read it, but it wasn't smooth. (Student 08)

Student 11 described the first time he attempted to administer an injection:

> It was a Sub-Q injection, and I was not at my 45-degree angle. I was ready to give it fully [at] 90 degrees, and that was when the professor had to say "Listen, I'm sorry, I'm sorry, like hey, you know what? You look nervous." She didn't embarrass me in front of the patient, thank God. But it was more of like, "Hey, you look nervous, I'll take care of this one, you can do meds on the next one." . . . I'm so happy she stopped me from giving a Sub Q, but at a 90-degree angle.

Role Limitations. Within this code category, students associate humility with the constraints of their position or duties. Two students referenced their experiences in the student role at clinical agencies in relation to humility. Student 01 associated humility with the intrinsic limitations of the role of the student nurse:

> But you also need to know, as a student nurse, that you're mostly there to observe. And sometimes they might ask you to do something that you're not comfortable with, or you don't know how to do. So that's when I guess that part of humility comes up. Yeah. Knowing when to say, and being comfortable and confident saying, "I do not know how to do this yet. I'm not yet qualified."

Another student described awareness of limitations as a strength. Student 13 reflected on her first day in the maternity clinic, supporting an exhausted expectant mother through intense labor pains, and the limits of her role as a student in a health care setting:

> In that moment, nothing was working, so I literally could [only] use humility and compassion for support. That's how it was left for me. So, for her, it just happened. I [was] next to her, like, "OK, you are not alone, we are all in this together, like we can fight this together, like you got this. Remember every single person in this room is here to help you."

The comment evidences the student's awareness that humility, understood as self-awareness, can clarify roles, and catalyze agency in the context of patient care.

Embarrassment. Within this code category, students associate humility with an awareness of embarrassment or feelings of awkwardness related to their own actions or those of a classmate. Humility as embarrassment could be firsthand or secondhand and accompanied mild to substantial emotional discomfort. Five students' discussions of their perceptions of humility conveyed unexpected findings about how they experienced and viewed embarrassment. First, participants recounted feeling embarrassment in both simulated and practice settings. When asked to define humility in the context of nursing, Student 04 immediately referenced an experience in simulation when he equated humility with embarrassment: "I would say, well, in the context of nursing school it would be feeling embarrassed in front of your peers."

In a follow-up response, the student described how he felt at the moment he realized he had administered a dangerously high dose of a powerful anticonvulsant medication to the pediatric manikin during his simulation. He emphasized that even this form of humility brought an opportunity for growth: "I mixed up the meds and administered the wrong dose. And as a part of the simulation, the patient crashed. Yes, and that was a really, really good experience, and it was a really, really good experience" (Student 04).

Notably, students who associated humility with episodes of embarrassment in simulated settings assigned more positive value to the experience as opportunities for growth. This suggests that psychological safety need not preclude or foreclose on errors or negative feedback for a deficient performance.

Students who described embarrassment in patient care settings assigned less value to their experiences. For example, student 09 recalled feeling embarrassed during a clinical experience at an agency when she felt demeaned by a staff nurse's comment to her patient: "Humility is humbleness. Especially in the hospital during clinical. She said, 'She's just a student.' I felt embarrassed. It's embarrassment by others. How others view you" (Student 09). The same student contrasted her secondhand experience with embarrassment in a simulated setting:

> Yeah, I think embarrassing moments definitely stick with you—and even witnessing embarrassing moments. Like for example the students who gave a whole lot of medication [in simulation]. Yeah, so even witnessing something—that is something that doesn't leave you, and it is something that you don't forget. So, I think it helps mold you, because it's something that stays in your mind. (Student 09)

The student's comment reveals that observing others experience humility as embarrassment during a clinical simulation positively impacted her learning. Student 12 described sometimes feeling embarrassed during a simulation experience when their omissions or errors are uncovered during debriefing, or when students simulating with them err in calculating or properly administering a medication. However, the student qualified the experience, stating, "it is better to have a chance to do it in a simulation lab and make a mistake where you know nobody's getting hurt" (Student 12).

Nonjudgment and receiving constructive criticism also seemed to mediate how the students valued experiences with embarrassment, even in practice settings. When she recounted her embarrassment at mispronouncing the name of an intravenous fluid when

reading the label, Student 08 expressed her appreciation for her faculty's constructive feedback:

> It's definitely, like, because when she had asked me to say it in the moment, I was like, um, like, duh, like, you just read it off? Like, I'm confused. So, I was a little embarrassed. But then after . . . she [the faculty] taught me the right way, I was like, oh, that makes so much sense. I felt like I gained more from that.

The student's response conveys that her faculty's response focused on the student's behavior, and not the student. In other words, although the student felt embarrassed about her error, her faculty's response was received as constructive criticism, rather than a subjective opinion about the student herself.

Student 11 recounted a near miss error in clinical: "In [medical surgical clinical], I started to administer a med injection with the needle at the wrong angle. The faculty stopped me. It was embarrassing, but I am so glad she stopped me."

Taken together, students who equated humility as embarrassment consistently saw their experiences with this form of humility as profoundly impactful. Students more often assigned positive value to experiences with embarrassment that occurred in simulation-based learning, such as those recounted by Students 04, 09, and 12 regarding a medication error in the pediatric simulation scenario. Students who experienced or even witnessed embarrassment in simulated settings viewed those experiences more positively than those who recounted feeling embarrassed in clinical practice settings. Students who described humility as embarrassment in reference to simulated clinical experiences were more likely to recognize their experience as a natural aspect of learning in a controlled environment. Occasions for constructive faculty feedback, such as those consistently

present in structured debriefing, may help to shape students' perceptions of embarrassment into opportunities for learning and professional growth.

Conversely, students used more negative language when they described humility as embarrassment in the in vivo clinical setting. For example, Student 08 chose self-abasing language, "duh," to describe misreading a medication label at a clinical site. Student 09 described her experience with embarrassment related to the staff nurse's response to her presence in a patient's room as "not nice." Here, too, constructive criticism and faculty approach seemed to make a positive difference.

Humility as Awareness of Others/Openness

This theme describes students' perceptions of humility that conveyed a prosocial, heightened awareness of others and openness to new perspectives and learning (Fang et al., 2019). This theme does not include data that impart self-interest, such as awareness of others' perceptions of the respondent, as may exist in experiences with embarrassment or receiving feedback. Code categories include patient-centeredness, compassion and respect, teamwork and collaboration, normalizing errors, and fallibility. The frequency of responses in each of these code categories is presented in Table 5.

Table 5

Trends for RQ 1 Theme 2: Humility as Awareness of Others/Openness

Code Category	Frequency
Patient-Centeredness	Some
Compassion and Respect	Some
Teamwork & Collaboration	Some
Normalizing Errors & Fallibility	One

Patient-Centeredness. Within this code category, students associate humility with a singular focus on the primacy of the patient's unique needs and circumstances. Two students highlighted the centrality of the patient and the value of respectful care when discussing humility as other-oriented. Student 19's view was emblematic: "So, to me, I believe humility is being able to separate yourself from your own world and care for others in a way that your focus is just on the patient and not on anything else that's going on."

Student 06 emphasized the intricacies of human health: "Humility to me in the context of nursing is to stay grounded in the idea that everyone's bodies are individual and may react to certain different scenarios differently than others." Asked to elaborate about an experience during her clinical education where humility played a significant role, the student, who had health care experience in an ancillary role offered, a compelling example of the relationship between other-oriented humility and patient-centered care:

> So probably the second day on med-surg, my med-surg clinical, me with my GREEN hair up on the top of my head. I was taking care of a patient. I had a night clinical, and I was walking out saying goodbye to my patient and my patient handed me the call bell. And she wasn't really verbal, but I thought maybe she was prescribed something since she was withdrawing from alcohol. OK, and she was prescribed Ativan. I had walked into the room, and she was a little out of it, and I was like, oh the doctor must have given [the medication] to her. I didn't look to see when the medication was given. I was like, "Oh, so I'll turn off the TV for you. Good night. Can I do anything else for you?" She handed me the call

> bell, and she was like tapping on the call bell. Nothing was really like clicking. I was like, "Oh, do you want me to turn off the light?" [I was] thinking that she wanted to go to bed. I turned off the light. So now I turned off the TV, I turned off the lights, and I put down the call bell. [I asked] "OK, can I get you anything else?" She hands me the call button, starts banging on the call bell and presses her own call bell light! She was seizing. Oh, and she was trying to alert me that she was seizing. Oh my God . . . it finally clicks, but after a good three minutes of me going back in. I had no idea what was going on and, you know, I was kind of just assuming that she was given medication and maybe that's why she was acting the way she was acting. (Student 06)

In this negative case, the student's explanation shows her assumptions about the patient's level of alertness caused her to misread the patient's communication and signs of an impending seizure, and thwarted patient-centered care. For this student, a lack of openness to the patient equated to a lack of humility that could have endangered her patient.

Compassion and Respect. Within this code category, students' comments associated humility with low-self focus and an empathetic stance. Three students related humility in the context of nursing to compassion and respect, recognizing the nurses' responsibility to care for vulnerable others and openness to their own vulnerability. Student 07 discussed compassion and respect: "You want to treat your patient with compassion and respect. You know, they're already vulnerable. They're in the hospital. You're taking care of your patient maybe at their lowest point" A second student

described humility as an awareness of the patient's vulnerability in discussing her interaction with a maternity patient who had an abusive partner:

> So, I think that humility means being vulnerable with other people. Yeah, I think vulnerability. In my maternity clinical, I actually had a patient who was being abused by her spouse. Having to communicate with the patient and having to have that level of understanding and, you know, communicating with them like you have to be vulnerable too. (Student 11)

Student 18's comment considers the perspective of patients' families:

> I think a big part of the humility part of our career is like just remembering that we are all connected too. We should all care for each other as if we're caring for someone that is dear to us, you know.

These students' responses show they conceptualized humility as caring for and about others.

Teamwork and Collaboration. Within this code category, students' responses foreground the importance of humility as openness to working effectively with others. Their transcripts spotlight nurses' interdependence with their colleagues, secondary to both professional and personal limits. Awareness of others is evident in the students' discussions about humility's role in teamwork and collaboration. Asked to define clinical humility, two students offered team-focused responses:

> Humility means to me not feeling the pressure to be narcissistic and, in the field, that means being humble and not having the need to be number one for everything, and leading others to grow together in the field. It also helps me with

> working with others, understanding their strengths, weaknesses, and working together as a team. (Student 07)

Asked to define humility in the context of nursing, Student 13 also stressed the interdependence of team members:

> For me, as a nurse and a future nurse, I feel for me humility means not just caring about yourself but also caring for all those and also respecting our boundaries. OK? Even though future nurses or present nurses are there to help our patients, we also have to understand that . . . we cannot do everything.

Normalizing Errors and Fallibility. Within this code category, students' transcripts draw attention to humility as a stance that embraces human imperfection. In this view, humility allows for human frailty, and anticipates the messiness of human imperfection and integrates it into the clinical workplace. The data show some intriguing perspectives among students. For example, one student who associated openness with humility cited openness to error as an example. Student 03 stressed the importance of normalizing errors: "So, when I think of humility in nursing, it's more like being humble, I guess. Being aware that everybody's capable of making mistakes, and it's not really a reflection on the person's ability to do their job." This comment illustrates a view of humility still as other-oriented and open both to others' perspectives and to new learning. The participant's comment indicates an understanding that errors are part of our shared experience. The student's approach shifted the focus of humility outward and away from shame to encourage transparency and acceptance of others. When asked to give an example of a clinical experience in which humility played a role, the student described a

recent patient encounter in which she struggled to comfortably position her patient for feeding:

> So, there was this one time we were in clinical. And it was the patient. He had a weak neck. So, his neck would just kind of slant backwards. And we were doing feedings. So, I sat him up, I put a pillow behind his head, but his head was still kind of leaning back a little bit. And I thought that it was enough for just that one pillow, because that's how it had been in the book. OK. But then my professor walked by, and she saw how his neck was, and she was like, "I don't think that's an optimal position for feeding." OK. So, she kind of got some blankets and made sure that he was fully aligned. And he was . . . able to eat better, and that's when I was like, OK, I should have used my critical thinking, like, at that moment, just you know, make his neck straight. (Student 03)

This quote illustrates that students understood that humility means that others can view the same situation differently, and that divergent viewpoints can add value. Moreover, the faculty member modeled other-oriented humility in her collaborative approach to repositioning the patient, which helped to normalize the student's error and foster openness to new learning.

Preliminary Analysis

A preliminary analysis of students' transcripts suggests key insights regarding Research Question 1. The interview data shed light on the underlying dynamics and inherent challenges in studying humility. While broadly, the analysis identified two overarching themes, Humility as Self-Awareness/Recognizing Limits and Humility as Awareness of Others/Openness, within each of these themes, students' responses

produced multiple code categories. Within the first theme, students described humility as both knowing (boundaries, limits) and not knowing (uncertainty). Within the second theme, awareness of others, students focused on humility as a relational quality. They referred to openness to explain humility as awareness of others, including patients, families, and colleagues. Students described humility as both dispositional and relational, as in students' narratives of experiences with embarrassment. Finally, the students' narratives illustrate important commonalities between clinical humility and aspects of intellectual, cultural, and narrative humility. A more comprehensive discussion of qualitative findings within the context of relevant simulation, humility, and medical and health humanities scholarship follows in Chapter 5.

Findings Related to Research Question 2

To explore the second research question, I asked students, "What aspects of the simulation activity do you think contributed to your openness to others' ideas or a change in your point of view about the patient's care?"; and, to follow up, students were asked to tell me more about how they felt during each phase of the simulation experience. Student responses align with five predominant themes: Psychological Safety and Nonjudgment, Normalizing/Managing Uncertainty, Mistakes as Opportunities, Working in Teams, and Patient-Centeredness and Authenticity.

Psychological Safety and Nonjudgment

Within this theme, student narratives describe structural and social aspects of simulation-based learning that foster intellectual openness and critical self-awareness. Lim (2017) wrote, "Clinical humility results when the imperfections of medicine meet the honesty of the practitioner" (para. 7). Code categories include fostering dialogue,

transparency and setting expectations, nonjudgment, and faculty approach. The frequency of responses in each of these code categories is presented in Table 6.

Table 6

Trends for RQ 2 Theme 1: Psychological Safety and Nonjudgment

Code Category	Frequency
Fostering Dialogue	Some
Transparency and Setting Expectations	Some
Nonjudgment	Some
Faculty Approach	Several

Fostering Dialogue. Within this code category, students' comments suggest that the physical environment in the debriefing classroom supported psychological safety and contributed to their intellectual openness. One student noted that the layout of the physical space used for pre-briefing and debriefing supported open discussion and engagement:

> "I like how we sit in the U-shape. So, it's an open discussion, everyone's like, "Hey, you did this, this, and this, I personally would have done it like this." She continued, "Yeah, like if we were all sitting back-to-back, I feel like it wouldn't be that easy. I feel like it wouldn't be as effective. . . . Everyone's looking at each other. Everyone is just talking . . . and it adds up to such a good game plan. No side conversations. No, we have no choice because everybody's looking at everyone. (Student 11)

The student's description of the seating arrangement accurately reflects the design of the space, in which participants, facilitators, and faculty content experts sit facing one

another, shoulder to shoulder, to permit open exchanges of ideas and equal status seating. The student's comment underscores the ways in which the debriefing room seating plan encourages an open exchange of ideas and intellectual honesty among participants. Valuing the contributions and perspectives of others and receptivity to opposing views are consistent with humble dispositions and clinical humility (Wadhwa & Manhant, 2022).

Student 15 recalled the way the introduction to the simulation day influenced her willingness to participate openly in the debriefing dialogue: "They say that's a safe zone, so you can freely voice your opinion and then clarify things that are in the dark. . . . It's always said, there are no wrong questions." The student's comment describes structures that are embedded into SBLEs to cultivate a culture of learning. Aspects of the introduction are scripted to encourage participants to feel safe asking questions and to participate without fear of judgment.

Transparency and Setting Expectations. Within this code category, students' comments describe how aspects of the SBLE that established trust through transparency and clear expectations fostered humility as receptivity to new learning, realistic expectations, and an awareness of their interdependence with colleagues. Two students referred to the role of presimulation, pre-briefing, and orientation in cultivating their openness to the experience. One student described the importance of presimulation activities and assignments students complete in advance of the SBLE to review the patient's case, important concepts, and skills that may be needed during the simulation. Student 02 summarized the impact of receiving the patient's case and reviewing it in advance of the SBLE: "So I feel like it really did just help calm me down. It really

prepared me well." A second student conveyed the importance of discussing roles and expectations during the pre-briefing phase of simulation.

> Um, well, going back to . . . the preparation that I mentioned before, I feel like I was pretty prepared, and I was pretty confident on what to do because it was organized. Like, me and my secondary nurse, my partner, we pretty much organized the roles, and I feel like in that phase, I think we did really well in handling the positioning, like making sure oxygen is up there; just pretty much all the priority interventions. We handled it properly because of that organization. (Student 04)

This student's reflection suggests that opportunities in pre-briefing to clarify roles helped them to set realistic expectations for themselves in the SBLE. Understanding the need for preparation and their interdependence with peers conveys an appreciation for humility in their approach to patient care. It also suggests that on some levels, psychological safety in simulation may be peer-generated (Purdy et al., 2022).

The same student referenced their orientation to the simulation environment and equipment when discussing aspects of the SBLE that enhanced their openness. Participants received a full orientation to the patient's room, care equipment, and the manikin patient. Student 04 recounted:

> It wasn't my first time being oriented to the room, so we were kind of familiar with it. OK. But it was very thorough. They showed us the respirations, they showed us all the equipment around the room, the computer, the patient.

The student's comment associates familiarity with trust and openness, which underpin psychological safety (Rudolph et al., 2014).

Nonjudgment. Within this code category, students described how aspects of the SBLE that conveyed impartiality and nonjudgment allowed them to be more open and attentive, and offset their fears of making errors. Three students' transcripts emphasized aspects of the simulation that cultivated a judgment-free atmosphere that enhanced their openness to new points of view, candid feedback, and perspective-taking. Student 04 described the interplay between dialogue, openness to feedback, and learning:

> You talk with other people and discuss what stuff you did OK and what stuff you did bad, and everybody tells you their opinion. We go around the room, and everybody says their opinion. That opens, kind of keeps you having an open mind, and saying, "OK, I made a mistake here," or "I could have done that better. Maybe next time I'll do it another way."

Student 17 reflected on the importance of faculty-generated psychological safety, nonjudgment, and the formative nature of her SBLE to openness to learning:

> Um, I think sometimes, when we go in there and, like, I forget, there was one time when we did sim, and we were told, "Oh, this is going to get graded," and, I think when it was that, but that wasn't even true, because the professor didn't know that, so, she was kind of telling us, "No, it is graded," and we were kind of, like, "What?," and so, like, that, in a sense, was what puts stress onto the situation that kind of makes you feel like, "All right, I just gotta do what I gotta do to get a good grade." Whereas, when we go in, and they tell us, "All right, we're gonna do a sim, like, this is not graded. We just . . . want you to learn something from it," rather than this negative connotation to it. It kind of puts the positive connotation

> and kind of makes me more open to learn something from it, rather than being reserved and feeling like I'm being written up.

Student 05 corroborated the value of nonjudgment to openness in simulation when she described aspects of simulation that contributed to her openness and perspective-taking:

> The no judgment zone. . . . Well, from the beginning of the scenario, the staff actually told us whatever happens in the sim lab, we have to call it whatever happens, Vegas rules. So, with that, it's not just that, but also my colleagues, who were able to work within that zone. Like everybody is very open-minded to what others are saying. It's not like, oh, no. If what you say is not right, even if they disagree with you, it will be in a very polite manner, and it will give you the reason why it's not right, so it will help for you to learn. It will be like, "Oh, I wasn't thinking about that, but thank you for letting me know [about] that."

The student's comment suggests that staff and faculty facilitators who stress confidentiality and nonjudgment in simulation, referencing "Vegas rules" to reinforce that policy, helped her to set aside any fear of judgment and enabled her to lean into interpersonal exchanges during the SBLE.

Faculty Approach. Within this code category, students discussed the influence of their faculty member's behavior on their openness to learning, inclination to ask questions, and receptivity to feedback in the SBLE. When students perceived that faculty sought to humanize their learning experience, the faculty opened the door to clinical humility for students in the SBLE. In describing aspects of simulation that enhanced their openness to changing their perspective and other points of view, five students reflected on faculty attitudes and approaches that enhanced their openness to new perspectives

during the SBLE. Student 03 stressed the impact of her faculty's approach when she described her faculty sharing logistics and expectations for student conduct during orientation: "It kind of sets the tone. OK. The personality of the instructors kind of shines through during orientation." Another student stressed the impact of his faculty member's candid approach to feedback in debriefing:

> When I was doing the head to toe, I had my plan and I thought, "I know that I have to talk pretty good"—but it ended up not that I missed a lot of stuff. My professor helped me, so afterwards, I felt more confident. (Student 04)

A second student stressed that she preferred an affable faculty approach in simulation: "I feel like when you have good instructors that make it easier for you to revisit things, it makes it easier for you to [ask questions]" (Student 12). Asked to elaborate on what type of faculty encouraged questions, she added: "One that isn't like, intimidating. OK. And they tell you before you go in there that it's OK to ask questions. It's OK to ask questions" (Student 12). Student18 reflected on how she felt when her faculty used a gentle, matter-of-fact approach to soften negative feedback on her delayed administration of medication during a simulated seizure scenario:

> It was very lighthearted, and it didn't come in a malicious or judgmental way, or to make me feel less of anything. It was a very—I love criticism, but . . . it's the way that it's given to us that makes a difference. Because if it's lighthearted, and we can kind of giggle about it, that is really helpful for me, to know that I did not feel bad, but like, my gosh, how did I do that? And then I kind of retain it better and remember it better, and you're a little more relaxed.

Students' preferences for faculty approaches varied. For example, Student 08 underscored her preference for direct feedback from faculty about misreading a label: "She is very blunt, but I like it." The faculty's approach to the simulation activity and the learners may permit students to overcome barriers to otherwise uncomfortable aspects of humility to critically self-assess and entertain new perspectives and approaches to patient care. In this way, the faculty approach appeared to underpin the safety of the learning environment for students.

Normalizing/Managing Uncertainty

Within this theme, student narratives describe aspects of the simulation that caused them to experience or witness uncertainty. Students referenced the complexity of the scenario when they discussed aspects of the simulation that caused them to revisit their thinking or fostered critical self-reflection and humility. Scenarios often require students to weigh priorities and make quick decisions. This can highlight knowledge gaps and skill deficiencies. The frequency of responses in this theme is presented in Table 7.

Table 7

Trends for RQ 2 Theme 2: Normalizing/Managing Uncertainty

Code Category	Frequency
N/A	Some

One student recalled struggling to set care priorities and implement critical interventions while simulating care for the pediatric patient during an asthma scenario:

> I really just didn't do what I was supposed to be doing. We raised the head of the bed, and I think that's exactly what happened. Her [oxygen saturation level] kept on dropping, so we turned up her [oxygen]. OK. Maybe to four liters. OK. We

> went from two to four. Maybe she didn't have the nasal canula. I think she didn't have oxygen on. She didn't have it on. She didn't have oxygen on at all. So, I raised the head of the bed. I put her on two liters of oxygen. . . . And then, I did patient education for medication, I administered the albuterol and I did the education for administration through the spacer. We did her vitals. Her [oxygen saturation] continued to drift downward. (Student 06)

These firsthand experiences may contribute to students' understanding of the importance of clinical humility to professional nursing practice, as they require students to confront knowledge gaps in real time and to be critically self-aware. For another student, observing her colleagues struggle to help their simulated patient breathe in the SBLE helped her to recognize uncertainty and normalize help-seeking:

> I think even with the asthma patient, that simulation taught me it's OK to ask for help if you're unsure about something. It just seemed like they didn't know what to do, so they were just kind of doing anything. I think that definitely shows that as a nurse it's OK to ask for help sometimes too, because you're not going to know everything. (Student 02)

One student described how the fidelity of the SBLE to the practice environment exposed the boundaries of their knowledge and skill. Student 04 recalled the stress he felt when alarms on the simulated patient monitor began to ring during his patient's seizure: "The patient was seizing, and I was, you know, there was a beeping going on. Oh, wow. There were people yelling. Wow. So, I felt under pressure."

In simulation, when students encounter discomfort associated with uncertainty, time constraints, or unexpected patient behaviors or responses, they have opportunities to

perceive that in nursing and health care professions, competence is an outgrowth of continual professional development rather than mastery learning. Ford et al. (2024) asserted, “It is important to note authentic learning requires some risk and transformative learning requires critical reflection that can include uncomfortable feelings of guilt and shame before new understandings and transformation can occur” (p. 3). Previous research has supported the value of simulation learning to self-awareness and self confidence in stressful clinical scenarios (Hustad et al., 2019). Highly realistic simulation experiences, like the ones Student 04 recounted, may spotlight knowledge gaps and cause students to confront the unpredictable nature of health care to make palpable the need for ongoing professional development and practice.

Mistakes as Opportunities

Within this theme, five students’ comments suggest that aspects of the simulation provided space to critically reflect on their experience, excavate errors, assess their limitations, and enhance understanding. The frequency of responses in this theme is presented in Table 8.

Table 8

Trends for RQ 2 Theme 3: Mistakes as Opportunities

Code Category	Frequency
N/A	Several

Exemplars show that through their engagement with the SBLE, participants recognized competence as an ethical obligation and were cognizant of factors that would diminish the quality of their patient care. Student 12 described simulation errors as

growth opportunities: “It’s OK to make mistakes when you’re in the simulation because we’re still student nurses, and we’re still learning.”

Student 04 reflected on the debriefing experience as an opportunity for candid self-assessment and openness to other perspectives:

> I think it had a pretty big impact on me—seeing where I made the mistake. We went thoroughly through all the steps that I did wrong, and that was definitely helpful to me. I definitely feel more understanding of others making mistakes, I guess, and the clinicians that you say make mistakes.

The student’s comment shows intellectual openness—both in rethinking his approach to administering a medication and in reevaluating his assumptions about other clinicians’ errors.

Student 13 reflected on the moment she identified erroneous assumptions about her simulated patient’s mother’s need for support services. The student explained how she deconstructed her thinking and found a new perspective:

> I don’t know, for a certain reason, I was like, OK, the mom is staying at home, mom, the dad is literally, when it comes to financial wise, the dad is helping in the process, and then she just has to be at home, and take care of the child, that’s all her work. I related it to my personal life. My stepmom has twins. In my country, moms have more support. The community and family step in and come together to help moms raise children. I reconsidered the scenario and the mom’s needs by the end of the day. Just because she was a stay-at-home mom doesn’t mean she has support. (Student 13)

The transcript excerpt suggests that the student's engagement with the patient's story during the SBLE exposed her assumptions and afforded an opportunity to reevaluate her thinking.

Students' comments showed that they drew connections between critical self-appraisal around errors and potential impacts for patient outcomes. The transcript data suggest students were able to accept themselves as fallible beings and reject the comfort of illusions about themselves as clinicians. Student 08 framed her error in misreading a label as an opportunity for growth: "It is crazy how I have been working in the hospital so long, and I did not know how to read that (label). It showed me how much I don't know and how much there is to know."

Student 04 offered a similar takeaway after administering an overdose of a medication during his pediatric simulation:

> I felt like experiencing a real error was very useful for my knowledge. It was just very, very useful to all of us, not only me but [people] experiencing an error, because errors do happen, and they usually get brushed off in the simulations. I get it, but I feel like showing the consequences of each error, small or big. In my case, it was big, it was really helpful in solidifying the knowledge I got. I would really appreciate it if people talked about theirs—if every error that happened was shown what consequences it [has].

The same student added that he saw opportunities for growth even with experiences of embarrassment: "I think embarrassing moments definitely stick with you and even witnessing embarrassing moments. . . . So I think that helps mold you because it's something that stays with your mind" (Student 04).

Student 02 emphasized that mistakes in simulation are opportunities to improve competence and protect real patients: “I prefer making all the mistakes that I need to make in simulation to making a mistake in the actual world.” These student quotes illustrate that simulation-based learning offered students a space to deepen self-awareness and recognize their ethical responsibility to deconstruct habits of practice and perception that can negatively impact the patient’s care.

Working in Teams

Within this theme, students described times they drew understanding from shared interactions, discussions, or experiences in simulation.

Table 9

Trends for RQ 2 Theme 4: Working in Teams

Code Category	Frequency
N/A	Some

Three participants’ transcripts revealed that engaging with other students during the SBLE helped them to construct meaning from a shared experience. Student 09 reflected on opportunities during her simulation orientation to work with her peers to practice assessing the simulated patient’s breath sounds:

> It felt great. I think we had a really good chance. We listened to the patient’s lung sounds, and we were able to listen to . . . crackles, and the difference between crackles and normal [breath sounds]. I think that went really well. Everyone had a chance to listen, we all heard the same thing, which was nice that we all came to an agreement.

In this example, students used their collective assessment skills and worked as a group to make sense of shared sensory data gathered in a group assessment activity during orientation to the SBLE. In this way, the students worked as a team to construct a shared mental model of "crackles," an adventitious breath sound they may never have heard in vivo. Listening and practicing together, through a process of comparison, dialogue, and validation, the students journeyed from perception to understanding.

Student 04, who reflected on observing his colleagues simulate, described teamwork and shared learning from the viewpoint of a nonparticipant observer. In discussing lessons learned about therapeutic communication from his student colleagues, he recounted:

> It impacted me. Not to say that I did it wrong, I did it differently. And there were always helpful tips and tricks that I could see from them and learn from them. Well, one thing that I struggle with the most is communicating with the patient. Seeing their openness, their confidence, what questions they ask, I feel like it really helped me in asking my questions and being more confident around the patient and . . . the family. (Student 04)

In this case, the student gleaned new knowledge through his peers' modeling effective communication skills during the simulation.

Participants also saw value in observing others work together to solve problems, even when their efforts were not immediately successful. Student 09 reflected on observing her colleagues work together to help their asthmatic patient during the pediatric simulation:

> When that patient started crashing, it was nice seeing them trying to figure out what to do. Same thing with the asthma patient. Even though they weren't making the right intervention, it was still nice to see that they were trying to figure it out. They were talking with each other, like, "What do we do at this point?"

Student 08 echoed her classmates' views on the benefits of observing others simulate when asked which aspects of the SBLE influenced her openness to changing her perspective on the patient's care. The student described how it felt to observe her classmates simulate caring for their pediatric patient: "I would say being able to watch other people handle situations, because then it gives me a different perspective on what I would have done versus what they're doing."

The students' reflections show that the SBLE may offer valuable opportunities to adopt a low self-focus, team-oriented approach, and to learn with others. The transcripts suggest that these opportunities may be available to simulation participants and to non-participant observers.

Patient-Centeredness and Authenticity

This theme captures students' experiences that demonstrate they adopted a humanistic focus during the SBLE, in which respect for their simulated patient's unique environmental, social, or physical needs and preferences underpinned their care. Consistently, interviewees' transcripts connect students' perceptions of realism in the SBLE with patient-centeredness. Code categories included realism and fidelity. The frequency of responses in each of these code categories is presented in Table 10.

Table 10

Trends for RQ 2 Theme 5: Patient-Centeredness & Authenticity

Code Category	Frequency
Realism	Some
Fidelity	Some

Realism. In this code category, students discussed that aspects of the SBLE that felt real prompted them to adopt a low self-focus that prioritized the patient. The realism of the simulation experience evoked strong emotions that resonated with Student 04:

> I mean, we were sweating in there. Yes, we were very nervous. I'm guessing the monitor is going down. One of our peers was also a family member. OK. So, there was also a human component. The vital signs are going down, like your peers are waiting for you and your friends, colleagues are waiting for you to make the decision, give something. So that really, even though it's a fake, it's a manikin, even though if the vital signs go down to a zero and nothing's going to happen and nobody's going to be hurt, you still feel like, at that moment, like when the switch flips, it doesn't matter if it's a real patient or a manikin there, you're trying to do your best.

Student 03 recalled how the simulation experience would impact her approach to patient care:

> I think definitely, like, especially the seizure one, where it was like, it was more of real life. OK. Because it was just abrupt, and nobody was expecting it—out of nowhere. And I feel like that's very realistic. It kind of instills the idea in us that not everything is going to be, like, in a little bow. Uh-huh. You know? It's like, expect the unexpected, I guess.

Student 09 discussed the fiction contract; realism; and adopting a compassionate, patient-centered focus:

> Even if it's just a manikin, you still are like, you know, it still has, it still could breathe. It still has the monitor. It's a voice from behind a room, but I mean, still the patient's voice. And we are told that, you know, it's not pretend. Like, when we're in this room, it's real life. And you still want to save the patient if they're, you know, they're de-satting or crashing, whatever the case is.

Student 04 described the impact of realism on his engagement with the SBLE and sense of connection to the patient's scenario:

> Yes, the simulation really feels like it's a real scenario, even though it's a manikin and I know it's not a real person, but how it's set up, it makes me feel like it's a real person. Wow. It makes me really, I would say, connected with the scenario, like it's a real hospital. Really.

Fidelity. Within this code category, students focused on the degree to which the SBLE accurately mirrored the experience of caring for a live patient in a patient care setting. Two students identified technical issues as barriers to realism, their engagement during the simulation, and their ability to focus on the simulated patient and their family. One student described challenges brought by issues with the manikin's sound system:

> And, there were definitely things that I would have done differently if I had done it again. I feel like I would have interacted with the mom more, even though I did interact with her. But I feel like I could have done it better. And also, it was kind of throwing me off. It's not, like, it was kind of throwing me off every time I had to re-say what I was saying. That did kind of throw me off a little bit. Yeah, like,

> when I would say something, and then it was, "Oh, like, you have to speak louder because your classmates are here." (Student 08)

A second student described her reaction when she encountered an error in the patient's medication orders that seemed to require her to administer an oral medication to an unconscious patient:

> So, we went in, and we were just starting to do vitals and stuff on the patient. Just, I guess, head to toe. And then the patient started seizing. And then I don't know. It was kind of short, because we kind of really didn't know, so we were just moving to the side to put the [seizure precaution] padding on, and then we weren't sure because then I was like . . . I didn't really know what to do, because then when I looked in the MAR [Medication Administration Record], the medications were not written properly. And then I'm like, I even said it out loud, I'm like, I don't think this is right. Because I was like. . . . The patient's actively seizing, so obviously this [oral medication] is not going to work in real life. So, then I was confused. (Student 17)

Health care simulationists ask participants to commit to an agreement, or "fiction contract," that both will do their best to replicate the realities of the practice environment. In other words, facilitators will prepare and deliver a realistic experience, and learners will act as though they are caring for a real patient (Rudolph et al., 2014, p. 341). The participant's comment shows that a disruption in realism may interfere with learner engagement, their ability to maintain a patient-centered focus, and their trust in the value of their simulation experience.

Preliminary Analysis

Overall, students' transcripts revealed they perceived that several aspects of their simulation-based learning prompt clinical humility. An analysis of the data revealed compelling patterns in alignment with constructs for psychological safety. For example, themes from the data around accepting fallibility and limitations mapped onto students' perceptions of their learning environment generated by their preparation and their faculty's approach. Students' narratives showed that their engagement during the simulation-based learning activity, either as caregivers or observers, and invited them to confront uncertainty and limitations inherent in their student role and relative inexperience. Participants acknowledged their need to learn from others when working with classmates to solve problems, and they validated the contributions of realism to centering the patient and perspective-taking. A thorough discussion of qualitative findings within the context of simulation, humility, and medical and health humanities scholarship follows in the next chapter.

Findings Related to Research Question 3

To explore the third research question, we asked students, "In what ways do you think humility contributes to your development as a nursing professional?" To follow up, we asked students, "How do you think clinical humility shapes the identity of a competent and compassionate nurse?" Student narratives reveal two themes: Lifelong Learning, and Ethical Caring. Two code categories, evidence-based practice, and the dynamic nature of science and health care knowledge, reside within the first theme. Within the second theme, code categories include acknowledging limits and collaborative practice.

Lifelong Learning

This theme describes several students' perceptions of the value of clinical humility as a catalyst for continuous professional growth. Code categories include evidence-based practice and the dynamic nature of science and health care knowledge. The frequency of responses in each of these code categories is presented in Table 11.

Table 11

Trends for RQ 3 Theme 1: Lifelong Learning

Code Category	Frequency
Evidence-Based Practice	Some
Dynamic Nature of Science and Health Care Knowledge	Some

Evidence-Based Practice. Within this code category, students related the value of humility to a data-driven, empirically sound approach to clinical practice. Some students perceived that humility propelled professional growth and clinical competence. Student 06 drew connections between humility and professional competence: "I think that's why we have evidence-based practice is humility. So, I think it's important to continue on with your [continuing education credits] and constantly learning and using that evidence-based practice to give better care to people." Student 18 was more succinct: "So I am always trying to learn more. . . . Practicing and understanding errors and shortcomings will continue to make me a better nurse." Student 19 acknowledged the value of patient preferences and individual needs in describing the nexus between evidence-based practice and humble patient care:

> Because if you want to be competent, you have to listen to the patient's needs and not just do whatever you think is right. You have to be able to question, like you

> listen to the patient, you have to be able to question other medical professionals about their care . . . to improve your patient's care. (19)

The Dynamic Nature of Science and Health Care Knowledge. Within this code category, students related the value of clinical humility to the provisional and progressive nature of science and health care knowledge. Two students invoked the nature of disciplinary knowledge to justify the importance of humility to professional practice. Student 08 offered a compelling explanation of the need for clinical humility to maintain enduring competence, given the dynamic nature of health care knowledge. The student recounted a transformative interaction with a senior staff nurse who had decades of experience at the agency where the student was assigned to a weekly maternity clinical:

> I was thinking about how different practice became in her time in practice and how much it will likely change in my career. Nurses should always be willing to learn. There will always be new technologies. . . . [Nurses] saying "We do it this way in my hospital" is counterproductive. Having humility can make you more competent. (Student 08)

A second student cited the need for health care professionals to adopt a learning orientation from the start:

> You have to be open and willing to learn. You have to know that you are not all-knowing. You're not going to have the answers to everything. And that's OK. You have to learn. That's what we went to school for. (Student 02)

In these responses, students acknowledged that nurses must acknowledge the limits of their own knowledge and scope of their role to continue to practice safely and effectively.

They expressed understanding that clinical humility can catalyze lifelong learning and support competence.

Ethical Caring

This theme explores students' expressions of the value of openness and self-awareness to ethical and compassionate care. Code categories include acknowledging limits and collaborative practice. The frequency of responses in each of these code categories is presented in Table 12.

Table 12

Trends for RQ 3 Theme 2: Ethical Caring

Code Category	Frequency
Acknowledging Limits	Several
Collaborative Practice	Some

Acknowledging Limits. Within this code category, several students associated humility with moral imagination—the capacity to seek and implement ethical outcomes to problem solving by stepping away from one's own worldview to incorporate other perspectives (Jantzen et al., 2023). Students' comments show they recognize that compassionate care requires a deep awareness that understanding of others' realities is sifted through our own experiences and biases and is always unfinished. Six students' responses cast light upon perceived connections between clinical humility and compassionate care.

> One student described the connection between humility and humanistic caring:
>
> I think humility just helps me grow and understand people. It connects to compassion a lot. Patients come from all different demographics, and you have to be open and understanding of their situation because not everyone goes through

> the same thing. You have to know what you know and what you don't know; and if you don't know something, it's OK to acknowledge that you have to learn it; you have to teach yourself [that] you have to ask someone for that help. (Student 03)

A second student drew connections between humility and competent, compassionate care:

> I mean, if you're not, if you're not trying to be better for your patients, are you really compassionate? Do you really want to be helping people in the first place? You know, if you just kind of show up to work every single day just for a paycheck, like, don't you want to, I mean, I don't think nurses really get paid that well for the amount of work that they do. So, I mean, I would argue that the majority of nurses are there for the fact that they want to help people. Yeah. Um, so if you're not open to adjustments in care, are you really being compassionate? (Student 06)

Student 12 drew important connections between humility, openness to patient feedback, and humanistic care: "Nurses need to be open to feedback from patients, too; not just colleagues." Student 15 also stressed the contribution of humility and low self-focus to compassionate caring: "If you have humility, if you are a humble person, it is easier to have compassion. . . . You learn from observing others."

One student described the role of humility in ethical caring for non-nursing health care professionals. Student 17 reflected on a physician's apology to a patient about the physician's failure to take an accurate history and the consequential delay in the patient's discharge:

> I think afterward, the doctor had come into the room and was like, "I apologize." I want to care for you. I want to be able to help you. I just wasn't aware of the situation. So, I think there was a learning experience for her, and she was able to own up to the mistake and try to offer different [solutions] to the patient.

Student 19 summarized:

> I feel like you have to have that in every situation because you don't know what you're walking into. OK. You don't know who the patient is or what's going on, especially when you first meet the patient. You have to be able to separate yourself from something happening in the next room, you have to go to the other room with a blank mind.

The student's comment highlights that the day-to-day demands of safe practice require nurses to cultivate a humble self-awareness of the limitations imposed by distractions and divided attention.

Collaborative Practice. Within this code category, interviewees drew connections between maintaining openness toward the perspectives of others and contributing to care as an effective member of the health care team. Two student responses highlighted the importance of clinical humility to caring collaborative practice. Student 14 put it simply: "When you are in an actual clinical setting, you can appreciate that others may have ideas about what to do in a given situation. You learn from observing others." The student's statement suggests that, in her view, low self-focus and openness to others' perspectives would improve clinicians' ability to effectively provide care.

Student 12 drew a similar connection, citing collaborative practice between nurses and nursing students in the clinical setting:

> Humility contributes to professionalism because I want to treat everyone with respect. Humility should be a constant for nurses throughout their careers. Humility connects the compassionate attitude between nurses and students. Nurses are willing to help students because they are compassionate. Humility is respect and understanding. Respect for others. Understanding for others.

Within the theme of Ethical Caring, the students' responses show that they view humility to be crucial for nurses to provide respectful care that prioritizes the patient's dignity and honors the unique realities of others. The students' responses connect humility to centering the patient; perspective-taking; and compassionate, collaborative care.

Preliminary Analysis

On initial analysis of their transcripts, students' responses reveal that they perceive clinical humility as relevant to developing and maintaining nursing competence amid the dynamics of the health care environment. Students credited humility as a key driver for ongoing professional development based on openness to learning and collaboration, receptivity to feedback, and critical self-refection. The students drew vital connections between humility and ethical, relational care behaviors, such as respect for the patient's needs and preferences and collaborative practice. An in-depth discussion of qualitative findings within the context of relevant simulation, humility, and medical and health humanities literature follows in Chapter 5.

Conclusion

This inquiry sought to use qualitative interview data to define and situate clinical humility amid student nurses' experiences with high-fidelity human patient simulation. A review of the demographics and excerpts from the participants' interviews offered insight into how the students defined clinical humility, which aspects of their simulation experience supported their understanding of the concept, and how they envisioned clinical humility would be relevant to their professional practice and patient care.

The qualitative data were coded; codes were organized into categories; and findings were organized around nine themes constructed by the author: Humility as Self Awareness/Recognizing Limits, Humility as Awareness of Others/Openness, Psychological Safety and Nonjudgment, Normalizing/Managing Uncertainty, Mistakes as Opportunities, Working in Teams, Patient-Centeredness/Authenticity, Lifelong Learning, and Ethical Caring. The main takeaways from the findings are that, amid simulation, participants construed humility as either awareness of self or openness to others. Student nurses posited that social and structural components that impart psychological safety and nonjudgment supported openness to others and to critical self-reflection. The transcripts suggested that students surmised that aspects of the SBLE that permitted them to engage with uncertainty, center the patient, or focus on shared learning also supported clinical humility. However, technical difficulties that led to inconsistencies in fidelity may have thwarted student engagement and disrupted their openness to learning or accurate self-appraisal. In their interviews, some students also noted that their simulation experience provided occasions to shift away from a performance mindset toward a more growth-oriented stance that emphasized mistakes as opportunities rather than personal or

professional failures. The next chapter will further interrogate these findings within relevant frameworks and theories offered by existing scholarship.

Chapter 5

DISCUSSION AND CONCLUSION

This research explored a critical knowledge gap by applying an inductive thematic analysis to simulation participants' experiences with clinical humility, revealing students' perceptions of clinical humility as a multifaceted construct that flourished amid safety and supported professional role development. The findings offer primary insights for future research in both health care simulation and medical and health humanities. This inquiry aimed to assess the nature of clinical humility and how it manifests amid simulation-based learning. I asked three primary research questions:

- How do baccalaureate nursing students who participate in clinical simulations perceive and experience humility?
- What specific aspects of simulation design and implementation can contribute to the development of clinical humility among baccalaureate nursing students?
- What insights does participation in a clinical simulation provide for baccalaureate nursing students about the relevance of humility in their professional development and/or professional identity?

The research consisted of individual semi-structured interviews with a convenience sample of 19 senior-level nursing students, who participated in a high-fidelity pediatric health care simulation-based learning activity as part of their baccalaureate nursing program at a private university in the northeastern Mid-Atlantic region of the United States. Descriptive demographic statistics contextualized the findings. I completed an inductive thematic analysis of interview transcripts using Braun and Clarke's (2006) six-step method for thematic analysis.

This chapter presents an interpretation of the findings organized according to broad concepts, drawing connections to existing literature from health care simulation and theories of humility, and anchoring the findings in foundational medical and health humanities philosophies that emphasize reflective practice and relationship-centered care. A synthesis of demographic data offers context and suggests insights into the participants' unique perspectives. The chapter will next undertake to discuss the limitations of this research, its possible implications for medical and health humanities and for nursing and health care education, and recommendations for further inquiry. Having set forth the aims and scope of this research, the following section reviews the qualitative findings located through a thematic analysis of the interview data.

Overview of Qualitative Findings

The thematic analysis generated nine themes. In response to Research Question 1, students interpreted clinical Humility as Self-Awareness/Recognizing Limits, with code categories of recognizing limits, uncertainty, fallibility, and embarrassment. Additionally, students perceived clinical Humility as Awareness of Others/Openness, with code categories of respect for the patient, respect for the perspective of team members, and openness to feedback and learning. A thematic analysis of responses to Research Question 2 revealed that aspects of simulation-based learning that supported clinical humility could be organized into five themes: Psychological Safety and Nonjudgement, Normalizing/Managing Uncertainty, Mistakes as Opportunities, Working in Teams, and Patient-Centeredness/Authenticity. Finally, in their responses to Research Question 3, participants drew connections between lessons learned in simulation and the importance of clinical humility to professional values for Lifelong Learning and Ethical Caring.

Taken together, the discussion of qualitative themes can be organized according to broader takeaways regarding humility amid simulation-based learning. Humility flourished amid safety and was multifaceted if somewhat indistinct. Students perceived clinical humility as growth-oriented, critical self-awareness that included acceptance of fallibility, tolerance of uncertainty, and acknowledgment of personal and epistemic limits. They also experienced clinical humility as openness to learning and new perspectives manifested as respect for others. Clinical humility shifted the focus away from the self to strengthen collaboration and patient-centeredness. Finally, participants valued clinical humility as an interpersonal practice and an ethical stance that was essential to professional development and compassionate care. Table 13 details the traits and practices study participants associated with clinical humility. These traits and practices offer a means to interpret how students' perceptions of clinical humility align with and part from existing scholarship on simulation, humility, and medical and health humanities.

Table 13

What Does Clinical Humility Look Like in SBLE? Traits and Practices Associated With Clinical Humility

Trait/Practice	Description	Context/Example
Psychological Safety	**Requires the presence of a supportive, nonjudgmental learning environment. May be faculty or peer generated.**	Students endorsed aspects of the SBLE that enhanced trust, encouraged respectful dialogue, and encouraged them to act and speak candidly. Safety and embarrassment coexisted in the service of learning. Safety could be faculty generated, as in simulation structures for prebriefing, orientation, and confidentiality, or peer-generated, as in familiarity with and trust in colleagues.
Multidimensional, Paradoxical, Difficult to Define	**Comprises awareness of self and openness to others.** Clinical humility is both knowing and not knowing; dispositional and relational.	Students describe clinical humility as knowing when to ask for help and recognizing limitations and acknowledging others' expertise.
Growth-Oriented Critical Self-Awareness	**A self-regulatory stance comprising awareness of knowledge, skill, and role limits.** Acceptance of boundaries imposed by lack of skill or experience, and scope of practice. Acceptance of fallibility, and tolerance of embarrassment. Acceptance and tolerance of complexity and uncertainty in the clinical environment.	Students described the limitations of their role as a student, and navigating complex, ambiguous, stressful patient care scenarios. Students viewed errors and fallibility as opportunities for growth rather than failure. Students perceived embarrassment as a positive growth experience when there was constructive feedback. This occurred in simulated settings but was also possible in supportive practice environments.

Trait/Practice	Description	Context/Example
Epistemic & Relational Openness/Awareness of and Respect for Others	**Takes the perspective that care is a collaborative, shared experience.** Comprises an orientation toward others with low self-focus that can include patient- centeredness, recognizing shared vulnerability, receptivity to new perspectives, a team focus, normalizing errors and fallibility.	Students saw that assumptions undermined care. Students met vulnerability with sensitivity, embraced team-orientation, held space for new points of view, and understood that everyone was fallible and could make mistakes. Students offered compelling support from both practice and simulated settings.
Supportive of Professional Role Development	**Nurtures caring competence, the nurse's ethical responsibility to the patient, which requires a commitment to lifelong learning and patient-centeredness.**	Students saw clinical humility as a catalyst for ongoing professional development and patient-centered care when they discussed the dynamic nature of health care and nursing knowledge, witnessing clinicians apologizing for mistakes, asking for help.

Interpretation and Comparison with Scholarship

Comparison With Simulation Scholarship

Prior simulation research has frequently focused on student competencies for communication, teamwork, collaboration, and communication, or facilitator behaviors (Ablao et al., 2023; An & Koo, 2022; Bø et al., 2021; Burrell et al., 2023; Hustad et al., 2019; Washington et al., 2021). Scholarly attention to humility in simulation has been scarce, apart from cultural contexts. Among the contributions of this research are that students perceived that acceptance of epistemic limits, fallibility, shared vulnerability, and experiences with uncertainty and mistakes as positive outcomes of their SBLEs. The following subsection will discuss the findings within the context of simulation scholarship and standards for psychological safety.

Clinical Humility and Safety

Convergence. While the literature review revealed no scholarship to explicitly address the construct of clinical humility in the context of health care simulation, the findings do converge with prior simulation research and standards of best practice. The findings of this study resonate with established theories of simulation-based learning, and particularly with those that pertain to the value of psychological safety for participants' openness to new learning and willingness to tolerate uncertainty and to take risks with their thinking (Rudolph et al., 2014).

Asked to describe aspects of the SBLE that supported humility, or openness to revisiting their point of view, students' responses pointed to the presence of key components of psychological safety: nonjudgment, transparency, clear expectations, and fostering dialogue. Illustrative quotes showed that engaging with presimulation materials, the prebriefing activities, and a hands-on orientation made students feel prepared for the SBLE. Students stressed that their faculty's emphasis on the confidential and formative nature of the simulation experience, and the intentional seating arrangements in the debriefing classroom fostered their openness to self-examination and critique. The students' responses suggest that their openness to learning hinged on the approach of their instructors, faculty, and even staff nurses in clinical settings. Opportunities to prepare for the SBLE helped students to fully engage with and navigate complex challenges and moments of uncertainty in the simulated clinical environment. For example, students appreciated opportunities to plan the patient's care with their colleagues in advance of the simulation.

Through the lens of simulation scholarship and the Simulation Standards of Best Practice (SSOBP), the findings of this study align with Rudolph's safe container theory of simulation debriefing, and the INACSL Simulation Standards for preparation and prebriefing, and those for debriefing (INACSL Standards Committee et al., 2025; Rudolph et al., 2014). In their 2014 commentary, Rudolph et al. set forth crucial practices that create a safe milieu for health care simulation learning by setting clear expectations and conveying respect for learners. Rudolph et al. asserted that psychological safety permits learners to take risks in learning without fear of negative consequences, fosters dialogue and openness to perspectives, and reduces defensive reactions to feedback (Rudolph et al., 2014). INACSL has endorsed the crucial role of psychological safety for learning in the SSOBP (Decker et al., 2025; INACSL Standards Committee et al., 2025). If humility can be understood as an openness to feedback and the perspectives of others, it is not surprising that the students in this study endorsed aspects of simulation that promote psychological safety as supportive of clinical humility.

Therefore, the findings of this study echo the well-established standards for psychological safety to support learning in simulation (Decker et al., 2025; INACSL Standards Committee et al., 2025). If clinical humility can be understood as a professional nursing competency, in SBLEs, students have the best opportunities to practice humility in an environment that they perceive is psychologically safe. Thus, faculty may inadvertently undercut clinical humility during simulation by placing too much emphasis on evaluating performance and avoiding errors.

While perceived safety seemed to support clinical humility for participants in this study, participants' transcripts also suggest that psychological safety and discomfort were

not mutually exclusive. In other words, while clinical humility flourished amid safety, it was not necessarily comfortable. Students tolerated discomfort in the form of uncertainty and embarrassment in the service of simulation-based learning.

These findings contribute compelling empirical data to support the recent assertions of Ford et al. (2024) that psychological safety in SBLEs need not equate to comfort. For example, students perceived their uncomfortable experiences with embarrassment, uncertainty, and negative feedback from faculty and peers in psychologically safe clinical environments as positive opportunities for learning. In their commentary, Ford et al. advised simulation educators to revisit the concept of psychological safety in acknowledgment of the discomfort that often accompanies transformational learning. They argued that confusing safety with comfort can undermine learning in nursing education, which may require students to embrace discomfort and accept the vulnerability that accompanies facing new challenges and unfamiliar experiences (Ford et al., 2024). The students' transcripts in my study bear this out.

Participants within this study described experiences in simulation as both exquisitely uncomfortable and profoundly beneficial. They described their responses to stressful, unpleasant encounters in simulation. Student 04 described a simulated pediatric emergency: "Oh wow. There were people yelling. Wow. So, I felt under pressure." He added "I mean we were sweating in there," and later, "It was a really, really good experience." Regarding their experiences with making clinical errors and receiving negative feedback, students stated, "She's blunt, but I like it" (Student 08), and "It's OK . . . we're still learning" (Student 12). In other words, students required psychological safety, but not comfort, to adopt a growth-oriented, humble stance toward clinical

practice and learning. This finding suggests that, while faculty who design and facilitate health care simulation for nursing students should use care to create and maintain a psychologically safe environment, they should use equal care to avoid confusing safety and comfort, which may foreclose on students' opportunities to enact clinical humility.

Divergence. These findings may represent a novel interpretation of the interplay between psychological safety and humility in SBLEs. In this study, nursing students who participated in the SBLE perceived that aspects of the SBLE prompted humility-associated practices, including openness to other perspectives and awareness of their own limitations and fallibility. While some previous simulation commentaries have advocated for a humble approach for simulation facilitators to foster psychological safety in simulation, I could locate no prior research to suggest that psychologically safe SBLEs can help to cultivate clinical humility in nursing students (Phrampus, 2023). In his essay, Paul Phrampus (2023) argued that facilitators who model humility for simulation participants create a less threatening learning environment where learners can acknowledge their missteps and engage in open discourse to analyze errors in their thinking. Phrampus reasoned that simulation facilitators should model openness to other perspectives and acknowledge their own fallibility to effectively create and maintain a supportive learning environment for simulation. Phrampus asserted that the faculty facilitator's humility promotes psychologically safe SBLEs. For Phrampus, faculty humility is an antecedent to psychological safety in simulation. By contrast, data provided in my research study point to psychological safety as a facilitator, rather than a consequence of humility. These findings offer practical value for health care educators about the mechanisms in SBLEs that can cultivate clinical humility among their students.

For example, the transcripts revealed that students perceived that transparency around the SBLE, especially aspects of the prebriefing designed to enhance psychological safety, helped them to set realistic expectations for themselves in the simulation. The students conveyed that orientation experiences and prebriefing discussions with peers about simulation roles normalized their interdependence and helped to shift their focus from their individual actions to the team's effort. In these ways, aspects of the SBLE intended to clarify expectations so that students could prepare themselves and fully engage in the learning experience also prompted students to adopt a humbler stance that incorporated a lower self-focus and a more accurate self-view as interdependent members of a health care team.

These findings contribute a novel, nursing-focused perspective to inquiries regarding the impact of SBLE participation on cultivating humility, expanding upon prior research that reported participation in simulation enhanced humility for non-nurse health care trainees (Happ et al., 2025). The findings also align with the larger body of scholarship that has suggested that simulation participants do experience gains in humility-related competencies such as self-awareness, role identity, and interprofessional communication and collaboration (Happ et al., 2025; James et al., 2021; Moore et al., 2021). However, the findings contribute a unique perspective on psychological safety within simulation. Interviewees' transcripts suggested that psychological safety in the simulation could be peer-generated. For example, the nursing students stressed that planning and troubleshooting care with their student colleagues, and observing their classmates do the same, validated the need to work interdependently with team members. Student 05 described the role of psychological safety in shaping openness to other

viewpoints: “Vegas rules . . . but also my colleagues, who were able to work within that zone. Like, everybody is very open-minded to what others are saying.” Student 09 stated, “When the patient started crashing, it was nice seeing [classmates] trying to figure out what to do. . . . Even though they weren’t making the right intervention, it was still nice to see that they were trying to figure it out.” In their transcripts, the students voiced appreciation for their colleagues and recognized that, working together, they could lean into their collective strengths to navigate uncertainty during the SBLE. These findings offer new insights for simulation educators who aim to foster psychological safety in SBLEs, detailed below.

This bottom-up construction of psychological safety represents a departure from established perspectives on psychological safety, which has conventionally assigned primary responsibility for establishing trust among participants to the educator (INACSL Standards Committee et al., 2025; Rudolph et al., 2014). The findings offer a new perspective on psychological safety as a socially constructed dynamic of SBLE, rather than a standardized element that is generated and managed entirely by the faculty facilitator. Students reported that familiarity with their peers and opportunities to discuss the plan of care in advance of the SBLE with their student colleagues helped them to enact clinical humility within the SBLE. This finding has implications for the planning, timing, structure, and delivery of simulation-based learning within baccalaureate nursing and other health care curricula. For example, students whose simulations occur at the start of the term or course with a new clinical student group may feel less psychologically safe, and less inclined toward self-awareness and openness than students who simulate at the end of the term when they are more familiar with their classmates. Consequently,

simulation faculty and facilitators should consider the potential impact of group dynamics when scheduling formative SBLEs, and act intentionally as facilitators to build trust with and among the group's student members. The findings suggest that faculty facilitators should incorporate a designated time before the start of the simulated patient encounter to permit teams who will simulate together time to strategize their approach to the patient's care.

Within the context of simulation scholarship, the findings spotlight vital connections between psychological safety and students' experiences with humility-related competencies. The findings urge that SBLEs, as a psychologically safe teaching and learning tool, can incubate clinical humility among participants. Previous simulation research has primarily studied humility through the lens of culture, or examined humility amid professional development for non-nursing disciplines (Buchanan & O'Connor, 2020; Happ et al., 2025; Luctkar-Flude et al., 2022; Moore et al., 2021; Smallheer et al., 2022; Tyerman et al., 2021; Walshe et al., 2022). This study examined an understudied perspective on humility as clinical humility amid simulation for nursing students. Further, the findings urge that within the psychologically safe environment of health care simulation, where objectives typically focus on technical acumen and communication competencies, nursing students can perceive success as growth instead of mastery, see errors as opportunities instead of failures, and appreciate collective strength more than individual achievement. The next section examines how the findings intersect with humility scholarship and broader theories of humility.

Comparison with Humility Scholarship

Humility as Elusive and Multidimensional

Students' varied interpretations of humility validate the assertions of scholars who have argued that the ambiguous, elusive nature of the concept creates inherent challenges for its study (Church, 2017; Leary, 2018). Jeffrey (2020) posited, "In uttering the word, the virtue slips away" (p. 479). Students' responses evince some of these challenges, as they perceived clinical humility as both dispositional (self-awareness) and relational (other-focused). Additionally, students did not explicitly address clinical humility in their transcripts but often discussed humility-related characteristics and competencies. This may reflect the lack of a lucid definition for the construct. Authors have noted the historical reticence of researchers to examine virtues, as their work might be construed to reflect moral judgments (Leary, 2018). Nonetheless, the findings of this study align well with existing humility scholarship, especially that which pertains to clinical humility, humble leadership, intellectual humility, and cultural humility.

Students associated clinical humility with recognizing personal or role limitations, acknowledging their own fallibility, and embarrassment. They also viewed humility as openness to others' perceptions and a respectful or compassionate focus on others, especially the patient and colleagues. Collectively, the students' responses support a dual construction for clinical humility that echoes the assertions of Lim (2017), who described clinical humility as a clinician's capacity to acknowledge his limits while valuing the contributions of other team members and the patient. So, too, do the findings converge with those of Wadhwa and Mahant (2022), who described humility within the context of

medical practice as comprising both an inward, self-aware perspective, and an outward, prosocial focus.

The students' transcripts reveal that they viewed humility as a core professional value that could enhance communication, improve teamwork, and break down counterproductive clinical silos and hierarchies. The findings align well with the conclusions of Michalec et al. (2024), who surmised that nurses and physicians in their study valued humility as essential for high-quality, patient-centered, team-based care in clinical settings. For nurses and physicians in that study, humility manifested as a leveling agent that flattened hierarchies and neutralized occupational status to build trust and collaboration between team members and patients (Michalec, Cuddy, et al., 2024). Interviewees in my study reported that their experience in simulation helped them to understand that uncertainty is inevitable in health care, and that, as members of the health care team, they will need to act with humility to deliver effective care and ask for help from team members and the patient whenever needed. As Student 02 stated, "You have to know how to [answer questions] in the most calm, informative way possible, without medical jargon. . . . Practicing humility is compassionate because if you don't have the answers, you recognize it and get someone to answer the question." The simulation participants recognized that hierarchies and status, such as those transmitted with the use of medical jargon, are counterproductive and even divisive when providing care. Further, they understood that effective, clinically humble care relies on the collective efforts of the team. While the findings support those of Michalec, Cuddy, et al. (2024), which drew on the perspectives of practicing clinicians to describe the value of humility to care, this

research contributes to our understanding of how student nurses perceive and experience humility in a clinical educational setting.

Alignment With Theories of Humility

Students' transcripts show commonalities, though not explicitly stated, between clinical humility and dimensions of humble leadership. For example, students described clinical humility as acknowledging uncertainty; accepting their fallibility; and showing awareness of role limitations, occasions of embarrassment, and respect for others. Their perceptions align with dimensions of leader humility put forth in the LEH, including an accurate self-view, a team orientation, and respect for others (Chintakananda et al., 2023). The transcripts also suggest convergence between students' perceptions of their faculty's respectful approach to errors and uncertainty, and existing scholarship on leadership characterized by humility. For example, scholars have included mentorship and empathy among dimensions of leader humility (Chintakananda et al., 2023). More research is needed to elucidate and expound on the potential connections between nurse faculty humility, humble leadership, and students' perceptions of clinical humility in simulated and patient care settings.

The interview data suggest that clinical humility may have congruence with cultural humility, intellectual humility, and humble leadership. Students described clinical humility as openness to others and to new perspectives, which aligns with cultural humility's focus on an egoless de-centering of the self and maintaining a learning orientation (Foronda et al., 2015). Interview transcripts also suggest students viewed clinical humility as acknowledging limits and uncertainty, which comports with aspects of intellectual humility's focus on admitting one's fallibility and openness to the views of

others (Johnson, 2022). From the students' perspective, clinical humility also underlies a learning orientation and teachability, which can describe dimensions of cultural humility, intellectual humility, and leader humility (Michalec, Cuddy, et al., 2024; Owens & Hekman, 2012; Zhu et al., 2024).

Findings both converged with and diverged from historical, philosophical, and theological perspectives, which often frame humility as both transformative and self-abasing, or as the absence of hubris and arrogance (Nadelhoffer & Wright, 2017; Porter et al., 2017). In their transcripts, the students seemed to reject traditionally self-abasing constructions of humility and chose to focus on its transformative influence. For example, in their transcripts, students referenced the ways in which experiences with clinical humility were transformative. Students' comments included, "Humility can make you more confident"(Student 18), and "I feel like showing the consequences of each error . . . was really helpful in solidifying the knowledge I got" (Student 04), and on embarrassment, "So I think that helps mold you because it is something that always stays with your mind" (Student 04). This mirrors historical and religious constructions of humility, like that of Thomas Aquinas who stressed the capacity of humility to transform (Porter et al., 2017).

Divergence From Theories of Humility

The transcripts suggest divergences from other theories of humility. In this study, students situated clinical humility in live or simulated patient care settings and assigned it practical, experiential dimensions. Existing humility scholarship situates other forms of humility in both clinical and non-clinical settings. For example, cultural humility's focus is on supporting diversity and defusing power dynamics (Tervalon & Murray-García,

1998). Intellectual humility focuses on intellectual openness and the limits of knowledge (Church, 2017; Leary, 2018). The findings from this study suggest students assign the most relevance for clinical humility to performing patient care skills. When asked to provide examples of humility's relevance to nursing, students cited experiences with performing skills such as administering medication, conducting a physical examination, infusing intravenous fluids, or responding to a critical patient event such as a patient's seizure or a child's asthmatic emergency. Despite its seeming clarity, students did not situate clinical humility in the nursing classroom, or otherwise beyond simulated and live patient care settings, suggesting that students perceived that the value of clinical humility is largely practical and most relevant to clinical contexts.

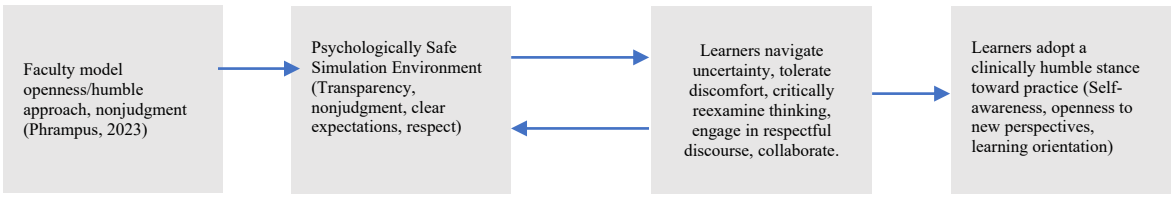
Finally, students' transcripts point to a novel relationship between psychological safety and humility. While other constructs of humility do not expressly require psychological safety, the data from this study suggest that, amid simulation, clinical humility may rely upon a psychologically safe environment. As discussed earlier, the interview transcript data suggest that the psychologically safe environment within the SBLE helped spotlight and cultivate humility-related competencies. Students stressed that aspects of the SBLE that made them feel safe enabled them to critically evaluate their skills and thinking and contemplate other perspectives. When students perceived a safe environment, uncertainty was normalized, and mistakes were reframed as opportunities. If, as the findings suggest, clinical humility is an environmentally sensitive, context-specific capacity, rather than a static trait, educators may be able to design clinical instructional activities to foster it. Further, measures of perceived clinical humility and other forms of humility should account for psychological safety. More research is needed

to understand how psychological safety acts to enhance clinical humility, and if and how clinical humility emerges in the absence of perceived psychological safety.

As stated earlier, Phrampus (2023) asserted that facilitators who exhibit humility may fortify psychological safety for participants. Taken together with this study's findings, in which simulation participants perceived that aspects of simulation designed to support psychological safety also supported clinical humility, there may be a dual relationship between humility and psychological safety in simulation. Faculty who embrace a humble approach to facilitate simulation-based learning may enhance psychological safety for participants, which, in turn, may encourage participants to embody clinical humility expressed as self-awareness and relational openness. Figure 7 represents the proposed interplay between psychological safety and clinical humility in simulation-based learning.

Figure 7

Conceptual Flow Diagram: Psychological Safety, Simulation, and Clinical Humility



Note. Conceptual flow diagram illustrates how faculty humility, psychological safety, and student engagement may support learners to animate clinical humility, manifested as self-awareness and openness.

More research is needed to explicate the contingencies and consequences of humility and psychological safety in simulation-based learning. Beyond theories of

simulation and humility, a discussion of perspectives from the medical and health humanities provides additional insights into the findings from this inquiry.

Contributions of Findings Through a Medical and Health Humanities Lens

When examining findings through the lens of the medical and health humanities, I note relevance to core concerns, including self-awareness, relational openness, and patient-centered care. In the context of health care simulation, nursing students understood clinical humility as a growth-oriented, self-regulatory approach to patient care that includes both critical self-awareness and epistemic openness. Specifically, clinical humility manifested as an inward-oriented awareness of one's fallibility, acceptance of uncertainty, and appreciation of the limits of one's knowledge, skills, and role. Students also perceived that clinical humility was other-oriented openness to the perspectives of faculty, colleagues, and patients. Last, students perceived that clinical humility was both an ethical stance and a relational practice that was imperative for professional role development and compassionate care. The following sections will map the findings of this study onto core concepts in the medical and health humanities.

Since the 1920s, when the medical health humanities emerged as a response to the Flexner report, medical health humanists have applied humanities perspectives to deepen understanding between medical and health professionals and patients (Berry et al., 2017; Klugman, 2017). The findings of this study bear relevance to the central concerns of the medical and health humanities to promote empathetic, prosocial, patient-centered perspectives among clinicians, caregivers, and patients (Berry et al., 2017). Further, the findings suggest that health care simulation may provide fertile ground upon which participants can build skills and cultivate attitudes to advance these core objectives.

Critical Self-Awareness

This study's findings resonate with well-established theories on clinician self-awareness, providing additive value to the work of Rita Charon, who argued that physicians should employ reflective medical narrative as a tool to enhance self-awareness and improve patient care. Students' transcripts revealed that, amid simulation, which incorporates a structured reflective debriefing, they perceived clinical humility as critical self-awareness manifested as an acceptance of fallibility, tolerance for uncertainty, awareness of their limitations and the limits of their roles and disciplinary knowledge, and occasions of embarrassment. The participants recalled moments of humility that brought their clinical skill set into sharp focus. Their reflections revealed how missed details—a misread medication label, a miscommunication with a distressed patient, and habits of thought that rigidly apply text-bound knowledge sabotage clarity, patient-centered focus, and growth. Charon argues that physicians avail themselves of their most effective tools—themselves—to their patients through reflection (Charon, 2001). Further, Charon asserted that medical narrative aims to encourage physicians to self-reflect so that they may practice with self-awareness, which, she argued, is often lacking in education and clinical practice (Charon, 2001). The findings add value for educators within the medical and health humanities and health care disciplines, as they urge that simulation and debriefing can serve as a narrative space that encourages self-reflection and nurtures critical self-awareness for participant nurse trainees. In short, these findings propose that SBLEs offer a novel site for narrative practice, where educators can work with nurse trainees to cultivate critical self-awareness, hone self-knowledge, and potentiate care. More research is needed to understand how simulation can operate as a site to build

durable clinical humility as self-awareness among nurses and clinicians in other health care disciplines.

Relational and Epistemic Openness

The analysis of students' transcripts suggests clinical humility is important as far as its connections to relational and epistemic openness. Students said that their experience in simulation helped them to value and maintain openness to other experiences and perspectives, a stance that is often associated with forms of humility (Foronda et al., 2015; Lim, 2017; Worthington, 2017). They credited their experience in simulation with forging new, other-oriented perspectives on the needs of their patients and their families, as well as the experiences of their colleagues. They reported that their experience made them "more understanding of others making mistakes" (Student 04) and helped them to gain insights into the worldview of others, such as that of a single parent caring for an asthmatic child in the asthma scenario. Additionally, students perceived that clinical knowledge was contextual and could be co-constructed with classmates during an auscultation exercise that employed a lifelike simulator, or through a post-conference or a debriefing dialogue with their faculty. These findings suggest new relevance for clinical humility amid simulation to the medical and health humanities. More research is needed to understand how simulation operates as a site to build self-awareness among nurses and clinicians in other health care disciplines.

For students in this study, participation in simulation-based learning also helped to foreground relational openness as clinical humility. They perceived that clinical humility made them more available for their colleagues and their patients. Medical and health humanities scholars have stressed the importance of relational connections through

other-oriented perspectives on care. For example, in the account of his experience with illness, Anatole Broyard (1992) argued that clinicians should combat professional detachment, and "plunge" into the patient's experience and "lose their fear of falling" (p. 49). Broyard asserted that providers should resist clinician-patient positionality to enhance their therapeutic relationships and make the experience of illness more meaningful. The students' transcripts echo Broyard's value for the primacy of clinical humility as relational openness in effective care. They described how the immersive, psychologically safe nature of their experience in simulation helped to motivate them to work together and seek help from their colleagues to unravel complex clinical challenges. The students discussed how espousing a lower self-focus helped them to be more receptive to others' perspectives and normalize errors and fallibility. The controlled nature of the simulation experienced helped students to embrace their shared vulnerabilities and understand that doing so could strengthen the team and fortify care. Interpersonal openness built on engagement represents a central concern for the medical and health humanities and is a dimension of many forms of humility (Church, 2017; Foronda et al., 2015; Lim, 2017). These findings add value for medical and health humanities scholars, as they suggest that health care simulation experiences can serve as a clinical playground where learners can practice relational openness without fear of falling.

Patient-Centeredness

Findings from the interview data draw compelling connections between patient-centeredness, a guiding principle for the medical and health humanities, and the students' perceptions of clinical humility in their simulation experience. Charon (2001) argued that

clinician training should prepare students to center the patient, and that clinicians cannot recognize the centrality of the patient unless they can empathically engage with the patient's story.

Students understood patient centeredness as an important manifestation of clinical humility both in simulation and in clinical practice settings. One referenced "being able to separate yourself from your own world and care for others," and that the carer's focus needs to be "just on the patient" (Student 19). A second student described hindrances to patient-centeredness when she recounted how her assumptions about a medication's effects led her to miss her patient's cues about an imminent seizure: "I was just assuming that she was given medication and maybe that's why she was acting the way she was acting" (Student 06).

These examples show that students perceived clinical humility as a relational quality that can be expressed as patient-centeredness. Students' reflections on their experiences in simulation and in patient care settings echo Charon's assertion that patient-centered care requires vigilant attentiveness, authentic presence, and resisting assumptions. Charon's perspective on attentiveness as an antecedent to authentic engagement aligns with students' assertions that realism in simulation supported patient-centeredness and clinical humility. Students reported intense and even visceral responses to the stress they experienced while caring for simulated patients in a highly realistic scenario. They described sweating and feeling pressured when their simulated patient did not improve during the scenario. In short, students asserted that the realism of the scenario helped them to stay focused and engaged with the simulation patient and respond to their needs.

Conversely, technical challenges and confusing or ambiguous scenario details, such as an incomplete medical record or manikin connectivity issues, disrupted authenticity and served to obstruct students' attentiveness and patient-centeredness. For example, when a student was asked to speak more audibly so that observers could hear, she reported feeling distracted by the interruptions, and that she otherwise "would have interacted with the mom more" (Student 08).

Ethical Stance

In reviewing the data in the context of the broader body of literature within the medical and health humanities, parallels emerge between this study's findings and the cornerstone principles for medical ethics pioneered by Edmund Pellegrino. The students' transcripts suggest that they perceived that clinical humility was an ethical stance that was imperative for professional role development and compassionate care. Interviewees stated that clinical humility required nurses to care for patients "as if the patient were family" and set aside their own concerns to be fully attentive to their patients (Student 18).

Further, students drew important connections between clinical humility and their responsibility to commit to learning as a lifelong pursuit that is part of the role and identity of the professional nurse. They attested that clinical humility could prompt the perpetual professional role development required for authentically caring competence. For example, Student 02 stated, "as a nurse it's OK to ask for help sometimes too, because you're not going to know everything." Student 06 summarized that professional competence was about "constantly learning and using that evidence-based practice to give better care to people."

The findings underline the abiding relevance of Pellegrino's (1979) philosophy of medical ethics, which calls for physician and nurse clinicians to act together for the patient's good in ways that respect and acknowledge the patient's inherent vulnerability. The findings suggest that students understood ethical caring required them to step away from their own worldviews to integrate other perspectives. Student 14 stated "You can appreciate that others may have ideas about what to do in a given situation. You learn from observing others." Participants understood that reliance on assumptions and inflexible thinking could be harmful to patients. Student 08 discussed how the lack of humble self-awareness and openness could potentially undermine caring competence: "Nurses saying 'We do it this way in my hospital' is counterproductive. Having humility can make you more competent."

Moreover, students related humility to their responsibility to compassionately care for patients as vulnerable others, with Student 07 stating, "You know, they're already vulnerable," and "You're taking care of your patient maybe at their lowest point." The transcript data align well with Pellegrino's (1979) contention that the work for health professions educators was to center professional activity on a "sincere concern" for human values (p. 118). Pellegrino (1979) asserted that the patient is a suffering being in search of help, and as such, within the physician-patient relationship, the patient is inherently vulnerable. Students' transcripts show that they noted and appreciated instances when clinical faculty and clinicians modeled clinical humility in their sincere concern for patients as vulnerable others when apologizing for errors, acknowledging uncertainty, or asking for help.

The indications of the findings for medical and health humanities scholars are, first, that clinical humility, as a construct, is well aligned with the discipline's core concerns for self-awareness, relational openness, patient-centeredness, and ethical practice. Second, the findings suggest that simulation-based learning environments present a novel arena for the medical and health humanities where trainees and educators can test theory and transform real-world practice. Having explored the relevance of the qualitative data to simulation, humility, and medical and health humanities scholarship, the next section will discuss the implications of the findings for the medical and health humanities, humility scholars, and nursing and health care simulation educators.

Implications of the Findings

The emerging insights from this research have shed empirical light on the construct of clinical humility, and confirmed that, like its conceptual counterparts, it presents a multifaceted, complex, and sometimes elusive concept for study that has profound relevance for the medical and health humanities, humility scholars, nurse educators, and health care simulation educators in academic and practice settings.

The findings from this study bolster arguments for integrating humanities into nursing and health care education. In their interviews, students pointed to humility as a stimulus for lifelong learning and ethical care. Students' transcripts revealed that they viewed self-awareness and relational openness, central goals of the medical and health humanities, as vital components of effective nursing care (Charon, 2001). Students cited examples of clinicians who acknowledged uncertainty, sought assistance, apologized for errors, and centered care on the patient. For medical health humanists, these findings endorse the role of the humanities in developing self-aware, ethically grounded clinicians

who are equipped to provide care in increasingly complex health care settings. Nurse educators should engage with medical and health humanities scholars to design curricula that integrate concepts and literature from the medical and health humanities to prepare nurses who are better equipped to practice with humility.

For humility scholars, the findings contribute to an emerging conceptualization of clinical humility that comprises internally and externally oriented features that can support ethical caring and fuel lifelong learning. This study invites humility scholars to revisit established theories of humility to include this newer conceptualization and consider how it reshapes the construct and adds dimension, and whether current instruments used to measure humility would detect or fail to detect clinical humility.

The study's findings offer compelling implications for nursing and simulation educators, notably around the usefulness of SBLEs to elicit and animate clinical humility for nursing students. The effective integration of simulation across disciplines and modalities has been well researched, and the body of scholarship around simulation evinces its value for building learners' self-confidence and communication skills (Bø et al., 2021; Garvey et al., 2020; Siah et al., 2022). However, apart from its impact on communication and intercultural interactions, less was known about the utility of simulation for preparing clinicians as humanistic caregivers (Létourneau et al., 2021; Luctkar-Flude et al., 2022; Moore et al., 2021).

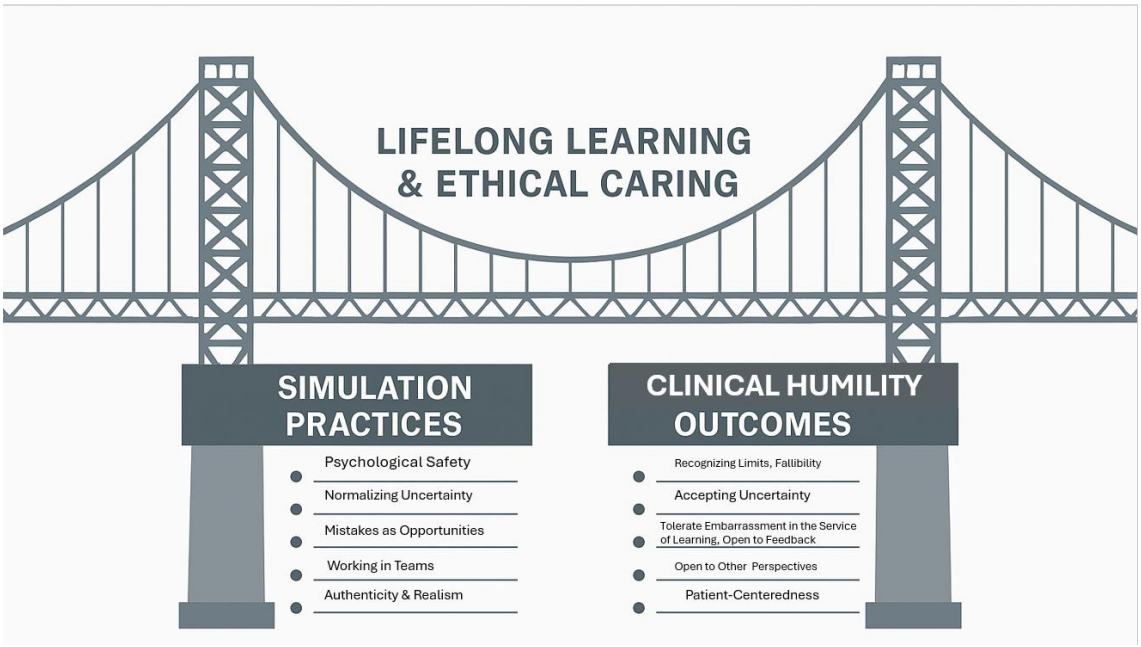
These findings show that nurse educators can design and employ simulation to initiate and fortify humanistic capacities for self-awareness, patient-centeredness, and relational openness, core concerns of medical narrative and of the medical and health humanities (Charon, 2001). Moreover, the findings show that educators can integrate

SBLEs as a safe environment for students to practice, engage with, and make meaning from human experiences of fallibility, vulnerability, uncertainty, and even embarrassment in the service of learning and skill-building.

The study further interrogated the architecture of clinical humility amid simulation-based learning, and its implications for professional formation among nursing students. In their responses, interviewees pointed to structures within their simulation experience that supported them to fully engage with the experience and with each other. These foundational structures—a nonjudgmental environment that prompts reflection, normalizes errors, embraces uncertainty, and welcomes dialogue—provide fertile ground upon which to erect an accurate self-view and appreciation for the contributions of others. Amid simulation, students perceived that clinical humility could operate to underpin professional role development in nursing, as it paved the way for lifelong learning and compassionate, ethical care. Figure 8 depicts the structural framework of simulation-based learning, showing the foundational components that supported clinical humility outcomes for students in this study.

Figure 8

Structural Framework for Simulation and Clinical Humility



Note. Figure created via Microsoft (2025).

This study stresses the critical importance of safe learning environments for simulation-based learning. Drawing upon a foundation of sturdy evidence, the implications of this study both converge with and challenge existing notions about psychological safety in SBLEs, most notably, long-held assumptions of simulation educators that equate psychological safety with comfort. Clinical humility flourished amid safety. Students said that psychological safety enabled them to critically self-reflect, honestly appraise their limitations, and confront opposing viewpoints. The study findings underscore the importance of psychological safety in simulation-based learning and urge educators to ensure that clinical learning environments prioritize psychological safety.

However, the findings from this study also urge that simulation educators and participants should recalibrate notions of psychological safety in simulation-based

learning to allow for and even anticipate the discomfort that can accompany personal, intellectual, and professional growth. To this end, educators should incorporate and standardize discussions about the potential for students to experience embarrassment during simulation-based learning. Educators and simulation facilitators should take steps to reassure students that their simulation activities are kept confidential and stress the formative nature of the experience.

Faculty should design strategies within SBLEs that recognize and optimize opportunities for peer-generated psychological safety. These may include creating teams of students in the SBLE who are known to one another, and structuring time during the prebrief for students to strategize their roles and plan of care for the simulated patient encounter. Simulation and nursing educators should conduct additional studies to develop a clearer understanding of how peer-generated psychological safety operates to enhance clinical humility and simulation learning. Having discussed the implications of the findings for medical and health humanities, nursing and health care simulation, and humility scholars, the following section will review the beneficiaries of the research findings.

Beneficiaries

The findings from this study have relevance for multiple stakeholders. The application of this study's findings can benefit nursing students, nurses, health care organizations, and their patients by enriching nurses' clinical training to produce critically self-aware, reflective, growth-oriented, and compassionate graduates who are better prepared to safely navigate the challenges and complexities of the health care environment. Nursing faculty and health care simulation educators can apply these

findings to enhance psychological safety and improve learning outcomes in SBLEs. Additionally, humility researchers can gain new insights into the nuances of humility and how it manifests and operates in academic and simulated clinical environments. Contemplating future research in the medical and health humanities, these findings make it clear that health care simulation offers a controlled, ethically sound environment in which to study medical and health humanities concepts.

The potential impact of continued research on this topic promises robust benefits. For example, expanding this research into non-academic clinical settings could provide a deeper understanding of how nurse humility influences patient outcomes and satisfaction. Future simulation research to explore this topic across simulation modalities will add breadth and depth to our understanding of the utility of SBLEs to promote clinical humility. Research that applies a mixed methods approach to the study of clinical humility can contribute to our understanding of its antecedents and consequences.

For a discussion of the correlation between demographic trends and qualitative themes, please see Appendix N.

Study Limitations

Sample

While this study interrogates how clinical humility manifests for baccalaureate nursing students amid clinical simulation, to fully appreciate the value of this inquiry, this section will acknowledge and detail its limitations. The findings, which provide valuable insight into students' perceptions of clinical humility amid simulation, should be evaluated considering their unique context. Given the lack of similar studies, it was prudent to begin with one institution. A somewhat homogenous sample of 19

baccalaureate nursing students from a single institution within a defined geographic area may not accurately represent the experiences of baccalaureate nursing students in schools of nursing. Most students were female, between the ages of 18 and 35 years. Therefore, the findings reflect the experiences of a single group of baccalaureate nursing students, rather than the experiences of nursing students in general. Additionally, I recruited a convenience sample of student volunteers. This may have introduced selection bias, in which students who held more favorable attitudes about simulation in the lab were overrepresented, and those who disliked simulation and laboratory experiences were underrepresented. Future research should incorporate larger sample sizes and a multisite design to include the broader perspectives of learners from different varied educational pathways and disciplines. A randomized sampling method would help to eliminate potential biases effected by convenience sampling.

Design Limitations

The findings should also be considered within the context of design limitations. There was some variability in the time elapsed between the students' simulation experience and the time of the interview, which may have introduced errors related to inaccurate recall. Additionally, while students reported they completed other presimulation assignments, there was a low uptake of the presimulation PowerPoint slide deck, which was intended to introduce the concept of clinical humility. Possibly due to confusion regarding the presimulation assignments, only 2 of 19 students reported that they had viewed or skimmed the presimulation PowerPoint, although all had completed the other presimulation assignments. This inconsistency may have skewed the responses of some participants regarding definitions of humility and preparedness for the SBLE to

imperil the dependability of the findings. Providing a standardized baseline introduction to the concept of humility might have been helpful. Future studies should ensure presimulation instructions are clearly communicated and incorporate automated mechanisms to accurately record presimulation activity uptake as a data point.

Bias

The subjective essence of qualitative research can introduce bias that distorts and clouds the trustworthiness of findings as accurate reflections of the data (Shah, 2019). The personal involvement of the researcher in conducting the interviews may have introduced participant bias, and less candid, trustworthy interview responses. I incorporated mechanisms to reduce the influence of participant and researcher bias, including conducting interviews in a neutral space, assuring participants of anonymity, and peer debriefing during the data analysis and coding phase of the research. However, interviews were conducted in a simulation lab where I am known to participants as a member of the faculty, which may have influenced participants' candor in responding. Participants may have answered questions in ways they perceived would be favorable to me. Additionally, the demographic data survey was not a validated tool, but rather a researcher-developed interview questionnaire. This may have introduced data collection bias, in which the questions asked may have influenced the interviewees' answers. As noted earlier, the elapsed time between the date of the SBLE and the interview was up to approximately two weeks, which may have introduced recall bias and can undercut the accuracy of participants' accounts. Future research should incorporate shorter intervals between the SBLE and data collection and add indirect research techniques such as

validated surveys and direct observations, as well as third-party interviewers to triangulate data and further ensure data credibility.

Recommendations for Future Research

This study aimed to describe how clinical humility manifests and operates for baccalaureate nursing students amid simulation-based learning. Like its conceptual relatives, clinical humility remains an often elusive and complex concept for research. Still, the findings offer valuable insights for scholars in health care simulation, nursing education, and the medical and health humanities. The analysis of data and discussion of themes show that nursing students perceived clinical humility as a multifaceted concept that relates to both self-awareness and awareness of others. Second, the data suggest that aspects of the SBLE, especially opportunities to confront uncertainty and limitations, view mistakes as opportunities, work collaboratively in teams, and practice realism-driven patient-centeredness in a controlled environment can animate clinical humility. Finally, participants discerned that humility is a crucial quality for nurses, stressing its importance to fostering caring competence and a commitment to lifelong learning and ethical comportment.

Collectively, these findings suggest that, for nursing students who participate in simulation, clinical humility manifests as a multifaceted construct that incorporates traits and practices that can be internally or externally focused, flourished amid safety, tolerated discomfort in the service of learning, and buttressed professional development and ethical care. While separately, each theme conveys discrete details of the study participants' experiences, jointly they point to the importance of simulation-based learning as a potential tool for cultivating clinical humility among nurse trainees. The

next sections will discuss the implications of these key themes for future scholarship in simulation and nursing education, humility research, and the medical and health humanities.

Future Simulation and Nursing Education Research

These findings suggest important considerations for future research in nursing and health care simulation, particularly for psychological safety in manikin-based high-fidelity human patient simulation. Specifically, they suggest that students perceived that their faculty's approach to psychological safety and supportive, constructive responses to students' uncertainty or mistakes contributed to the students' self-awareness and relational and epistemic openness. The transcripts further suggest that students perceived that psychological safety could be peer-generated to catalyze collaboration and openness to the perspectives of others. Future inquiries should interrogate the phenomenon of peer-generated psychological safety for students who simulate with in nursing education and other health care disciplines. Additional research should also examine the interplay between clinical humility and psychological safety across simulation modalities, including virtual, extended, and mixed reality platforms, and within bedside patient-care settings. Last, further inquiries should compare the effectiveness of different faculty development interventions for preparing educators and simulation facilitators to create and maintain psychological safety amid simulation and clinical training settings. Research centered on the constituents of psychologically safe training environments stands to enhance the quality of health care by equipping nursing graduates with the skills and attitudes they will need to question their assumptions, assess their limitations, work in teams, and continually seek professional growth.

The study revealed some unexpected findings around students' experiences with embarrassment amid simulation. Namely, students gleaned value from occasions of embarrassment in learning environments that made them feel safe and promised professional growth. These findings, in the broader context of simulation scholarship, challenge prevailing assumptions about the limits of psychological safety that held that safety and discomfort were mutually exclusive (Ford et al., 2024). Further studies should focus more on students' experiences with embarrassment amid SBLEs, to better understand how humility in the form of embarrassment can underpin competence and foster continued professional development. This will help simulation educators to develop simulation activities and calibrate simulation best practices that anticipate learners' experiences with embarrassment to enhance professional growth.

Nurse educators should build on the findings of this study to conduct additional inquiries to illuminate how faculty should model and cultivate clinical humility across instructional settings. Additional studies should consider the relative influence of other instructional approaches, such as lecture, storytelling and group discussion, and guided reflection on humble practice.

Larger scale qualitative and quantitative studies should inform the development of tools to measure clinical humility among nursing students, faculty, and other health care professionals who simulate. Further research to develop and validate surveys and other instruments to measure clinical humility will benefit nurse educators who seek to design and evaluate instructional activities and clinical learning experiences to foster critical self-awareness and relational openness among students.

Future Humility Research

This research aimed to develop a better understanding of the nature of clinical humility, a relatively novel and under-researched construct of humility, within the context of high-fidelity SBLEs. In the findings, clinical humility emerged as multidimensional and bore commonalities with other forms of humility including intellectual, cultural, and leader humility. This research is among the first to explore clinical humility among nurses. While this research advances our understanding of clinical humility, relevant conceptual questions persist.

Additional research should seek to define central constructs of clinical humility to understand its contours and dimensions. More research is needed to identify and test potential connections between nurse faculty humility, humble leadership, and students' perceptions of clinical humility in simulated and live patient care settings. Future humility research should undertake to define clinical humility and identify its antecedents and consequences more clearly. This can support the development and validation of instruments that will accurately detect the presence of clinical humility, evaluate learning experiences that seek to cultivate it, and identify its influence on the capacity of clinicians to provide humanistic, patient-centered care that advances health and reduces human suffering.

Future research should include alternative research designs to enhance understanding of clinical humility and its potential impacts on nurses and patient outcomes. For example, longitudinal studies may help to uncover how clinical humility manifests and endures over time. Further research should seek to situate clinical humility

within the broader context of humility research to ensure that measures of humility can accurately detect its presence and effects.

Future Medical Humanities Research

Given its concern for human experiences of illness and healing, and its focus on cultivating more caring and sensitivity among clinicians, findings of this inquiry are highly relevant for medical and health humanities scholars and suggest new directions for continued research on clinical humility (Klugman, 2017). The findings revealed that students viewed humility as a relational practice. The medical and health humanities can leverage its transdisciplinary mission to further examine and illuminate the nature of clinical humility more broadly. For example, future transdisciplinary research should examine how clinical humility manifests and operates in other contexts, outside the realm of clinical education and health care simulation. Additional research in the medical and health humanities should explore if and how clinical humility can be cultivated by engagement with texts, stories, memoirs, film, visual arts, and other methods used to build its interdisciplinary body of knowledge. Future medical and health humanities research should also explore the influence of power dynamics in clinical education settings on clinical humility.

More research is needed to determine how medical and health humanities educators can use SBLEs to cultivate clinical humility and other humanistic caring practices for students and trainees across health care disciplines. For example, can simulation modalities be integrated to harmonize with more conventional tools of the medical and health humanities to humanize training and amplify the importance of relational openness, self-awareness, and patient-centeredness among students and

clinicians? Additional medical and health humanities research findings may also prompt novel approaches to simulation design and facilitation to foreground humility and other humanistic caring competencies for nurses and health care trainees.

Finally, the findings suggest that SBLEs served as an effective vehicle for student nurses to contemplate and rehearse ethical practices that concern the medical and health humanities, such as critical self-reflection, decentering themselves, and amplifying the patient's voice. More research is needed using varied approaches to determine whether participation in SBLEs can imbue students and professional clinicians with clinical humility and other durable skills sets to promote ethical behaviors that underpin quality of care.

Conclusion

This study set out to explore baccalaureate nursing students' experiences with and perceptions of clinical humility amid clinical simulation through semi-structured interviews. The findings from this study present simulation participants' perceptions of clinical humility, a relatively new conceptualization of a complex and often elusive virtue. This research has important implications for nursing faculty and simulation educators in other health care disciplines, as well as for medical and health humanities scholars.

To summarize, this research prompts a compelling argument for the profound relevance of clinical humility as a relational and ethical practice that can support nursing students' professional formation, can be prompted by SBLEs, and is well aligned with the aims of the medical and health humanities. The findings support and amplify the work of earlier researchers who asserted that humility should be included in health care education

(Michalec, 2024). Simulation provides a safe environment for cultivating skills that respond to the human dimensions of health care—fallibility, uncertainty, and vulnerability.

I am grateful to the clinicians who met our family with humility. When they sought to know us and understand us better, looked to collaborate with colleagues, and candidly shared their uncertainty, they humanized our experience and earned our trust. Feeling heard and seen counteracted the fear and isolation we felt as we navigated the process of diagnosis and treatment. Their humility has profoundly reshaped our family's story—including the daughters who quietly lived this experience alongside us – and continues to inform the work ahead.

Reflecting on my own start in nursing, and the experiences that eventually led me to this research, I am encouraged by the wisdom of the students who participated in this study. Amid simulation, the students recognized that real clinical expertise welcomes humility. Provided with a psychologically safe learning environment, students reframed success as growth rather than technical precision. Clinical humility is a "precious gift" that affords the perspective Coulehan (2009) knew his students would need to navigate uncertainty. For nurse educators charged with preparing the next generation of nurses, designing learning environments that cultivate clinical humility may be as crucial as teaching technical skills, as they will provide students with the tools they will need to continually learn and provide safe, compassionate care for their patients.

References

Ablao, J. N., Alyami, W., Alarki, H., Alzahrani, W., Alshareff, M., Alemrani, F., Alaysuy, H., & Alatawi, F. (2023). Nursing students' perception of the effectiveness of the health care simulation at the university of Tabuk. *International Journal of Nursing Education*, *15*(4), 26–32. https://doi.org/10.37506/ijone.v15i4.20039

American Association of Colleges of Nursing. (2023). *The essentials: Competencies for professional nursing education*. https://www.aacnnursing.org/Portals/0/PDFs/Publications/Essentials-2021.pdf

American Nurses Association. (2018). *Code of ethics*. https://www.nursingworld.org/practice-policy/nursing-excellence/ethics/code-of-ethics-for-nurses/coe-view-only/

American Nurses Association. (2024, January 22). *America's most trusted: Nurses continue to rank the highest*. https://www.nursingworld.org/news/news-releases/2024/americas-most-trusted-nurses-continue-to-rank-the-highest/

Amin, M., Nørgaard, L., Cavaco, A. M., Witry, M. J., Hillman, L., Cernasev, A., & Desselle, S. P. (2020). Establishing trustworthiness and authenticity in qualitative pharmacy research. *Research in Social and Administrative Pharmacy*, *16*(10), 1472–1482. https://doi.org/10.1016/j.sapharm.2020.02.005

An, H., & Koo, H. (2022). Peer tutoring experiences of neonatal nursing simulations among Korean nursing students: A qualitative study. *Child Health Nursing Research*, *28*(4), 280–290. https://doi.org/10.4094/chnr.2022.28.4.280

Aquinas, T. (1265). *Summa Theologica* (Fathers of the English Dominican Province, Trans.). https://www.documentacatholicaomnia.eu/03d/1225-1274,_Thomas_Aquinas,_Summa_Theologiae_%5B1%5D,_EN.pdf (Original work published 1265)

Bates, T. A., Moore, L. C., Greene, D., & Cranford, J. S. (2018). Comparing outcomes of active student and observer roles in nursing simulation. *Nurse Educator*, *44*(4), 216–221. https://doi.org/10.1097/nne.0000000000000603

Berry, S., Jones, T., & Lamb, E. (2017). Editors' introduction: Health humanities: The future of pre-health education is here. *Journal of Medical Humanities*, *38*(4), 353–360. https://doi.org/10.1007/s10912-017-9466-0

Bhandari, A., & Abu Sayf, A. (2013). A case of clinical humility: A false positive VQ scan leads to misdiagnosis of acute aortic dissecting aneurysm. *Chest*, *144*(4), 324A. https://doi.org/10.1378/chest.1704890

Bienstock, J., & Heuer, A. (2022). A review on the evolution of simulation-based training to help build a safer future. *Medicine*, *101*(25), e29503. https://doi.org/10.1097/md.0000000000029503

Bø, B., Madangi, B., Ralaitafika, H., Ersdal, H., & Tjoflåt, I. (2021). Nursing students' experiences with simulation-based education as a pedagogic method in low-resource settings: A mixed-method study. *Journal of Clinical Nursing*, *31*(9–10), 1362–1376. https://doi.org/10.1111/jocn.15996

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2022). Toward good practice in thematic analysis: Avoiding common problems and be(com)ing a knowing researcher. *International Journal of Transgender Health*, *24*(1), 1–6. https://doi.org/10.1080/26895269.2022.2129597

Britannica Editors. (2025). Empathy. In *Encyclopedia Britannica*. Retrieved November 10, 2025, from https://www.britannica.com/science/empathy

Broyard, A. (1992). *Intoxicated by my illness: And other writings on life and death*. Ballantine Books.

Buchanan, D., & O'Connor, M. (2020). Integrating diversity, equity, and inclusion into a simulation program. *Clinical Simulation in Nursing*, *49*, 58–65. https://doi.org/10.1016/j.ecns.2020.05.007

Burrell, S. A., Ross, J., Keil, K. M., & Heverly, M. (2023). Pilot testing of virtual simulation-based experiences in an oncology nursing seminar. *Journal of Nursing Education*, *62*(3), 167–170. https://doi.org/10.3928/01484834-20230109-07

Byma, E. A., & Lycette, L. (2023). An integrative review of humanities-based activities in baccalaureate nursing education. *Nurse Education in Practice*, *70*, Article 103677. https://doi.org/10.1016/j.nepr.2023.103677

Carey, J. M., & Rossler, K. (2023). The how when why of high fidelity simulation. *StatPearls*. http://europepmc.org/books/NBK559313

Carillo, I., Massimino, P., & Santella, A. (2022). Exploring the motivations of nursing students in New York State. *American Journal of Health Studies*, *37*(1). https://doi.org/10.47779/ajhs.2022.716

Carr, S. E., Noya, F., Phillips, B., Harris, A., Scott, K., Hooker, C., Mavaddat, N., Ani-Amponsah, M., Vuillermin, D. M., Reid, S., & Brett-MacLean, P. (2021). Health humanities curriculum and evaluation in health professions education: A scoping review. *BMC Medical Education*, *21*(1). https://doi.org/10.1186/s12909-021-03002-1

Carvalho-Filho, M. A., Schaafsma, E. S., & Tio, R. A. (2018). Debriefing as an opportunity to develop emotional competence in health profession students: Faculty, be prepared! *Scientia Medica*, *28*(1), 1–9. http://doi.org/10.15448/1980-6108.2018.1.28805

Cavazotte, F., Mansur, J., & Lanção, F. (2023). Beyond the paradox: Understanding how project leader humility and narcissism affect project outcomes. *International Journal of Project Management*, *41*(6), Article 102500. https://doi.org/10.1016/j.ijproman.2023.102500

Center for Medical Simulation. (2024). *The Basic Assumption*©. Retrieved May 6, 2024, from https://harvardmedsim.org/resources/the-basic-assumption/#:~:text=%E2%80%9CWe%20believe%20that%20everyone%20participating,including%20it%20in%20course%20materials.

Charon, R. (2001). Narrative medicine. *JAMA*, *286*(15), 1897. https://doi.org/10.1001/jama.286.15.1897

Charon, R. (2006). *Narrative medicine: Honoring the stories of illness*. Oxford University Press.

Chen, C., Huang, A. Y., Hou, P.-H., Lin, J.-Y., Chen, H.-H., Huang, S.-S., & Yang, S. H. (2025). Exploring the significance of medical humanities in shaping internship performance: Insights from curriculum categories. *Medical Education Online*, *30*(1). https://doi.org/10.1080/10872981.2024.2444282

Chintakananda, K., Diefendorff, J. M., Oc, B., Daniels, M. A., Greguras, G. J., & Bashshur, M. R. (2023). Leader-expressed humility: Development and validation of scales based on a comprehensive conceptualization. *Journal of Business Ethics*, *192*(1), 129–146. https://doi.org/10.1007/s10551-023-05523-9

Chochinov, H. M. (2010). Humility and the practice of medicine: Tasting humble pie. *Canadian Medical Association Journal*, *182*(11), 1217–1218. https://doi.org/10.1503/cmaj.100874

Chong, E. K., Chen, H., Chui, H., & Luk, S. (2025). Perceived cultural humility in supervision group and trainees' cultural responsiveness self-efficacy. *Psychotherapy*, *62*(1), 44–54. https://doi.org/10.1037/pst0000540

Church, I. M., & Barrett, J. (2017). Intellectual humility. In E. L. Worthington, Jr., D. E. Davis, & J. N. Hook (Eds.), *Handbook on humility: Theory, research, and applications* (pp. 62–75). Routledge.

Coppola, W. J., Kumar, A. B., & Hook, J. N. (2020). Measuring humility in musical contexts: Initial development of the musical humility scale. *Psychology of Music*, *49*(4), 1047–1057. https://doi.org/10.1177/0305735619896416

Coulehan, J. (2009). Pantoun on lines by William Osler. *JAMA*, *302*(17), 1844. https://doi.org/10.1001/jama.2009.1505

Coulehan, J. (2010). On humility. *Annals of Internal Medicine*, *153*(3), 200–201. https://doi.org/10.7326/0003-4819-153-3-201008030-00011

Crath, R., & Rangel, J. (2020). Engaging cultural humility diffractively. *Journal of Evaluation in Clinical Practice*, *27*(3), 554–561. https://doi.org/10.1111/jep.13409

Craxì, L., Giardina, S., & Spagnolo, A. G. (2017). A return to humane medicine: Osler's legacy. *Infections in the History of Medicine*, *25*(3), 292–297.

Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design* (2nd ed.). Sage Publications.

DasGupta, S. (2008). Narrative humility. *The Lancet*, *371*(9617), 980–981. https://doi.org/10.1016/s0140-6736(08)60440-7

Davis, D. E., Hook, J. N., Worthington, E. L., Van Tongeren, D. R., Gartner, A. L., Jennings, D. J., & Emmons, R. A. (2011). Relational humility: Conceptualizing and measuring humility as a personality judgment. *Journal of Personality Assessment*, *93*(3), 225–234. https://doi.org/10.1080/00223891.2011.558871

Decker, S., Sapp, A., Bibin, L., Chidume, T., Crawford, S. B., Fayyaz, J., Johnson, B., & Szydlowski, J. (2025). Healthcare simulation standards of best practice®: The debriefing process. *Clinical Simulation in Nursing*, *105*, Article 101775. https://doi.org/10.1016/j.ecns.2025.101775

Dellasega, C., Milone-Nuzzo, P., Curci, K. M., Ballard, J., & Kirch, D. G. (2007). The humanities interface of nursing and medicine. *Journal of Professional Nursing*, *23*(3), 174–179. https://doi.org/10.1016/j.profnurs.2007.01.006

Díaz, D. A., Todd, A. D., Gilbert, G. E., López Castillo, H., Anderson, M., Jackson, J. P., Linnell, M. R., Ng, K. Y., Walker, A. G., & Díaz, R. Z. (2023). Using various types of embedded participants to enhance culturally congruent, family-centered simulation-based education. *Simulation & Gaming*, *54*(4), 427–446. https://doi.org/10.1177/10468781231181665

Dillard-Wright, J. (2023). Telling a different story: Historiography, ethics, and possibility for nursing. *Nursing Philosophy*, *24*(3). https://doi.org/10.1111/nup.12444

Dimonte, V., Luciani, M., Conti, A., Malinverni, E., Clari, M., Campagna, S., & Garrino, L. (2021). Nursing students' perspectives of dance movement therapy to learn relational skills: A qualitative description study. *Nurse Education Today*, *97*, 104697. https://doi.org/10.1016/j.nedt.2020.104697

Drevdahl, D. J., & Canales, M. K. (2025). Understanding nursing backwards: The evolution of nursing as a profession. *Journal of Nursing Education*, *64*(2), 99–108. https://doi.org/10.3928/01484834-20241004-04

Edwards, J. J., Nichols, A., & Bakerjian, D. (2023, March 1). *Simulation training*. Patient Safety Network. https://psnet.ahrq.gov/primer/simulation-training

Eppich, W., & Cheng, A. (2015). Promoting excellence and reflective learning in simulation (PEARLS) development and rationale for a blended approach to health care simulation debriefing. *Simulation in Healthcare*, *10*(2), 106–115.

Fang, Y., Dong, Y., & Fang, L. (2019). Honesty-humility and prosocial behavior: The mediating roles of perspective taking and guilt-proneness. *Scandinavian Journal of Psychology*, *60*(4), 386–393. https://doi.org/10.1111/sjop.12551

Ford, N. J., Gomes, L. M., Lowe, E., & Harder, N. (2024). Embracing discomfort and vulnerability: Cultivating brave learning spaces within simulation-based nursing education. *International Journal of Healthcare Simulation*. https://doi.org/10.54531/fokp9401

Forero, R., Nahidi, S., De Costa, J., Mohsin, M., Fitzgerald, G., Gibson, N., McCarthy, S., & Aboagye-Sarfo, P. (2018). Application of four-dimension criteria to assess rigour of qualitative research in emergency medicine. *BMC Health Services Research*, *18*(1). https://doi.org/10.1186/s12913-018-2915-2

Foronda, C. L., & MacWilliams, B. (2015). Cultural humility in simulation education: A missing standard? *Clinical Simulation in Nursing*, *11*(6), 289–290. https://doi.org/10.1016/j.ecns.2015.04.002

Foronda, C., Baptiste, D.-L., Reinholdt, M. M., & Ousman, K. (2015). Cultural humility: A concept analysis. *Journal of Transcultural Nursing*, *27*(3), 210–217. https://doi.org/10.1177/1043659615592677

Foronda, C., Porter, A., & Phitwong, A. (2020). Psychometric testing of an instrument to measure cultural humility. *Journal of Transcultural Nursing*, *32*(4), 399–404. https://doi.org/10.1177/1043659620950420

Frei, J., Alvarez, S. E., & Alexander, M. B. (2010). Ways of seeing: Using the visual arts in nursing education. *Journal of Nursing Education*, *49*(12), 672–676. https://doi.org/10.3928/01484834-20100831-04

Galán, C. A., Boness, C. L., Tung, I., Bowdring, M. A., Sequeira, S. L., Call, C. C., Savell, S. M., & Northrup, J. B. (2024). Clinical psychology graduate programs: Falling short in cultural humility training. *Training and Education in Professional Psychology*, *18*(3), 265–278. https://doi.org/10.1037/tep0000443

Galdas, P. (2017). Revisiting bias in qualitative research: Reflections on its relationship with funding and impact: *International Journal of Qualitative Methods*, *16*(1). https://doi.org/10.1177/1609406917748992

Gallagher, M. R., & Flint, J. A. (2016). Learning Argentine tango to develop nursing student empathy for patients. *Journal of Nursing Education*, *55*(5), 304. https://doi.org/10.3928/01484834-20160414-13

Garner, S. L., Koch, H., George, C., Hitchcock, J., Norman, G., Green, G., Young, P., & Mahid, Z. (2021). Cross cultural team collaboration: Integrating cultural humility in health development and research. *Informatics for Health and Social Care*, *46*(4), 345–354. https://doi.org/10.1080/17538157.2021.1895168

Garvey, L., Willetts, G., Sadoughi, N., & Olasoji, M. (2020). Undergraduate nursing students' experience of mental health simulation post-clinical placement: A qualitative study. *International Journal of Mental Health Nursing*, *30*(1), 93–101. https://doi.org/10.1111/inm.12801

Gould, J. W., & Martindale, D. A. (2005). A second call for clinical humility and judicial vigilance. *Family Court Review*, *43*(2), 253–259. https://doi.org/10.1111/j.1744-1617.2005.00025.x

Grisso, T. (2005). Commentary on "empirical and ethical problems with custody recommendations:" What now? *Family Court Review*, *43*(2), 223–228. https://doi.org/10.1111/j.1744-1617.2005.00020.x

Guo, H., Li, H., Yao, Y., Li, Y., & Huang, Y. (2025). The application of integrating medical humanities education into emergency skill-training scenario simulation teaching. *Frontiers in Medicine*, *12*, 1–9. https://doi.org/10.3389/fmed.2025.1561504

Hamad, A., & Jia, B. (2022). How virtual reality technology has changed our lives: An overview of the current and potential applications and limitations. *International Journal of Environmental Research and Public Health*, *19*(18), Article 11278. https://doi.org/10.3390/ijerph191811278

Happ, M. N., Howell, T., Pollak, K. I., Happ, M. F., Georgoff, P., Mallory, P. P., Straube, T., Greenberg, J. A., Tracy, E. T., & Antiel, R. M. (2025). Building surgical character: A dynamic simulation curriculum for nontechnical skills. *Journal of Surgical Education*, *82*(4), Article 103416. https://doi.org/10.1016/j.jsurg.2024.103416

Hayden, J., Smiley, R., Alexander, M., Kardong-Edgren, S., & Jeffries, P. R. (2014). The NCSBN National Simulation Study: A longitudinal, randomized, controlled study replacing clinical hours with simulation in prelicensure nursing education [Special section]. *Journal of Nursing Regulation*, *5*(2), S3–S40. https://doi.org/10.1016/S2155-8256(15)30062-4

Healy, D., & Smyth, S. (2017). Poetry as an engagement strategy: A novice teacher experience of its use within lectures. *Nurse Education in Practice*, *24*, 43–48. https://doi.org/10.1016/j.nepr.2017.03.007

Heath, F. E. (2023). Moral imagination. In *Encyclopedia Britannica*. https://www.britannica.com/topic/moral-imagination

Hess, E. D., & Ludwig, K. (2017). *Humility is the new smart: Rethinking human excellence in the smart machine age*. Berrett-Koehler Publishers.

Hill, P. C., Laney, E. K., Edwards, K. J., Wang, D. C., Orme, W. H., Chan, A. C., & Wang, F. L. (2017). A few good measures: Colonel Jessup and humility. In E. L. Worthington Jr., D. E. Davis, & J. N. Hook (Eds.), *Handbook of Humility* (pp. 119–130). Routledge.

Hillier, M. M., DeGrazia, M., Mott, S., Taylor, M., Manning, M. J., O'Brien, M., Schenkel, S. R., Cole, A., & Hickey, P. A. (2021). Utilizing high-fidelity simulation to improve newly licensed pediatric intensive care unit nurses' experiences with end-of-life care. *Journal for Specialists in Pediatric Nursing*, *27*(1). https://doi.org/10.1111/jspn.12360

Hofmeyer, A. (2025). Teaching intellectual humility in doctoral education in nursing to improve empathic engagement and impact. *Journal of Advanced Nursing*. https://doi.org/10.1111/jan.17109

Hong, Y.-H., Chen, C.-J., Shen, S., Fang, S.-C., Lin, M.-L., & Huang, S.-M. (2024). Effects of dance movement therapy on compassionate flow in nursing students: An experimental study. *Heliyon*, *10*(23), Article e40811. https://doi.org/10.1016/j.heliyon.2024.e40811

Hook, J. N., Davis, D. E., Owen, J., Worthington, E. L., & Utsey, S. O. (2013). Cultural humility: Measuring openness to culturally diverse clients. *Journal of Counseling Psychology*, *60*(3), 353–366. https://doi.org/10.1037/a0032595

Howley, L., Gaufberg, E., & King, B. (2020). *The fundamental role of the arts and humanities in medical education*. Association of American Medical Colleges. https://store.aamc.org/downloadable/download/sample/sample_id/382/

Hoyle, R. H., Davisson, E. K., Diebels, K. J., & Leary, M. R. (2016). Holding specific views with humility: Conceptualization and measurement of specific intellectual humility. *Personality and Individual Differences*, *97*, 165–172. https://doi.org/10.1016/j.paid.2016.03.043

Hsieh, M., & Lee, J. (2018). Preliminary study of vr and ar applications in medical and healthcare education. *Journal of Nursing and Health Studies*, *3*(1:1). https://doi.org/10.21767/2574-2825.100030

Hu, J., Zhang, S., Lount, R. B., & Tepper, B. J. (2023). When leaders heed the lessons of mistakes: Linking leaders' recall of learning from mistakes to expressed humility. *Personnel Psychology*, *77*(2), 683–712. https://doi.org/10.1111/peps.12570

Hustad, J., Johannesen, B., Fossum, M., & Hovland, O. (2019). Nursing students' transfer of learning outcomes from simulation-based training to clinical practice: A focus-group study. *BMC Nursing*, *18*(1). https://doi.org/10.1186/s12912-019-0376-5

Huynh, H., Dicke-Bohmann, A., & Nelson, C. (2021). What do humble doctors do? A conceptualization of clinician humility from the patient's perspective. *Patient Education and Counseling*, *104*(12), 3066–3071. https://doi.org/10.1016/j.pec.2021.04.028

Hyatt, L., & Roberts, C. (2024). *Dissertation journey* (4th ed.). Corwin.

Institute of Medicine Committee on Quality of Health Care in America. (2000). *To err is human: Building a safer health system* (L. T. Kohn, J. M. Corrigan, & M. S. Donaldson, Eds.) [Report]. National Academies Press. https://www.ncbi.nlm.nih.gov/books/NBK225188/

International Nursing Association for Clinical Simulation and Learning Simulation Regulations Committee. (2021). *Simulation regulation map*. Retrieved April 20, 2025, from https://www.inacsl.org/simulation-regulation-map

International Nursing Association for Clinical Simulation and Learning Standards Committee. (2016). INACSL standards of best practice: Simulation^{SM} simulation design. *Clinical Simulation in Nursing*, *12*, S5–S12. https://doi.org/10.1016/j.ecns.2016.09.005

International Nursing Association for Clinical Simulation and Learning Standards Committee, Watts, P.I., McDermott, D.S., Alinier, G., Charnetski, M., Ludlow, J., Horsley, E., Meakim, C., & Nawathe, P. (2021). Healthcare Simulation Standards of Best Practice® Simulation Design. *Clinical Simulation in Nursing*, *58*, 14–21. https://doi.org/10.1016/j.ecns.2021.08.009

International Nursing Association for Clinical Simulation and Learning Standards Committee, Persico, L., Ramakrishnan, S., Wilson-Keates, B., Catena, R., Charnetski, M., Fogg, N., Jones, M. C., Ludlow, J., MacLean, H., Simmons, V. C., Smeltzer, S., & Wilk, A. (2025). Healthcare simulation standard of best practice prebriefing: Preparation and briefing. *Clinical Simulation in Nursing*, *105*, Article 101777. https://doi.org/10.1016/j.ecns.2025.101777

Jain, S. (2024, Summer). Clinical humility and the limits of medical knowledge. *Harvard Medicine*. https://magazine.hms.harvard.edu/articles/clinical-humility-and-limits-medical-knowledge

James, L. S., Williams, M. L., Camel, S. P., & Slagle, P. (2021). Nursing student's attitudes toward teams in an undergraduate interprofessional mass casualty simulation. *Nursing Forum*, *56*(3), 500–512. https://doi.org/10.1111/nuf.12570

Jantzen, D., Newton, L., Dompierre, K.-A. B., & Sturgill, S. (2023). Promoting moral imagination in nursing education: Imagining and performing. *Nursing Philosophy*, *25*(1), Article e12427. https://doi.org/10.1111/nup.12427

Jarvis, C., & Eckhardt, A. L. (2024). *Physical examination and health assessment* (9th ed.). Elsevier.

Jeffrey, D. (2020). Humility: The primary virtue of a good doctor. *Journal of the Royal Society of Medicine*, *113*(12), 479–481. https://doi.org/10.1177/0141076820923609

Johnson, S. S. (2022). Editor's desk: It's critical to cultivate intellectual humility. *American Journal of Health Promotion*, *36*(8), 1399–1401. https://doi.org/10.1177/08901171221125326a

Johnston, S., Nash, R., & Coyer, F. (2019). An evaluation of simulation debriefings on student nurses' perceptions of clinical reasoning and learning transfer: A mixed methods study. *International Journal of Nursing Education Scholarship*, *16*(1). https://doi.org/10.1515/ijnes-2018-0045

Jones, M., & Schoonen, T. (2024). Embodied simulation and knowledge of possibilities. *Philosophical Psychology*, (2), 522–546. https://doi.org/10.1080/09515089.2024.2417990

Kaplan, K. B., Tenam-Zemach, M., & Reeves, J. (2023). Improving cultural humility in physical therapy students: What is faculty's role? *Physiotherapy Theory and Practice*, *40*(10), 2380–2397. https://doi.org/10.1080/09593985.2023.2252053

Kassabry, M. (2023). The effect of simulation-based advanced cardiac life support training on nursing students' self-efficacy, attitudes, and anxiety in Palestine: A quasi-experimental study. *BMC Nursing*, *22*(1). https://doi.org/10.1186/s12912-023-01588-z

Klugman, C. M. (2017). How health humanities will save the life of the humanities. *Journal of Medical Humanities*, *38*(4), 419–430. https://doi.org/10.1007/s10912-017-9453-5

Klugman, C. M., & Lamb, E. G. (2019). Introduction: Raising health humanities. In *Research methods in health humanities* (C. M. Klugman & E. G. Lamb, Eds.). Oxford University Press. https://doi.org/10.1093/med/9780190918514.003.0016

Krumrei-Mancuso, E. J., & Begin, M. (2022). Cultivating intellectual humility in leaders: Potential benefits, risks, and practical tools. *American Journal of Health Promotion*, *36*(8), 1404–1411. https://doi.org/10.1177/08901171221125326c

Leal-Costa, C., Carrasco-Guirao, J., Adánez-Martínez, M., Ramos-Morcillo, A., Ruzafa-Martínez, M., Suárez-Cortés, M., Jiménez-Ruiz, I., Molina-Rodríguez, A., & Díaz-Agea, J. (2024). Does clinical simulation learning enhance evidence-based practice? A quasi-experimental study involving nursing students. *Clinical Simulation in Nursing*, *87*, Article 101494. https://doi.org/10.1016/j.ecns.2023.101494

Leary, M. (2018). *The psychology of intellectual humility*. John Templeton Foundation. https://www.templeton.org/wp-content/uploads/2020/08/JTF_Intellectual_Humility_final.pdf

Létourneau, D., Goudreau, J., & Cara, C. (2021). Nursing students and nurses' recommendations aiming at improving the development of the humanistic caring competency. *Canadian Journal of Nursing Research*, *54*(3), 292–303. https://doi.org/10.1177/08445621211048987

Liborius, P., Kiewitz, C., & Faber, A. (2025). Up close and powerful: Leaders' personal sense of power and psychological closeness to their team as antecedents of leader humility, subordinate job engagement and trust. *Journal of Organizational Behavior*, *46*(9), 1226–1246. https://doi.org/10.1002/job.2883

Lim, F. (2017, March 3). Clinical humility: A humbled patient care. *American Nurse.* https://www.myamericannurse.com/clinical-humility-humbled-patient-care/

Lioce, L. (Ed.). (2020). *Healthcare simulation dictionary* (2nd ed.). Agency for Healthcare Research and Quality.

Lioce, L., Loprieto, J., Andersen, M., Deutsch, E. S., Downing, D., Robertson, J. M., Diaz, D. A., & Spain, A. E. (Eds.). (2025). *Healthcare simulation dictionary* (3rd ed.). Agency for Healthcare Research and Quality. https://www.ssih.org/sites/default/files/2025-03/Healthcare-Simulation-Dictionary-3.pdf

Llewellyn, S., Connor, K., Quatraro, M., & Dye, J. (2023). Changes in weight bias after simulation in pre-license baccalaureate nursing students. *Teaching and Learning in Nursing*, *18*(1), 148–151. https://doi.org/10.1016/j.teln.2022.07.006

Luctkar-Flude, M., Ziegler, E., Foronda, C., Walker, S., & Tyerman, J. (2022). Impact of virtual simulation games to promote cultural humility regarding the care of sexual and gender diverse persons: A multi-site pilot study. *Clinical Simulation in Nursing*, *71*, 146–158. https://doi.org/10.1016/j.ecns.2022.07.004

Lumbreras, S., Gismera, L., & Oviedo, L. (2023). How a humbler science becomes a better science. *Religions*, *14*(1), 64. https://doi.org/10.3390/rel14010064

Luo, Y., Zhang, Z., Chen, Q., Zhang, K., Wang, Y., & Peng, J. (2022). Humble leadership and its outcomes: A meta-analysis. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.980322

Makary, M. (2024). *Blind spots: When medicine gets it wrong and what it means for our health*. Bloomsbury Publishing.

Masters, K. (2024). *Role development in professional nursing practice* (7th ed.). Jones & Bartlett Learning.

Matsuda, Y., Prather, S. L., Reaves, R. P., McEwing, E. M., Iriarte, E., & Everett-Thomas, R. (2023). Understanding the student's experience of community health nursing simulations. *International Journal of Nursing Education Scholarship*, *20*(1). https://doi.org/10.1515/ijnes-2022-0022

McCaffrey, G., Venturato, L., Patterson, J., Langille, J., Jackson, R., & Rosenal, T. (2017). Bringing a novel to practice: An interpretive study of reading a novel in an undergraduate nursing practicum course. *Nurse Education in Practice*, *24*, 84–89. https://doi.org/10.1016/j.nepr.2017.04.001

McElroy-Heltzel, S. E., Davis, D. E., DeBlaere, C., Worthington, E. L., & Hook, J. N. (2018). Embarrassment of riches in the measurement of humility: A critical review of 22 measures. *The Journal of Positive Psychology*, *14*(3), 393–404. https://doi.org/10.1080/17439760.2018.1460686

McKenna, L., Mambu, I., Sommers, C. L., Reisenhofer, S., & McCaughan, J. (2023). Nurses' and nursing students' reasons for entering the profession: Content analysis of open-ended questions. *BMC Nursing*, *22*(1), Article 152. https://doi.org/10.1186/s12912-023-01307-8

McKie, A., & Naysmith, S. (2013). Promoting critical perspectives in mental health nursing education. *Journal of Psychiatric and Mental Health Nursing*, *21*(2), 128–137. https://doi.org/10.1111/jpm.12061

Meakim, C., Boese, T., Decker, S., Franklin, A. E., Gloe, D., Lioce, L., Sando, C. R., & Borum, J. C. (2013). Standards of best practice: Simulation standard I: Terminology. *Clinical Simulation in Nursing*, *9*(6), S3–S11. https://doi.org/10.1016/j.ecns.2013.04.001

Michalec, B., Cuddy, M. M., Felix, K., Gur-Arie, R., Tilburt, J. C., & Hafferty, F. W. (2024). Positioning humility within healthcare delivery - From doctors' and nurses' perspectives. *Human Factors in Healthcare*, *5*, 1–10. https://doi.org/10.1016/j.hfh.2023.100061

Michalec, B., Xyrichis, A., & Arenson, C. (2024). "Professional humility": Introducing a new framework to advance interprofessionalism. *Journal of Interprofessional Care*, *38*(4), 587–592. https://doi.org/10.1080/13561820.2024.2326974

Microsoft. (2025). Microsoft 365 Copilot (GPT-5 chat model) [Large language model]. Microsoft Corporation.

Moniz, T., Golafshani, M., Gaspar, C. M., Adams, N. E., Haidet, P., Sukhera, J., Volpe, R. L., de Boer, C., & Lingard, L. (2021). How are the arts and humanities used in medical education? Results of a scoping review. *Academic Medicine*, *96*(8), 1213–1222. https://doi.org/10.1097/ACM.0000000000004118

Moore, C., Hecht, S. M., Sui, H., Mayer, L., Scott, E. K., Byrne, B., & McHenry, M. S. (2021). Integrating cultural humility into infant safe sleep counseling: A pediatric resident simulation. *Cureus*, *13*(2), Article e20847. https://doi.org/10.7759/cureus.20847

Mrayyan, M. T., & Al-Rjoub, S. (2024). Does nursing leaders' humility leadership associate with nursing team members' psychological safety? A cross-sectional online survey. *Journal of Advanced Nursing*, *80*(9), 3666–3678. https://doi.org/10.1111/jan.16117

Mukhalalati, B., & Taylor, A. (2019). Adult learning theories in context: A quick guide for healthcare professional educators. *Journal of Medical Education and Curricular Development*, *6*. https://doi.org/10.1177/2382120519840332

Nadelhoffer, T., & Wright, J. (2017). The twin dimensions of the virtue of humility. In *Moral psychology* (pp. 309–342). The MIT Press. https://doi.org/10.2307/j.ctt1n2tvzm.25

Naumova, E. N. (2023). Intellectual humility in public health training, research, and practice. *Journal of Public Health Policy*, *44*, 1–5. https://doi.org/10.1057/s41271-022-00389-z

Nightingale, F. (1992). *Notes on nursing*. J. B. Lippincott. (Original work published 1859)

Nolan, T., Alston, A., Choto, R., & Moss, K. (2021). Cultural humility: Retraining and retooling nurses to provide equitable cancer care. *Clinical Journal of Oncology Nursing*, *25*(5), 3–9. https://doi.org/10.1188/21.cjon.s1.3-9

O'Doherty, D., O'Hare, J. A., Hyde, S., & McGrath, D. (2019). Humanities in medicine: A qualitative study of graduate and student experiences of completing a student selected component. *Creative Education*, *10*(02), 273–287. https://doi.org/10.4236/ce.2019.102022

Orange, D. M. (2017). From fallibilism to clinical humility: Brothers and Corpt on the feminine and the maternal. *Psychoanalytic Inquiry*, *37*(6), 425–428. https://doi.org/10.1080/07351690.2017.1334453

Osler, W. (2014, October 12). The student life (Sir William Osler). *ArtBeat*. https://utmedhumanities.wordpress.com/2014/10/12/the-student-life-sir-william-osler/

Ou, A. Y., Lu, Q., Li, X., Chi-Nien, C., & Chen, G. (2024). CEO humility and corporate social irresponsibility: Evidence based on a new unobtrusive measure. *Organization Science*, *35*(6), 2016–2039. https://doi.org/10.1287/orsc.2022.17104

Ousager, J., & Johannessen, H. (2010). Humanities in undergraduate medical education: A literature review. *Academic Medicine*, *85*(6), 988–998. https://doi.org/10.1097/acm.0b013e3181dd226b

Owen, H. (2012). Early use of simulation in medical education. *Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare*, *7*(2), 102–116. https://doi.org/10.1097/sih.0b013e3182415a91

Owens, B. P., & Hekman, D. R. (2012). Modeling how to grow: An inductive examination of humble leader behaviors, contingencies, and outcomes. *Academy of Management Journal*, *55*(4), 787–818. https://doi.org/10.5465/amj.2010.0441

Pellegrino, E. D. (1979). *Humanism and the physician*. University of Tennessee Press.

Perryman, D. E. (2023). Infusing humility as a developmental leadership tool: An exploratory instrumental case study. *Journal of Leadership Education*, 1–22. https://doi.org/10.12806/V22/I2/R1

Phan, Q., Johnson, N., Hillman, J., Geller, D., Kimble, L. P., & Swan, B. (2020). Assessing baccalaureate nursing students' knowledge and attitudes of social determinants of health after a health equity simulation. *International Journal of Nursing Education Scholarship*, *17*(1). https://doi.org/10.1515/ijnes-2020-0024

Phrampus, P. E. (2023, August 8). HUMBLE: Six traits that will make you a better simulation educator and lead effective debriefings. *Simulating Healthcare*. https://simulatinghealthcare.net/2023/08/08/humble-six-traits-that-will-make-you-a-better-simulation-educator-and-lead-effective-debriefings/

Porter, S. L., Rambachan, A., Vélez de Cea, A., Rabinowitz, D., Pardue, S., & Jackson, S. (2017). Religious perspectives on humility. In *Handbook of humility* (pp. 47–61). Routledge.

Porter, T., Baldwin, C. R., Warren, M. T., Murray, E. D., Cotton Bronk, K., Forgeard, M. J. C., Snow, N. E., & Jayawickreme, E. (2022). Clarifying the content of intellectual humility: A systematic review and integrative framework. *Journal of Personality Assessment*, *104*(5), 573–585. https://doi.org/10.1080/00223891.2021.1975725

Porter, T., Elnakouri, A., Meyers, E. A., Shibayama, T., Jayawickreme, E., & Grossmann, I. (2022). Predictors and consequences of intellectual humility. *Nature Reviews Psychology*, *1*(9), 524–536. https://doi.org/10.1038/s44159-022-00081-9

President and Fellows of Harvard College. (2020). *The Flexner report*. Perspectives of Change. https://perspectivesofchange.hms.harvard.edu/node/99#:~:text=The%201910%20Flexner%20Report%20examined%20medical%20education,not%20afford%20to%20update%20and%20maintain%20facilities.%26text=Flexner%20recommended%20coeducation%20of%20men%20and%20women,should%20be%20trained%20to%20serve%20Black%20communities.

Purdy, E., Borchert, L., El-Bitar, A., Isaacson, W., Bills, L., & Brazil, V. (2022). Taking simulation out of its "safe container"—Exploring the bidirectional impacts of psychological safety and simulation in an emergency department. *Advances in Simulation*, *7*(1), Article 5. https://doi.org/10.1186/s41077-022-00201-8

Reutter, M., & Alexander, J. (2021). Attitudes of dental hygiene and nursing students following a simulation activity. *Innovations in Dental Hygiene Education*, *96*(1), 76–83.

Robb, I. (1901). Nursing ethics, for hospital and private use. *AJN, American Journal of Nursing*, *1*(10), 764–765. https://doi.org/10.1097/00000446-190107000-00017

Ruberton, P. M., Huynh, H. P., Miller, T. A., Kruse, E., Chancellor, J., & Lyubomirsky, S. (2016). The relationship between physician humility, physician–patient communication, and patient health. *Patient Education and Counseling*, *99*(7), 1138–1145. https://doi.org/10.1016/j.pec.2016.01.012

Rudolph, J. W., Raemer, D. B., & Simon, R. (2014). Establishing a safe container for learning in simulation: The role of the presimulation briefing. *Simulation in Healthcare*, *9*(8), 339–349. https://doi.org/10.1097/SIH.0000000000000047

Saitoh, A., Yokono, T., Sakagami, M., Kashiwa, M., Abeywickrama, H., & Uchiyama, M. (2024). Perspectives of nursing students on hybrid simulation-based learning clinical experience: A text-mining analysis. *Nursing Reports*, *14*(2), 988–999. https://doi.org/10.3390/nursrep14020074

Salazar Preciado, L., Mazar, I., & Haack, S. (2025). Advancing cultural humility in pharmacy education: Insights from interprofessional experiences for varied learning modalities. *Currents in Pharmacy Teaching and Learning*, *17*(3), Article 102272. https://doi.org/10.1016/j.cptl.2024.102272

Saleem, M., & Khan, Z. (2023). Healthcare simulation: An effective way of learning in health care. *Pakistan Journal of Medical Sciences*, *39*(4). https://doi.org/10.12669/pjms.39.4.7145

Sandars, J. (2009). The use of reflection in medical education: AMEE guide no. 44. *Medical Teacher*, *31*(8), 685–695. https://doi.org/10.1080/01421590903050374

Sasagawa, M., & Amieux, P. S. (2019). Dispositional humility of clinicians in an interprofessional primary care environment: A mixed methods study. *Journal of*

Multidisciplinary Healthcare, *9*(12), 925–934. https://doi.org/10.2147/JMDH.S226631

Schei, E., Fuks, A., & Boudreau, J. (2018). Reflection in medical education: Intellectual humility, discovery, and know-how. *Medicine, Health Care and Philosophy*, *22*(2), 167–178. https://doi.org/10.1007/s11019-018-9878-2

Schwab, S. M., & Silva, P. L. (2023). Intellectual humility: How recognizing the fallibility of our beliefs and owning our limits may create a better relationship between the physical therapy profession and disability. *Physical Therapy*, *103*(8), 1–6. https://doi.org/10.1093/ptj/pzad056

Senger, A. R., & Huynh, H. P. (2020). Intellectual humility's association with vaccine attitudes and intentions. *Psychology, Health & Medicine*, *26*(9), 1053–1062. https://doi.org/10.1080/13548506.2020.1778753

Shaffer, V. A., Bohanek, J., Focella, E. S., Horstman, H., & Saffran, L. (2019). Encouraging perspective taking: Using narrative writing to induce empathy for others engaging in negative health behaviors. *PLOS ONE*, *14*(10), Article e0224046. https://doi.org/10.1371/journal.pone.0224046

Shah, S. (2019, January 3). 7 Biases to avoid in qualitative research. *Editage Insights*. https://www.editage.com/insights/7-biases-to-avoid-in-qualitative-research

Siah, R. J., Xu, P., Teh, C. L., & Kow, A. C. (2022). Evaluation of nursing students' efficacy, attitude, and confidence level in a perioperative setting using virtual-reality simulation. *Nursing Forum*, *57*(6), 1249–1257. https://doi.org/10.1111/nuf.12783

Slota, M., McLaughlin, M., Vittone, S., & Crowell, N. (2022). Visual intelligence education using an art-based intervention: Outcomes evaluation with nursing graduate students. *Journal of Professional Nursing*, *41*, 1–7. https://doi.org/10.1016/j.profnurs.2022.03.012

Smallheer, B., Chidume, T., Spinks, M. K., Dawkins, D., & Pestano-Harte, M. (2022). A scoping review of the priority of diversity, inclusion, and equity in health care simulation. *Clinical Simulation in Nursing*, *71*, 41–64. https://doi.org/10.1016/j.ecns.2022.05.009

Smiley, R. A., Allgeyer, R. L., Shobo, Y., Lyons, K. C., Letourneau, R., Zhong, E., Kaminski-Ozturk, N., & Alexander, M. (2023). The 2022 national nursing workforce survey. *Journal of Nursing Regulation*, *14*(1), S1–S90. https://doi.org/10.1016/s2155-8256(23)00047-9

Stefanidis, D., Cook, D., Kalantar-Motamedi, S.-M., Muret-Wagstaff, S., Calhoun, A. W., Lauridsen, K. G., Paige, J. T., Lockey, A., Donoghue, A., Hall, A. K., Patocka, C., Palaganas, J., Gross, I. T., Kessler, D., Vermylen, J., Lin, Y., Aebersold, M., Chang, T. P., Duff, J., . . . Toseef Ansari, M. (2024). Society for

simulation in healthcare guidelines for simulation training. *Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare*, *19*(1S), S4–S22. https://doi.org/10.1097/sih.0000000000000776

Stone, J. (2017). Cultivating humility and diagnostic openness in clinical judgment. *AMA Journal of Ethics*, *19*(10), 970–977. https://doi.org/10.1001/journalofethics.2017.19.10.ecas1-1710

Tangney, J. (2000). Humility: Theoretical perspectives, empirical findings and directions for future research. *Journal of Social and Clinical Psychology*, *19*(1), 70–82. https://doi.org/10.1521/jscp.2000.19.1.70

Teles, M., Mendes-Castillo, A., Oliveira-Kumakura, A., & Silva, J. (2020). Clinical simulation in teaching pediatric nursing: Students; perception. *Revista Brasileira de Enfermagem*, *73*(2). https://doi.org/10.1590/0034-7167-2018-0720

Teo, N. X., Lim, T., & Tong, E. W. (2022). The humble estimate: Humility predicts higher self-assessment accuracy. *British Journal of Social Psychology*, *62*(1), 561–582. https://doi.org/10.1111/bjso.12545

Tervalon, M., & Murray-García, J. (1998). Cultural humility versus cultural competence: A critical distinction in defining physician training outcomes in multicultural education. *Journal of Health Care for the Poor and Underserved*, *9*(2), 117–125. https://doi.org/10.1353/hpu.2010.0233

Tippins, T. M., & Wittmann, J. P. (2005). Empirical and ethical problems with custody recommendations. *Family Court Review*, *43*(2), 193–222. https://doi.org/10.1111/j.1744-1617.2005.00019.x

Tomaselli, G., Buttigieg, S. C., Rosano, A., Cassar, M., & Grima, G. (2020). Person-centered care from a relational ethics perspective for the delivery of high quality and safe healthcare: A scoping review. *Frontiers in Public Health*, *8*. https://doi.org/10.3389/fpubh.2020.00044

Tyerman, J., Ziegler, E., Carroll, B., & Luctkar-Flude, M. (2021). LGBTQI2S virtual simulation: Lessons learned using actors with lived experience. *Clinical Simulation in Nursing*, *54*, 40–44. https://doi.org/10.1016/j.ecns.2021.01.016

Van Tongeren, D. R., & Myers, D. G. (2017). A social psychological perspective on humility. In E. L. Worthington, D. E. Davis, & J. N. Hook (Eds.), *Handbook of humility* (1st ed., pp. 150–164). Taylor & Francis.

Vears, D. F., & Gillam, L. (2022). Inductive content analysis: A guide for beginning qualitative researchers. *Focus on Health Professional Education: A Multi-Professional Journal*, *23*(1), 111–127. https://doi.org/10.11157/fohpe.v23i1.544

Visintin, E., Rullo, M., & Lo Destro, C. (2024). Imagine being humble: Integrating imagined intergroup contact and cultural humility to foster inclusive intergroup relations. *Behavioral Sciences*, *14*(1), 51. https://doi.org/10.3390/bs14010051

Wadhwa, A., & Mahant, S. (2022). Humility in medical practice: A qualitative study of peer-nominated excellent clinicians. *BMC Medical Education*, *22*(1), Article 88. https://doi.org/10.1186/s12909-022-03146-8

Walshe, N., Condon, C., Gonzales, R. A., Burke, E., Chianáin, L., Thamanam, N., Smart, A., Jordaan, G., & Regan, P. (2022). Cultural simulations, authenticity, focus, and outcomes: A systematic review of the healthcare literature. *Clinical Simulation in Nursing*, *71*, 65–81. https://doi.org/10.1016/j.ecns.2022.05.008

Wang, X., Yang, L., & Hu, S. (2024). Teaching nursing students: As an umbrella review of the effectiveness of using high-fidelity simulation. *Nurse Education in Practice*, *77*, Article 103969. https://doi.org/10.1016/j.nepr.2024.103969

Washington, V. L., Zakrajsek, A., Myler, L., Seurynck, K., Holt, S., & Scazzero, J. (2021). Blending interprofessional education and simulation learning: A mixed-methods study of an interprofessional learning experience with nursing and occupational therapy students. *Journal of Interprofessional Care*, *36*(2), 276–281. https://doi.org/10.1080/13561820.2021.1897552

Watts, P. I., McDermott, D. S., Alinier, G., Charnetski, M., Ludlow, J., Horsley, E., Meakim, C., & Nawathe, P. A. (2021). Healthcare simulation standards of Best Practice™ simulation design. *Clinical Simulation in Nursing*, *58*, 14–21. https://doi.org/10.1016/j.ecns.2021.08.009

Whatley, M., Foster, D., & Paul, S. (2023). We before me: Developing a self-referent measure of cultural humility for postsecondary students. *Journal of Studies in International Education*, *28*(2), 259–277. https://doi.org/10.1177/10283153231173224

Wohlmann, A. (2022). Anatole Broyard: A style for being ill; or, metaphor 'light.' In A. Wohlmann (Ed.), *Metaphor in illness writing* (pp. 105–131). Edinburgh University Press. https://doi.org/10.1515/9781399500883-007

Worthington, E. L., Jr. (2007). *Humility: The quiet virtue*. Templeton Foundation.

Worthington, E., Jr. (Ed.). (2017). *Handbook of humility: Theory, research, and applications*. Routledge.

Wrench, J. S., Punyanunt-Carter, N., & Garcia, A. J. (2019). Understanding college students' perceptions regarding mindfulness: The impact on intellectual humility, faith development, religious communication apprehension, and religious communication. *Journal of Religion and Health*, *59*(4), 1794–1809. https://doi.org/10.1007/s10943-019-00861-3

Wright, J., Nadelhoffer, T., Thomson Ross, L., & Sinnott-Armstrong, W. (2017). Be it ever so humble: Proposing a dual-dimension account and measurement of humility. *Self and Identity*, *17*(1), 92–125. https://doi.org/10.1080/15298868.2017.1327454

Yeager, K. A., & Bauer-Wu, S. (2013). Cultural humility: Essential foundation for clinical researchers. *Applied Nursing Research*, *26*(4), 251–256. https://doi.org/10.1016/j.apnr.2013.06.008

Zhong, J., Ma, C., Chen, Z., Zhang, L., & Zhang, X. (2024). Humble leader, successful follower: Linking leader humility with follower career outcomes via leader competence from an implicit leadership theory perspective. *Journal of Vocational Behavior*, *155*, Article 104060. https://doi.org/10.1016/j.jvb.2024.104060

Zhu, P., Chen, C.-C., Wang, Q., Luke, M. M., & Liu, Y. (2024). Item response theory analysis and measurement invariance testing of the Cultural Humility and Enactment Scale. *Measurement and Evaluation in Counseling and Development*, *58*(1), 27–46. https://doi.org/10.1080/07481756.2024.2344000

Zimmerman, T., & Marfuggi, R. (2012). Medical humanities role in medical education. *World Medical & Health Policy*, *4*(2), 1–11. https://doi.org/10.1515/1948-4682.1185

Zinan, N. (2021). Humility in health care: A model. *Nursing Philosophy*, *22*(3). https://doi.org/10.1111/nup.12354

APPENDIX A

Drew University IRB Approval

DREW

Mary Clare Smith [redacted]

Re: IRB Approval from Felician University

Alex de Voogt [redacted] Wed, Aug 14, 2024 at 1:27 PM
To: Mary Clare Smith [redacted]
Cc: Gaetana Kopchinsky [redacted], Merel Visse [redacted], Mary Clare Smith [redacted]

Dear Mary Clare,

After consulting with the provost, I am pleased to inform you that we accept the IRB approval from Felician University. You will need to inform us if anything changes but until that time, I wish you all the best with your research.

If you prefer to have this message in a formal letter, please, let me know.

With best regards,

Alex de Voogt
IRB Chair

On Mon, Aug 12, 2024 at 6:06 PM Mary Clare Smith [redacted] wrote:

> Hello Dr. de Voogt,
>
> I hope you are well.
> I have received approval from the Felician University IRB to conduct my doctoral research at the Felician University Nursing Resource and Simulation Center.
> Is a second Drew IRB approval necessary? I have attached my letter of approval from the Felician University IRB Chair.
> Is the Authorization Reliance Agreement attached to this email needed, and if so, who should complete this document?
>
> Thank you!
> Kind regards,
> Mary Clare
>
> --
> Mary Clare Smith, MSN, RN, CHSE
> Student, Doctor of Medical Humanities
> Drew University
> [redacted]

APPENDIX B

Felician University IRB Approval

Felician University
Institutional Review Board

Promoting research
that reflects the value of human dignity

[redacted]

August 5, 2024

Dear Mary Clare Smith,

The Felician University Institutional Review Board has reviewed your research proposal entitled "Student Perceptions of Clinical Humility in Simulation Based Experiences" that you submitted on July 27, 2024. In your application, you provided a sufficient explanation of the research procedures that ensure voluntary participation, minimal risk, and confidentiality of data collected during your study. Your research protocol was, therefore, classified as exempt from full review and **approved on August 1, 2024**.

Should any changes or additions be made to the IRB approved procedures, the description of proposed revisions must be submitted for IRB review and be approved by the IRB prior to being instituted. If you encounter any new risks of persons as subjects, including collection of data that may link to any personal identifiable information, you must immediately stop your research and notify the Board.

At the present time, there is no need for further action on your part with the IRB. Please retain this letter for your records.

Sincerely,

[redacted]
Sr. Honorata Grzeszczuk CSSF, PhD
Chair, Institutional Review Board
Felician University
[redacted]
[redacted]

CC: Dr. Gaetana Kopchinsky

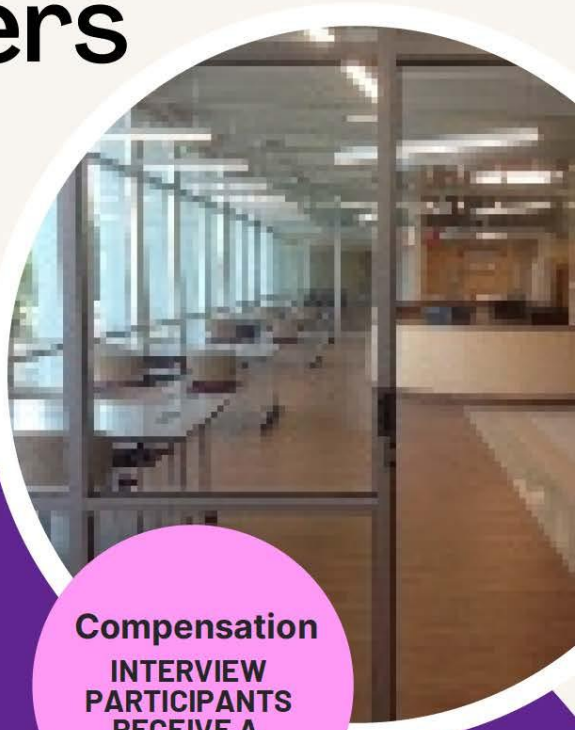
APPENDIX C

Recruitment Flyer

Doctoral Research Project

Volunteers Needed

We are interested in YOUR thoughts and experiences in simulation. *We are looking for Felician Nursing students to participate in a research study at the NRSC.*



Confidential

Participation is voluntary, will not affect your standing and all information you provide to us wll be kept confidential.

Participants must be 18 years of age or older.

Compensation

INTERVIEW PARTICIPANTS RECEIVE A $10 GIFT CARD !

WHAT TO EXPECT:

- Students will attend and participate in their scheduled Pediatric simulations with their clinical groups.
- Participants and non-participants will have the same clinical simulation activities. No additional assignments or simulations are required of participants.
- If eligible, you will be invited to complete a brief demographic survey and a 30 minute in-person interview.
- The interview will last 30 minutes and will be completed in person.

Interested?

For qualification & more information please email:

[redacted]

and copy

[redacted]

or

call [redacted]

This study has been approved by the the Institutional Review Boards of Felician University and Drew University.

APPENDIX D

CITI Certifications

CITI PROGRAM

Completion Date 01-Jan-2024
Expiration Date 01-Jan-2027
Record ID 52343461

This is to certify that:

Mary Clare Smith

Not valid for renewal of certification through CME.

Has completed the following CITI Program course:

Responsible Conduct of Research (RCR)
(Curriculum Group)
Basic RCR + Human Subjects
(Course Learner Group)
1 - Basic Course
(Stage)

Under requirements set by:

Drew University

CITI
Collaborative Institutional Training Initiative

101 NE 3rd Avenue, Suite 320
Fort Lauderdale, FL 33301 US
www.citiprogram.org

Generated on 01-Jul-2025. Verify at www.citiprogram.org/verify/?w5c217303-274d-499a-80fd-63e88f260285-52343461

CITI PROGRAM

Completion Date 03-Jan-2024
Expiration Date 03-Jan-2027
Record ID 52343545

This is to certify that:

Mary Clare Smith

Not valid for renewal of certification through CME.

Has completed the following CITI Program course:

Social & Behavioral Research - Basic/Refresher
(Curriculum Group)
Social & Behavioral Research - Basic/Refresher
(Course Learner Group)
1 - Basic Course
(Stage)

Under requirements set by:

Felician University

CITI
Collaborative Institutional Training Initiative

101 NE 3rd Avenue, Suite 320
Fort Lauderdale, FL 33301 US
www.citiprogram.org

Generated on 03-Jan-2024. Verify at www.citiprogram.org/verify/?wbf7bb42b-dafd-4e07-b33c-1478cb650fd7-52343545

APPENDIX E

Patient Assessment Supporting Documents

Asthma Treatment Plan – Student

(This asthma action plan meets NJ Law N.J.S.A. 18A:40-12.8) **(Physician's Orders)**

PACNJ Pediatric/Adult Asthma Coalition — Sponsored by American Lung Association. — NJ Health

(Please Print)

Name	Date of Birth	Effective Date
Doctor / Phone	Parent/Guardian (if applicable) / Phone	Emergency Contact / Phone

HEALTHY (Green Zone)

You have *all* of these:
- Breathing is good
- No cough or wheeze
- Sleep through the night
- Can work, exercise, and play

And/or Peak flow above _____

Take daily control medicine(s). Some inhalers may be more effective with a "spacer" – use if directed.

MEDICINE	HOW MUCH to take and HOW OFTEN to take it
☐ Advair® HFA ☐ 45, ☐ 115, ☐ 230	2 puffs twice a day
☐ Aerospan™	☐ 1, ☐ 2 puffs twice a day
☐ Alvesco® ☐ 80, ☐ 160	☐ 1, ☐ 2 puffs twice a day
☐ Dulera® ☐ 100, ☐ 200	2 puffs twice a day
☐ Flovent® ☐ 44, ☐ 110, ☐ 220	2 puffs twice a day
☐ Qvar® ☐ 40, ☐ 80	☐ 1, ☐ 2 puffs twice a day
☐ Symbicort® ☐ 80, ☐ 160	☐ 1, ☐ 2 puffs twice a day
☐ Advair Diskus® ☐ 100, ☐ 250, ☐ 500	1 inhalation twice a day
☐ Asmanex® Twisthaler® ☐ 110, ☐ 220	☐ 1, ☐ 2 inhalations ☐ once or ☐ twice a day
☐ Flovent® Diskus® ☐ 50 ☐ 100 ☐ 250	1 inhalation twice a day
☐ Pulmicort Flexhaler® ☐ 90, ☐ 180	☐ 1, ☐ 2 inhalations ☐ once or ☐ twice a day
☐ Pulmicort Respules® (Budesonide) ☐ 0.25, ☐ 0.5, ☐ 1.0	1 unit nebulized ☐ once or ☐ twice a day
☐ Singulair® (Montelukast) ☐ 4, ☐ 5, ☐ 10 mg	1 tablet daily
☐ Other	
☐ None	

Remember to rinse your mouth after taking inhaled medicine.

If exercise triggers your asthma, take_____ ____ puff(s) ____minutes before exercise.

CAUTION (Yellow Zone)

You have *any* of these:
- Cough
- Mild wheeze
- Tight chest
- Coughing at night
- Other:_____

If quick-relief medicine does not help within 15-20 minutes or has been used more than 2 times and symptoms persist, call your doctor or go to the emergency room.

And/or Peak flow from_____ to_____

Continue daily control medicine(s) and ADD quick-relief medicine(s).

MEDICINE	HOW MUCH to take and HOW OFTEN to take it
☐ Albuterol MDI (Pro-air® or Proventil® or Ventolin®)	2 puffs every 4 hours as needed
☐ Xopenex®	2 puffs every 4 hours as needed
☐ Albuterol ☐ 1.25, ☐ 2.5 mg	1 unit nebulized every 4 hours as needed
☐ Duoneb®	1 unit nebulized every 4 hours as needed
☐ Xopenex® (Levalbuterol) ☐ 0.31, ☐ 0.63, ☐ 1.25 mg	1 unit nebulized every 4 hours as needed
☐ Combivent Respimat®	1 inhalation 4 times a day
☐ Increase the dose of, or add:	
☐ Other	

- **If quick-relief medicine is needed more than 2 times a week, except before exercise, then call your doctor.**

EMERGENCY (Red Zone)

Your asthma is getting worse fast:
- Quick-relief medicine did not help within 15-20 minutes
- Breathing is hard or fast
- Nose opens wide • Ribs show
- Trouble walking and talking
- Lips blue • Fingernails blue
- Other:_____

And/or Peak flow below _____

Take these medicines NOW and CALL 911.

Asthma can be a life-threatening illness. Do not wait!

MEDICINE	HOW MUCH to take and HOW OFTEN to take it
☐ Albuterol MDI (Pro-air® or Proventil® or Ventolin®)	4 puffs every 20 minutes
☐ Xopenex®	4 puffs every 20 minutes
☐ Albuterol ☐ 1.25, ☐ 2.5 mg	1 unit nebulized every 20 minutes
☐ Duoneb®	1 unit nebulized every 20 minutes
☐ Xopenex® (Levalbuterol) ☐ 0.31, ☐ 0.63, ☐ 1.25 mg	1 unit nebulized every 20 minutes
☐ Combivent Respimat®	1 inhalation 4 times a day
☐ Other	

Triggers

Check all items that trigger patient's asthma:

- ☐ Colds/flu
- ☐ Exercise
- ☐ Allergens
  - ○ Dust Mites, dust, stuffed animals, carpet
  - ○ Pollen - trees, grass, weeds
  - ○ Mold
  - ○ Pets - animal dander
  - ○ Pests - rodents, cockroaches
- ☐ Odors (Irritants)
  - ○ Cigarette smoke & second hand smoke
  - ○ Perfumes, cleaning products, scented products
  - ○ Smoke from burning wood, inside or outside
- ☐ Weather
  - ○ Sudden temperature change
  - ○ Extreme weather - hot and cold
  - ○ Ozone alert days
- ☐ Foods:
  - ○ _____
  - ○ _____
  - ○ _____
- ☐ Other:
  - ○ _____
  - ○ _____
  - ○ _____

This asthma treatment plan is meant to assist, not replace, the clinical decision-making required to meet individual patient needs.

REVISED MAY 2017

Permission to Self-administer Medication:

- ☐ This student is capable and has been instructed in the proper method of self-administering of the non-nebulized inhaled medications named above in accordance with NJ Law.
- ☐ This student is not approved to self-medicate.

PHYSICIAN/APN/PA SIGNATURE_____ DATE_____

Physician's Orders

PARENT/GUARDIAN SIGNATURE_____

PHYSICIAN STAMP

Make a copy for parent and for physician file, send original to school nurse or child care provider.

Asthma Treatment Plan – Student
Parent Instructions

The **PACNJ Asthma Treatment Plan** is designed to help everyone understand the steps necessary for the individual student to achieve the goal of controlled asthma.

1. **Parents/Guardians:** *Before taking this form to your Health Care Provider*, complete the top left section with:
   - Child's name
   - Child's date of birth
   - Child's doctor's name & phone number
   - An Emergency Contact person's name & phone number
   - Parent/Guardian's name & phone number
2. **Your Health Care Provider will** complete the following areas:
   - The effective date of this plan
   - The medicine information for the Healthy, Caution and Emergency sections
   - Your Health Care Provider will check the box next to the medication and check how much and how often to take it
   - Your Health Care Provider may check **"OTHER" and:**
     - ❖ **Write in asthma medications not listed on the form**
     - ❖ **Write in additional medications that will control your asthma**
     - ❖ **Write in generic medications in place of the name brand on the form**
   - Together you and your Health Care Provider will decide what asthma treatment is best for your child to follow
3. **Parents/Guardians & Health Care Providers together** will discuss and then complete the following areas:
   - Child's peak flow range in the Healthy, Caution and Emergency sections on the left side of the form
   - Child's asthma triggers on the right side of the form
   - Permission to Self-administer Medication section at the bottom of the form: Discuss your child's ability to self-administer the inhaled medications, check the appropriate box, and then both you and your Health Care Provider must sign and date the form
4. **Parents/Guardians:** *After completing the form with your Health Care Provider:*
   - Make copies of the Asthma Treatment Plan and give the signed original to your child's school nurse or child care provider
   - Keep a copy easily available at home to help manage your child's asthma
   - Give copies of the Asthma Treatment Plan to everyone who provides care for your child, for example: babysitters, before/after school program staff, coaches, scout leaders

PARENT AUTHORIZATION

I hereby give permission for my child to receive medication at school as prescribed in the Asthma Treatment Plan. Medication must be provided in its original prescription container properly labeled by a pharmacist or physician. I also give permission for the release and exchange of information between the school nurse and my child's health care provider concerning my child's health and medications. In addition, I understand that this information will be shared with school staff on a need to know basis.

Parent/Guardian Signature	Phone	Date

FILL OUT THE SECTION BELOW ONLY IF YOUR HEALTH CARE PROVIDER CHECKED PERMISSION FOR YOUR CHILD TO SELF-ADMINISTER ASTHMA MEDICATION ON THE FRONT OF THIS FORM.

RECOMMENDATIONS ARE EFFECTIVE FOR ONE (1) SCHOOL YEAR ONLY AND MUST BE RENEWED ANNUALLY

☐ I do request that my child be **ALLOWED** to carry the following medication ______________________________ for self-administration in school pursuant to N.J.A.C.:6A:16-2.3. I give permission for my child to self-administer medication, as prescribed in this Asthma Treatment Plan for the current school year as I consider him/her to be responsible and capable of transporting, storing and self-administration of the medication. Medication must be kept in its original prescription container. I understand that the school district, agents and its employees shall incur no liability as a result of any condition or injury arising from the self-administration by the student of the medication prescribed on this form. I indemnify and hold harmless the School District, its agents and employees against any claims arising out of self-administration or lack of administration of this medication by the student.

☐ I **DO NOT** request that my child self-administer his/her asthma medication.

Parent/Guardian Signature	Phone	Date

PACNJ
Pediatric/Adult Asthma Coalition

The Pediatric/Adult Asthma Coalition of New Jersey, sponsored by the American Lung Association in New Jersey. This publication was supported by a grant from the New Jersey Department of Health and Senior Services, with funds provided by the U.S. Centers for Disease Control and Prevention under Cooperative Agreement 5U59EH000491-5. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the New Jersey Department of Health and Senior Services or the U.S. Centers for Disease Control and Prevention. Although this document has been funded wholly or in part by the United States Environmental Protection Agency under Agreement XA96296601-2 to the American Lung Association in New Jersey, it has not gone through the Agency's publications review process and therefore, may not necessarily reflect the views of the Agency and no official endorsement should be inferred. Information in this publication is not intended to diagnose health problems or take the place of medical advice. For asthma or any medical condition, seek medical advice from your child's or your health care professional.

Sponsored by
AMERICAN LUNG ASSOCIATION® IN NEW JERSEY

SEIZURE ACTION PLAN FOR

_____ (INSERT NAME HERE)

ABOUT

Name _____ Date of Birth _____

Doctors Name _____ Phone _____

Emergency Contact Name _____ Phone _____

Emergency Contact Name _____ Phone _____

Seizure Type/Name: _____

What Happens: _____

How Long It Lasts: _____

How Often: _____

Seizure Triggers:

☐ Missed Medicine ☐ Lack of Sleep ☐ Emotional Stress ☐ Physical Stress ☐ Missing meals
☐ Alcohol/Drugs ☐ Flashing Lights ☐ Menstrual Cycle ☐ Illness with high fever
☐ Response to specific food, or excess caffeine Specify: _____ ☐ Other Specify: _____

DAILY TREATMENT PLAN

Seizure Medicine(s)

Name	How Much	How Often/When
Additional Treatment/Care: (i.e.: diet, sleep, devices etc.)		

CAUTION–STEP UP TREATMENT

Symptoms that signal a seizure may be coming on and additional treatment may be needed:

☐ Headache ☐ Staring Spells ☐ Confusion ☐ Dizziness ☐ Change in Vision/Auras
☐ Sudden Feeling of Fear or Anxiety ☐ Other Specify: _____

Additional Treatment:

☐ Continue Daily Treatment Plan
- If missed medicine, give prescribed dose from above ASAP.
- Do not give a double dose or give meds closer than 6 hours apart.

☐ Change to: _____ How Much: _____ How Often/When: _____

☐ Add: _____ How Much: _____ How Often/When: _____

☐ Other Treatments/Care: (i.e.: sleep, devices): _____

SEIZURE ACTION PLAN

DANGER–GET HELP NOW

Follow Seizure First Aid Below

- ☐ Find adult trained on rescue medication:
  Name: _____ Number: _____
- ☐ Record Duration and time of each seizure(s)
- ☐ Call 911 if:
  - Child has a convulsive seizures lasting more than ___ minutes
  - Child has repeated seizures without regaining consciousness
  - Child is injured or has diabetes
  - Child is having breathing difficulty

When EMS arrives, a medical provider will perform an individual assessment to determine appropriate next steps.

Rescue Therapy:

☐ Rescue therapy provided according to physician's order:

_____

_____

POST SEIZURE RECOVERY

Typical Behaviors/Needs After Seizure:

☐ Headache ☐ Drowsiness/Sleep ☐ Nausea ☐ Aggression ☐ Confusion/Wandering ☐ Blank Staring
☐ Other Specify: _____

Reviewed/Approved by:

_____
Physician Signature Date

_____
Parent/Guardian Signature Date

SEIZURE FIRST AID

Image adapted with permission from the Epilepsy Foundation of America

LEARN MORE AND GET A DOWNLOADABLE VERSION OF THIS ACTION PLAN AT:

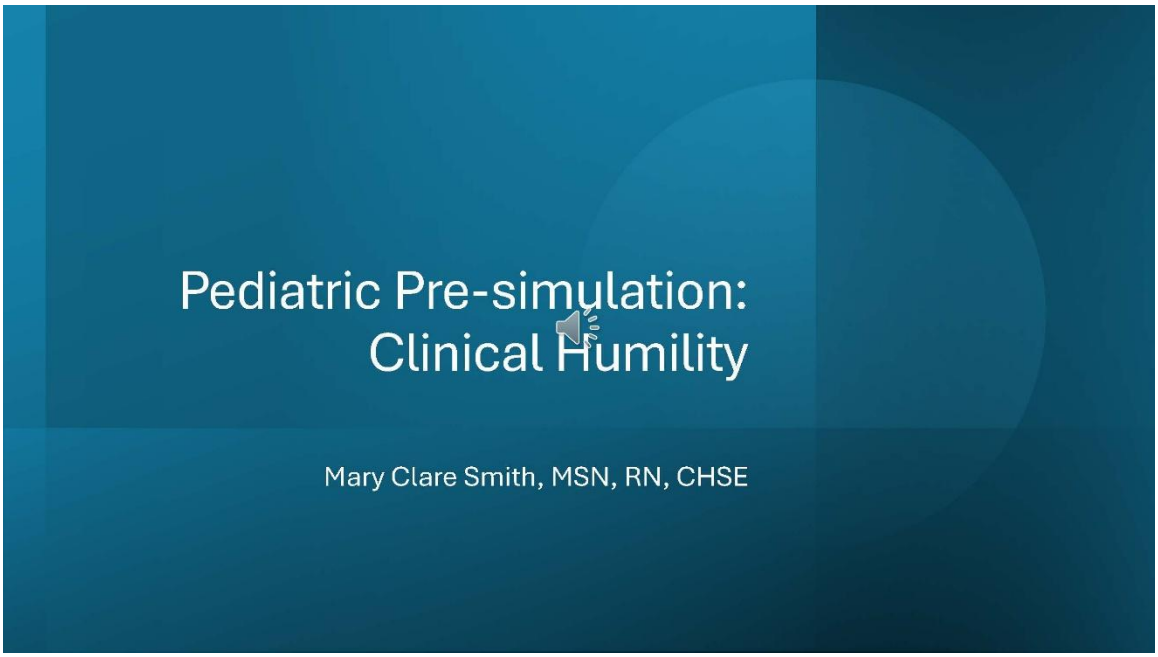
Child Neurology Foundation — Creating a Community of Support
childneurologyfoundation.org/sudep

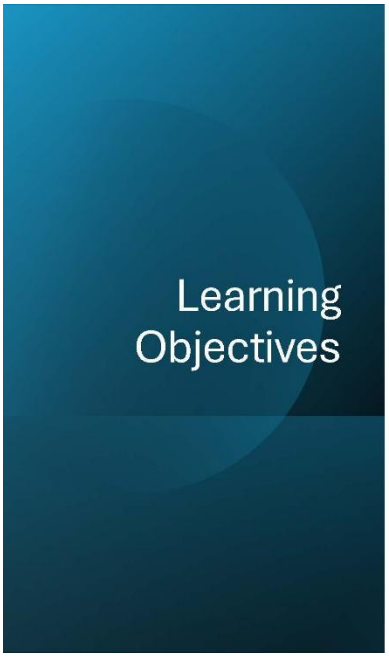
Danny Did Foundation
dannydid.org

Epilepsy Foundation — SUDEP Institute
epilepsy.com/sudep-institute

APPENDIX F

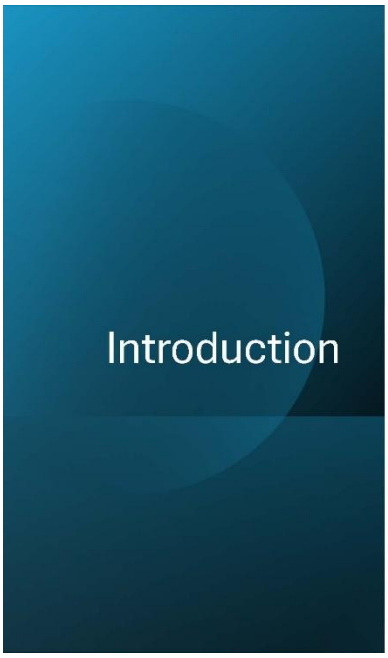
Presimulation PowerPoint





After reviewing this presentation, the learner will be able to:

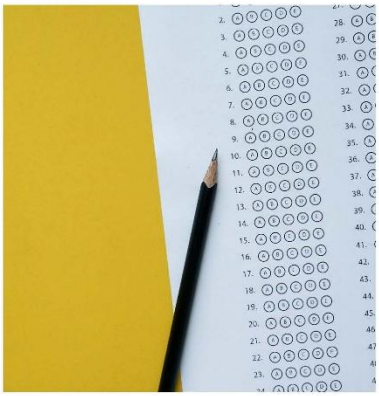
- Accurately define clinical humility.
- List three ways that nurses can demonstrate clinical humility.
- Articulate two ways in which clinical humility in nursing may positively impact patient outcomes.



- You are scheduled to participate in a clinical simulation.
- Clinical simulation is intended as an opportunity for you to practice your clinical skills in a safe, realistic clinical environment. (Watts et al., 2021)
  - Simulation provides an opportunity for you to think and practice like a nurse
  - In debriefing, you will be asked to reflect on your simulation experience and share and receive feedback with your clinical group.
- In preparation for your simulation and debriefing, this presentation will introduce the topic of clinical humility, or intellectual humility in a clinical setting - which relates to knowing and accepting one's fallibility and limitations (Wadhwa & Mahant, 2022).

Why think about humility?

- Nurses and students focus on objective truths.
  - Multiple choice exams
  - Calculating measurable quantities
  - Examining one's own thinking is crucial to nursing judgement (Pretoruis et al., 2016)
- Healthcare knowledge is rapidly evolving.
  - Uncertainty is a certitude (Mercuri, 2019; Wadhwa & Mahant, 2022) .
- Study suggested humility was associated with excellence among physicians (Wadhwa & Mahant, 2022).
- What is the potential impact of humility on nurses and nursing care (Pretoruis et al., 2016) .



How is humility manifested?

- Internal Manifestations –
  - Self-reflection
  - Valuing the perspectives of others
  - Knowing that knowledge in healthcare is finite
- External Manifestations – Actions/Behaviors based on internal humility
  - Help-seeking
  - Improved communication skills
  - Embracing lifelong learning
  - Practicing self-compassion

(Wadhwa & Mahant, 2022)

What does it mean to provide patient care with humility?

What Humility IS:

- Conceptual cousins: Intellectual Humility and Cultural Humility
- Asking Questions
- Actively seeking professional development
  - Mentoring
  - Formal education
  - Certifications
  - Joining professional societies
- Practicing as a team member
  - Seeking the input of the patient
  - Seeking out other professionals' viewpoints
- Practicing self-compassion
  - Acknowledging your own limits
  - Help-seeking behaviors
  - Prioritizing your health and protecting vulnerabilities

What Humility IS NOT:

- Meekness
- Lack of Confidence
- Passiveness
- Self-abasement
- Insecurity
- More than an attitude or a temperament
- Not limited to cultural contexts

(Wadhwa & Mahant, 2022)

How might humility impact nursing practice?

As an attribute for clinicians, humility may:

May encourage help-seeking behaviors among clinicians which can protect patients

May protect the workforce: Humility may improve job satisfaction by improving teamwork and collaboration, reducing reality shock, normalizing uncertainty

Listen to the "Second Opinions" Podcast to learn more about humility among clinicians:

(Johnson & Wadhwa, 2024)

https://daily.jstor.org/second-opinions-on-intellectual-humility-and-medicine/

References

Johnson, J., & Wadhwa, A. (2024, January 24). *Second opinions: On intellectual humility and medicine - JSTOR DAILY*. JSTOR Daily. https://daily.jstor.org/second-opinions-on-intellectual-humility-and-medicine/

Mercuri, M. (2019). Humility in the face of uncertainty. *Journal of Evaluation in Clinical Practice, 25*(2), 173–175. https://doi.org/10.1111/jep.13116

Pretoruis, L., Van Dyk, A., Small, L., & Amukugo, H. (2016). Assessment of the needs of student nurses regarding critical thinking in nursing practice. *International Journal of Advanced Nursing Studies, 5*(2), 190. https://doi.org/10.14419/ijans.v5i2.6554

Senger, A. R., & Huynh, H. P. (2020). Intellectual humility's association with vaccine attitudes and intentions. *Psychology, Health & Medicine, 26*(9), 1053–1062. https://doi.org/10.1080/13548506.2020.1778753

Stone, J. (2017). Cultivating humility and diagnostic openness in clinical judgment. *AMA Journal of Ethics, 19*(10), 970–977. https://doi.org/10.1001/journalofethics.2017.19.10.ecas1-1710

Wadhwa, A., & Mahant, S. (2022). Humility in medical practice: A qualitative study of peer-nominated excellent clinicians. *BMC Medical Education, 22*(1). https://doi.org/10.1186/s12909-022-03146-8

Watts, P. I., McDermott, D. S., Alinier, G., Charnetski, M., Ludlow, J., Horsley, E., Meakim, C., & Nawathe, P. A. (2021). Healthcare simulation standards of best practicetm simulation design. *Clinical Simulation in Nursing, 58*, 14–21. https://doi.org/10.1016/j.ecns.2021.08.009

APPENDIX G

SBAR Documents

Report from shift nurse:

Emergency Department
Time: 1900
SBAR report from charge nurse:
Situation:
Sabina Vasquez is an 8-year-old child admitted today from the Emergency Department with a diagnosis of pneumonia.
Background:
Sabina has a history of asthma and has had cold like symptoms for the last few days, so she has required increased use of an albuterol inhaler at home. Sabina was diagnosed with asthma when she was 4 years old and living in Mexico. Sabina and her family speak fluent English. She is followed by the asthma clinic team; her asthma has been well controlled, and she has a current asthma action plan that the family follows closely and her immunizations are up to date. She developed a fever of 39 °C (102.2 °F) early this morning. Her parent was concerned about her fever and breathing and brought her to the Emergency Department. Her parent also mentioned that Sabina didn't eat or drink much yesterday and told that she gave Sabrina acetaminophen prior to bringing her to the hospital. Sabina's brothers also have colds.
Assessment:
She presented to the Emergency Department in moderate respiratory distress with, accessory muscle use, a productive cough, wheezing and course crackles throughout all lung fields, and an oxygen saturation of 90% on room air. She was placed on oxygen via nasal cannula at 2 liters per minute. She received albuterol nebulizer treatments at 17:00 and 17:30. This improved her oxygen saturation to 94%. Chest x-ray revealed right lower lobe pneumonia with effusion. An IV of dextrose 5% in 0.45% sodium chloride with 20 mEq KCl/L at 68 mL/hour is infusing. Blood cultures, CBC and metabolic panel lab work completed.
Recommendation:
Continue to manage respiratory system.

Medications

- Ceftriaxone
- Albuterol
- Acetaminophen
- Fluticasone
- IV Fluids

Report from shift nurse:

Emergency Department
Time: 1900
SBAR report from charge nurse:
Situation:
Jackson Weber is a 5-year-old child with known generalized tonic-clonic seizures. He was admitted to the Emergency Department after experiencing 4 seizures at home during the last 12 hours.
Background:
Jackson was diagnosed with generalized tonic-clonic seizures 2 years ago. Upon diagnosis, Jackson's neurologist started him on oral phenobarbital. Jackson has been seizure-free until this evening. His seizures are of unknown origin.
His parent reported that, at home, the first 3 seizures lasted between 3 to 4 minutes, each resolving without intervention. His fourth seizure lasted approximately 7 minutes and resolved after the administration of 3.6 mg intranasal midazolam.
Assessment:
Jackson is resting comfortably; he is sleepy but arousable. He is on a cardio-respiratory monitor and vital signs are stable. He currently has an IV in his right arm with dextrose 5% in 0.9% sodium chloride infusing at 58 mL/hr. When he arrived in the Emergency Department, a CBC with diff, chem 20, and a phenobarbital level were drawn and sent to lab stat. The labs have just come in. Jackson's parent is at the bedside. I have called the doctor and he is aware of the low phenobarbital levels.
Recommendation:
Follow up with the labs and continue to monitor for seizure activity.

Medications

- Phenobarbital elixir
- Lorazepam
- D5NS 1000 mL

APPENDIX H

Concept Map Template

[redacted] Nursing Resource and Simulation Center Pre-Simulation Assignment

In preparation for your upcoming simulation experience in the NRSC, please review the simulated client's charts. For each client, please fill out the concept map and medication information below. **For each section of the concept map and medication sheet, please provide a minimum of 3 important pieces of data, and 2 nursing diagnoses based on the data gathered.** The information you include on the concept map and medication sheets should be relevant to the information within the simulated client's charts.

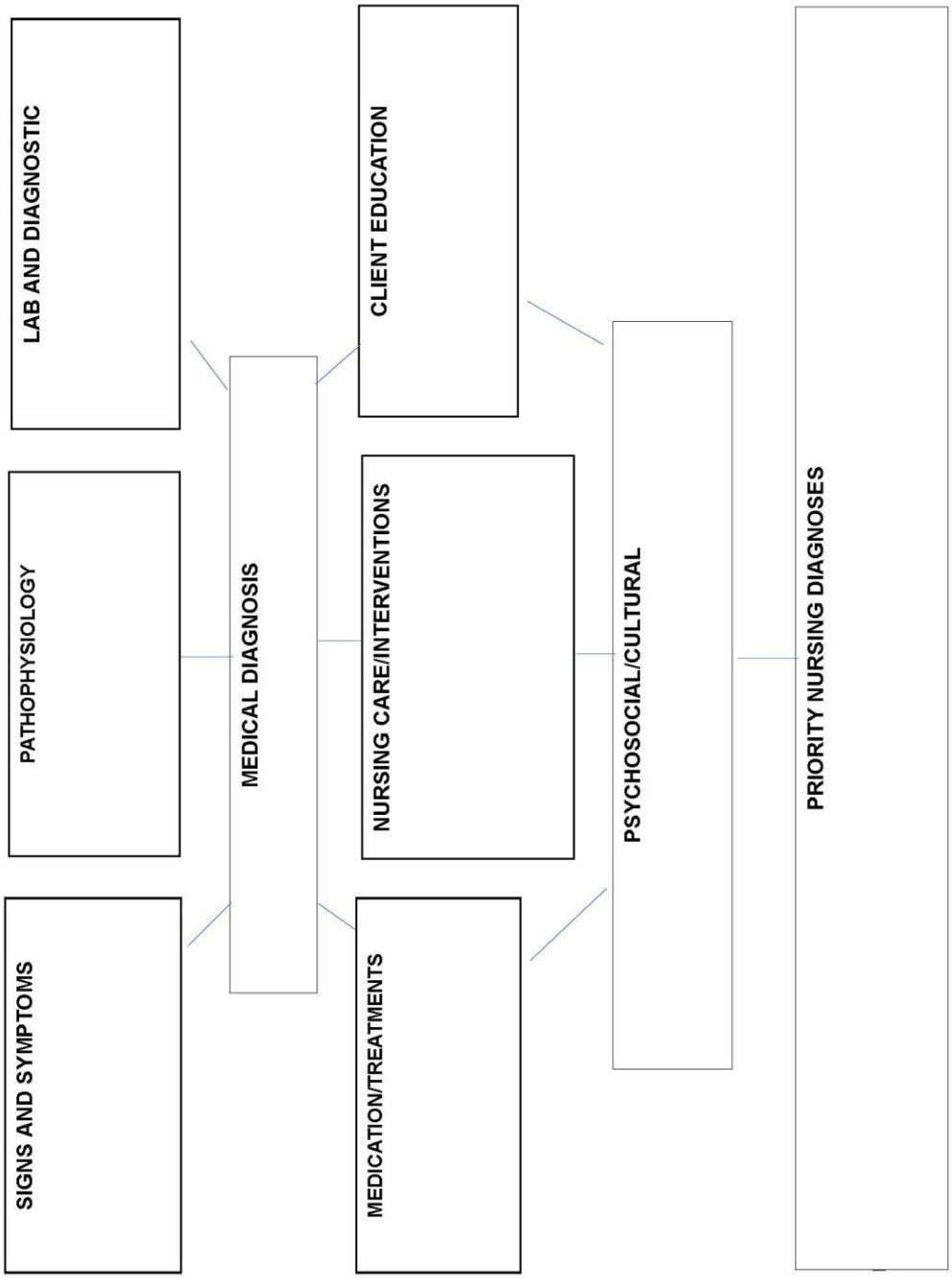
Be prepared to discuss the information included within the concept maps and medication sheets for each client during the pre-briefing session of the scheduled simulation. The assignment is meant to adequately prepare you in caring for your simulated client and engage with your instructors and peers during the simulation experience.

We look forward to seeing you at the simulation!

Best wishes,

The NRSC Staff

NR 07/2023


LAB AND DIAGNOSTIC
PATHOPHYSIOLOGY
SIGNS AND SYMPTOMS
MEDICAL DIAGNOSIS
CLIENT EDUCATION
NURSING CARE/INTERVENTIONS
MEDICATION/TREATMENTS
PSYCHOSOCIAL/CULTURAL
PRIORITY NURSING DIAGNOSES

Medication name:

Category class:

Expected pharmacological action:

Therapeutic use:

Contraindications/precautions:

Interactions:

Complications:

Nursing interventions:

Evaluation:

Client education:

Medication name:

Category class:

Expected pharmacological action:

Therapeutic use:

Contraindications/precautions:

Interactions:

Complications:

Nursing interventions:

Evaluation:

Client education

Medication name:

Category class:

Expected pharmacological action:

Therapeutic use:

Contraindications/precautions:

Interactions:

Complications:

Nursing interventions:

Evaluation:

Client education:

Medication name:

Category class:

Expected pharmacological action:

Therapeutic use:

Contraindications/precautions:

Interactions:

Complications:

Nursing interventions:

Evaluation:

Client education:

Medication name:

Category class:

Expected pharmacological action:

Therapeutic use:

Contraindications/precautions:

Interactions:

Complications:

Nursing interventions:

Evaluation:

Client education:

Medication name:

Category class:

Expected pharmacological action:

Therapeutic use:

Contraindications/precautions:

Interactions:

Complications:

Nursing interventions:

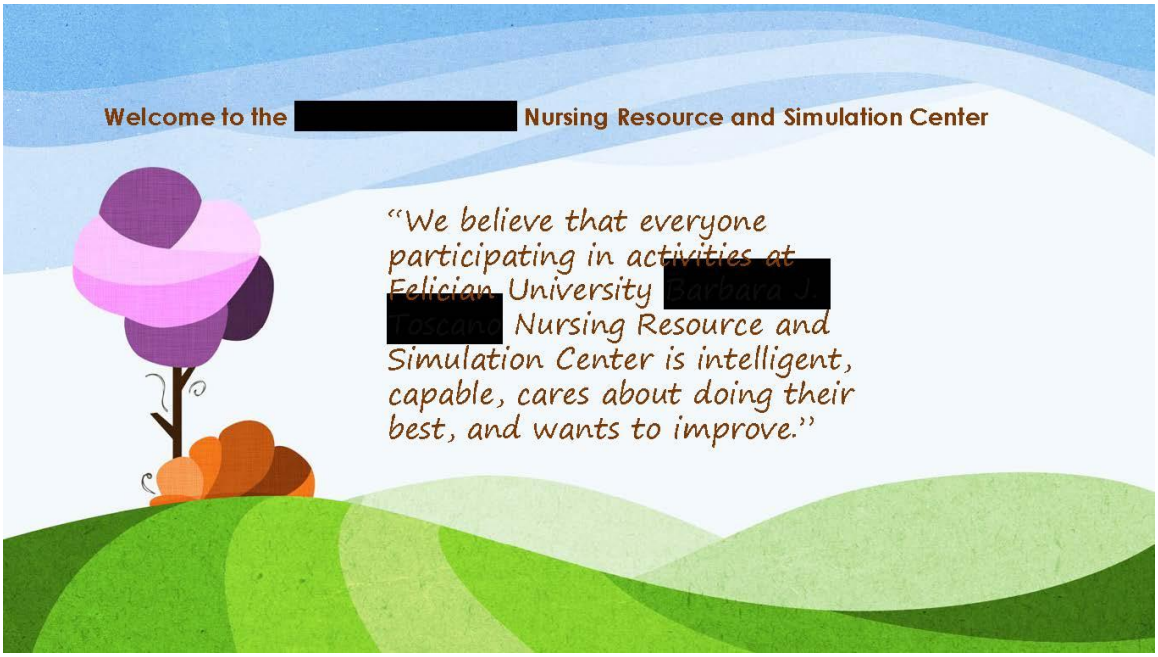
Evaluation:

Client education:

APPENDIX I

Simulation Prebriefing Debriefing PowerPoint


Pediatric Nursing
[redacted] Nursing Resource and Simulation Center


Welcome to the [redacted] Nursing Resource and Simulation Center
"We believe that everyone participating in activities at Felician University [redacted] Nursing Resource and Simulation Center is intelligent, capable, cares about doing their best, and wants to improve."

Pre-briefing

- ❑ Welcome introductions
- ❑ Expectations of simulation experience
- ❑ Review learning objectives
- ❑ Fiction contract
- ❑ Orientation to the simulation space

Simulation Patient Electronic Health Records

Login to EHR Tutor and Review the Charts for the patients for today

Add Course Title: Pediatric Simulations by entering enrollment key : 3UQX65N

Patient Names

Sabina C. Vasquez (Complex)
Jackson Webber

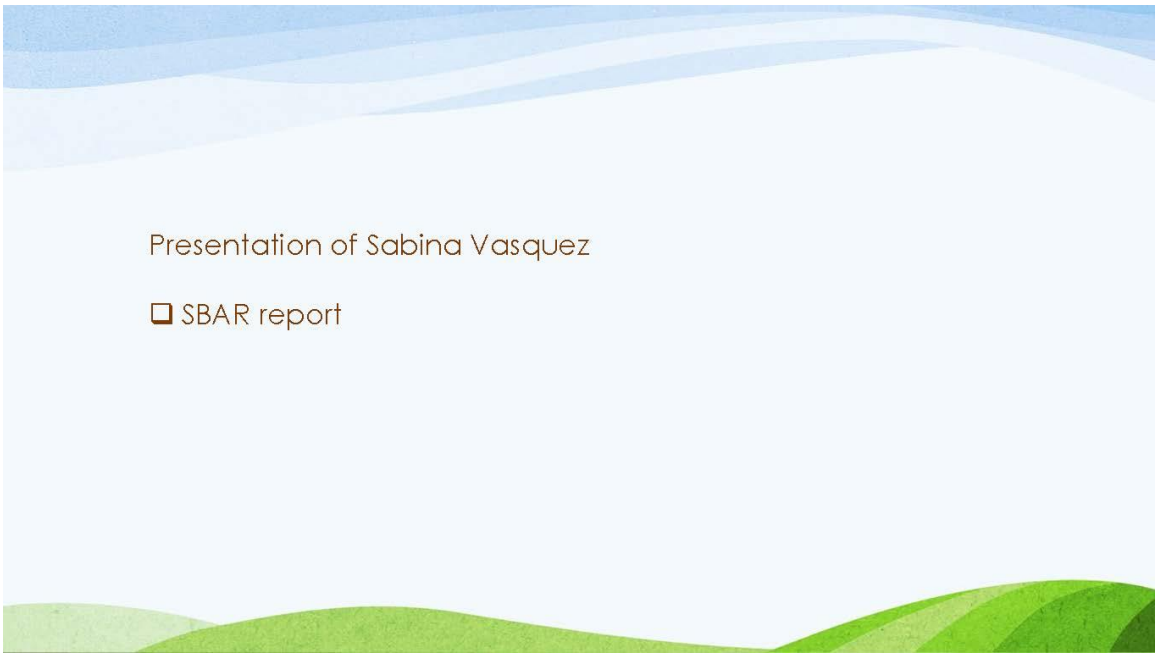
Concept Map Review for *Sabina Vasquez with Clinical Faculty*

https://aafa.org/asthma/asthma-treatment/asthma-treatment-action-plan/

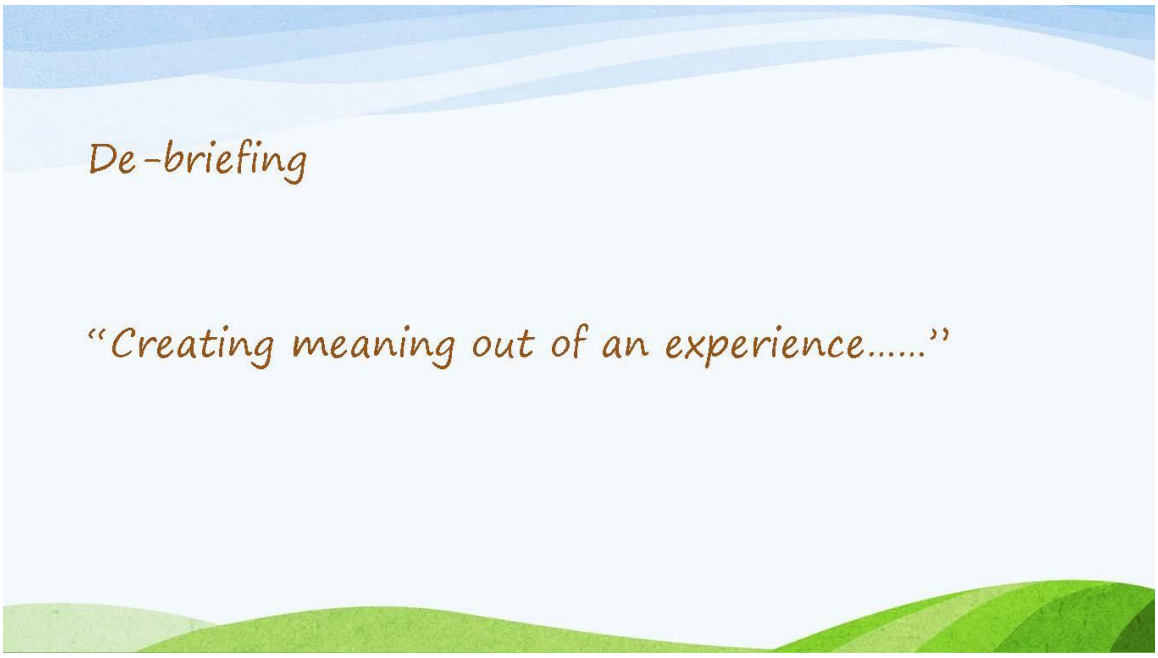
Clinical Scenario-- Sabina Vasquez

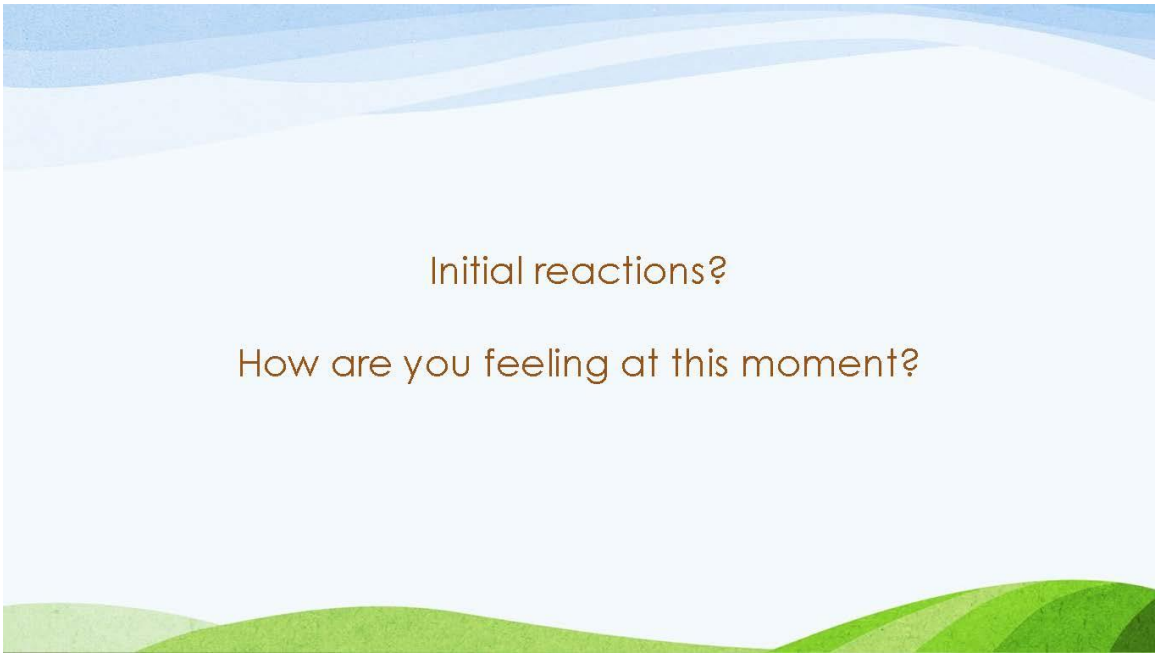
Learning Outcomes for this clinical scenario include

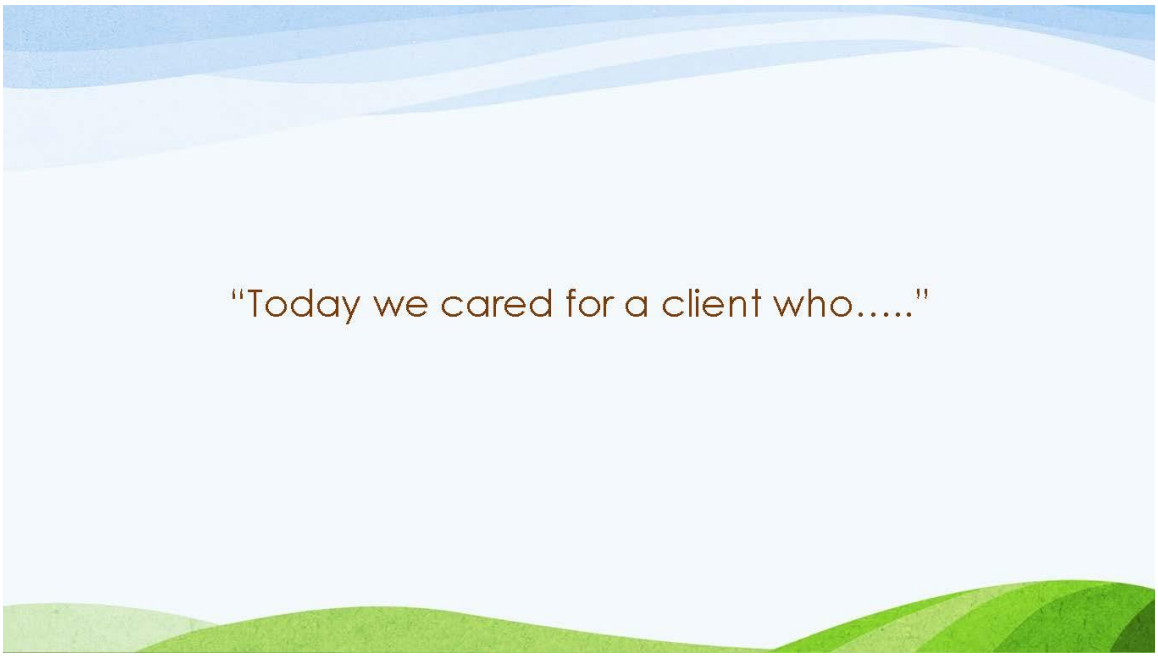
- ❑ Distinguish between mild respiratory difficulty and respiratory distress
- ❑ Develop a plan of care based on assessment findings
- ❑ Initiate oxygen therapy as appropriate for a patient in respiratory distress
- ❑ Implement safe administration of asthma medications and antibiotics
- ❑ Educate client/family about the differences between pneumonia and asthma exacerbation

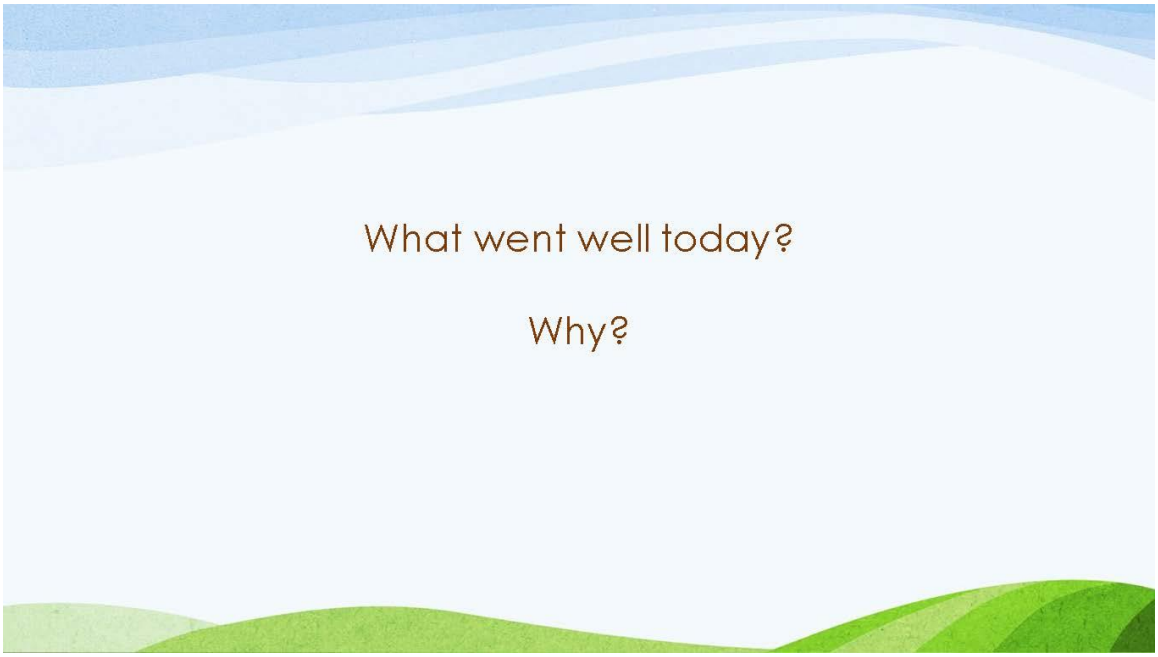

Presentation of Sabina Vasquez
SBAR report

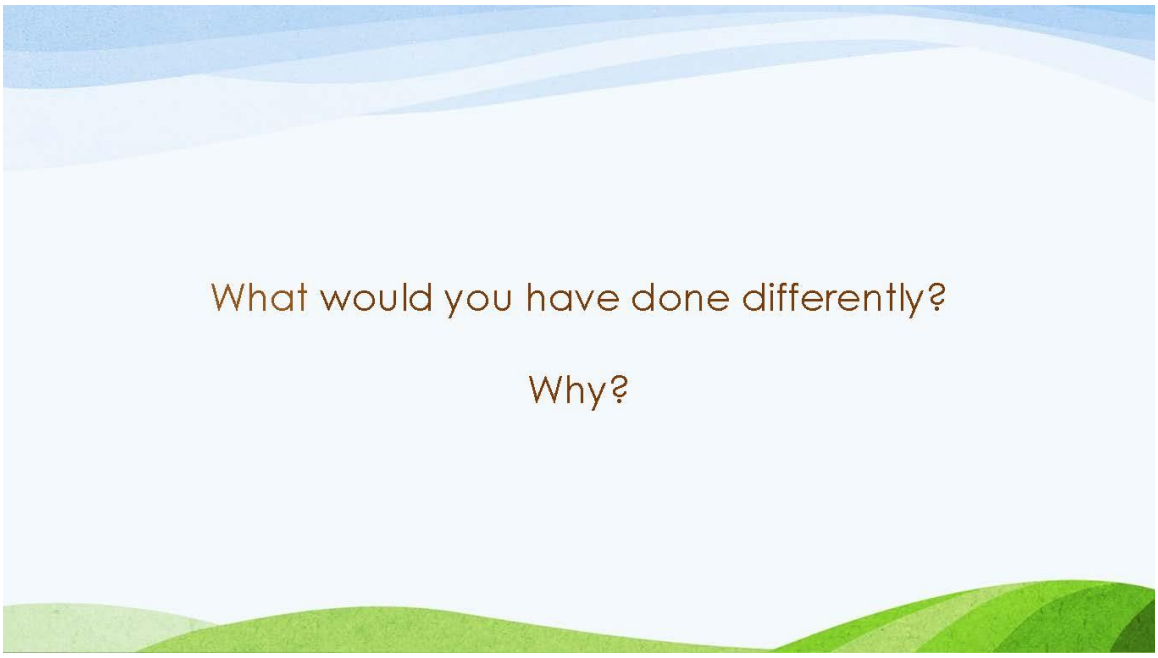

Role Assignments
Primary Nurse
Secondary Nurse
Resource Nurse
Mother/Guardian

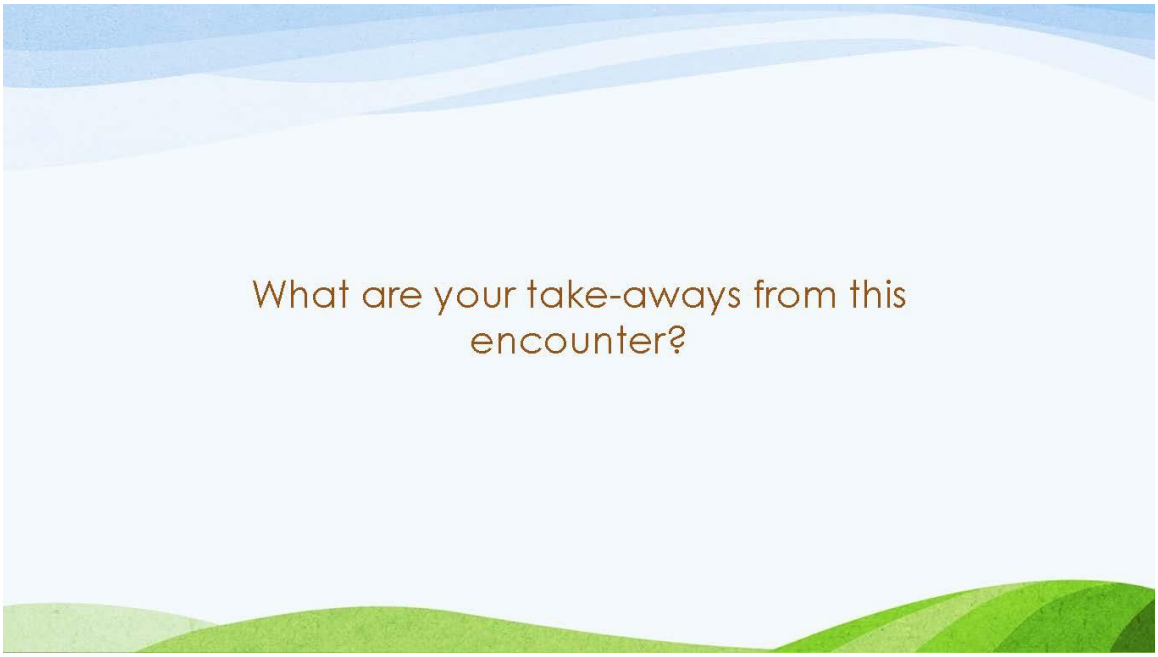

De-briefing
"Creating meaning out of an experience....."


Initial reactions?
How are you feeling at this moment?


"Today we cared for a client who....."


What went well today?
Why?


What would you have done differently?
Why?


What are your take-aways from this encounter?

Concept Map Review for *Jackson Weber with clinical faculty*

Seizure Action and Treatment Plan

https://www.childneurologyfoundation.org/wp-content/uploads/2018/04/CNF_Seizure_Action_Plan_v4_fillable.pdf

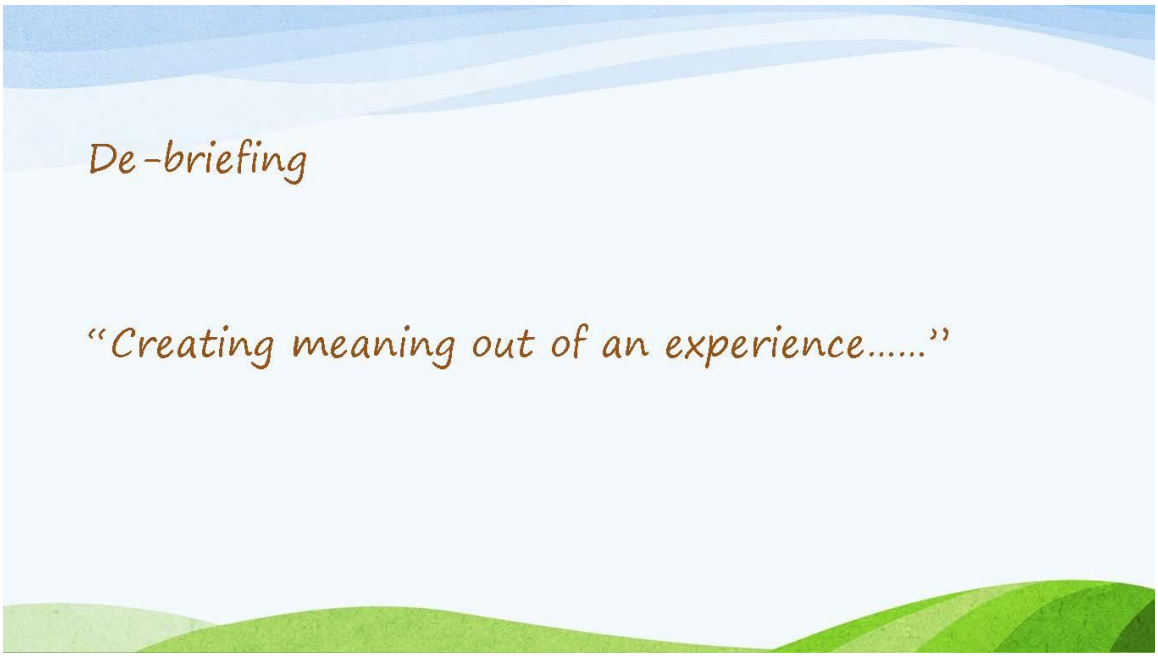
Clinical scenario-- *Jackson Weber*

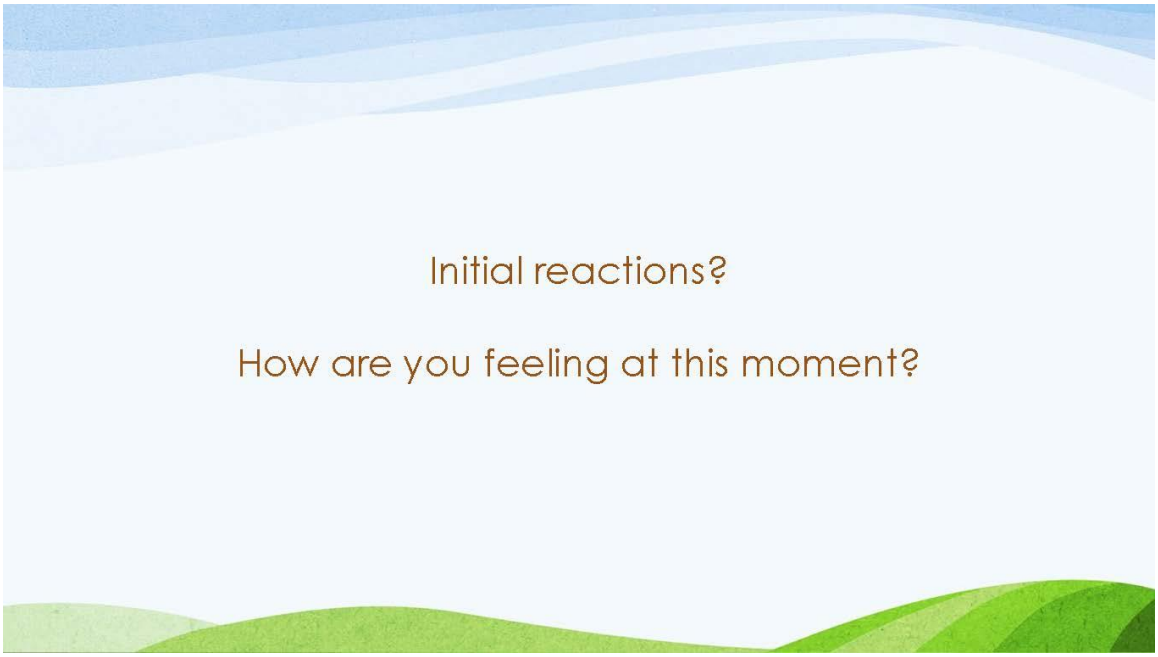
Learning outcomes for this clinical scenario include:

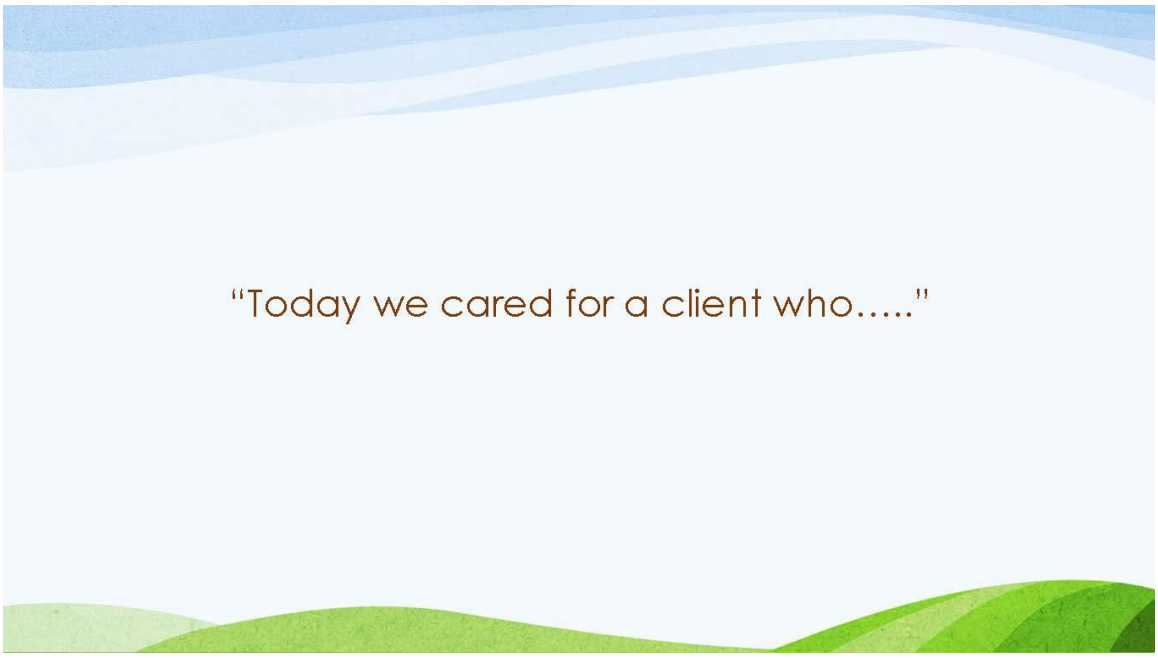
- ❑ Demonstrate a developmentally appropriate focused respiratory and neurologic assessment
- ❑ Utilize effective communication strategies with the interprofessional team
- ❑ Demonstrate nursing interventions safely, for a patient with a history of seizures.

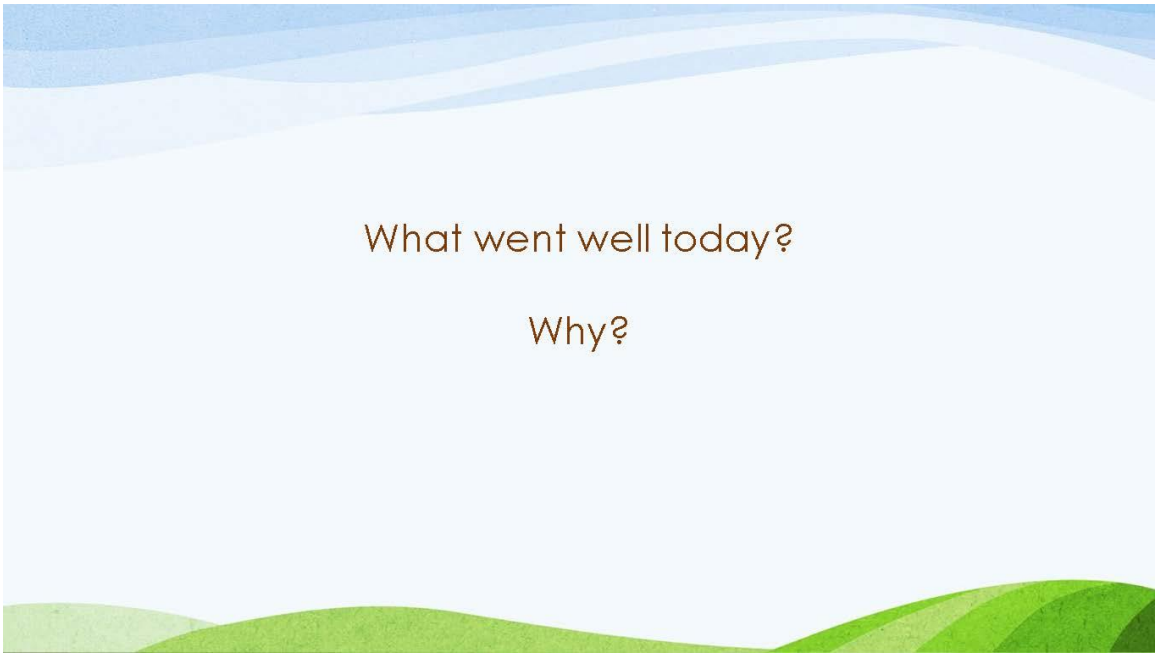

Presentation of Jackson Weber
SBAR report

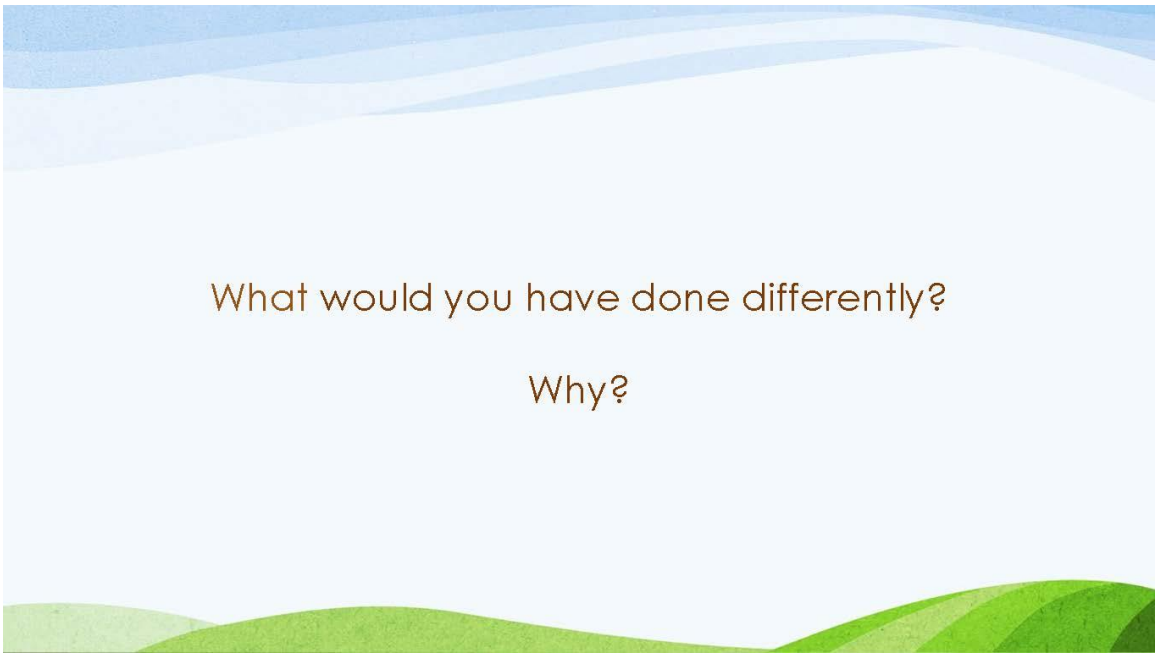

Role Assignments
Primary Nurse
Secondary Nurse
Resource Nurse
Mother/Guardian

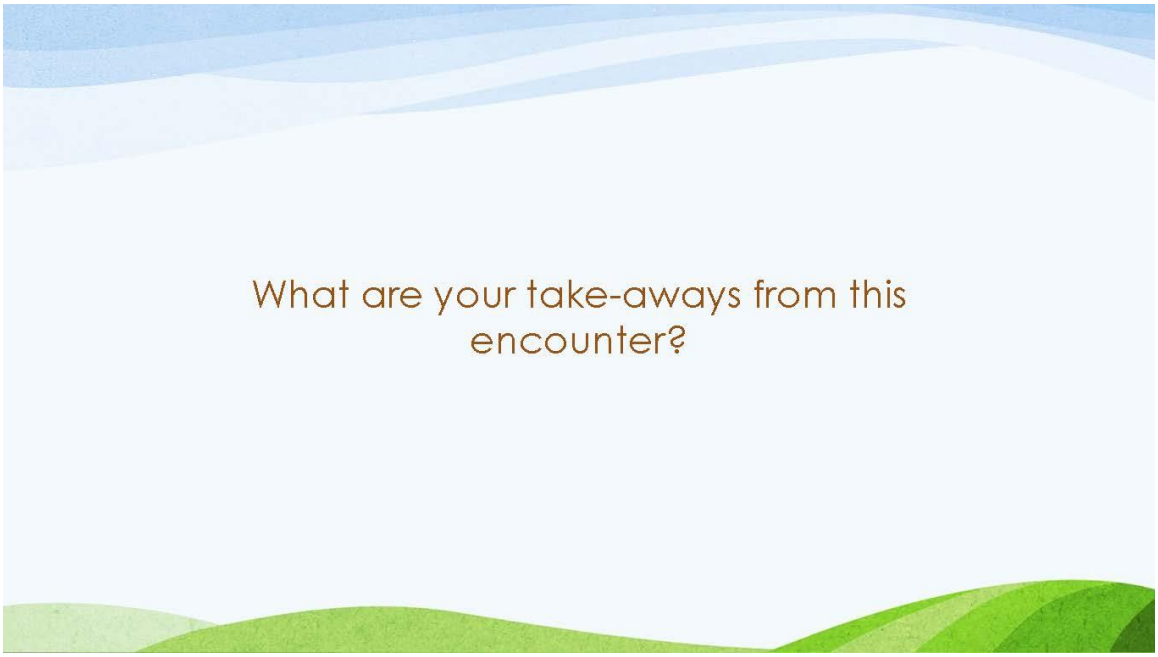

De-briefing
"Creating meaning out of an experience....."


Initial reactions?
How are you feeling at this moment?


"Today we cared for a client who....."


What went well today?
Why?


What would you have done differently?
Why?


What are your take-aways from this encounter?


Thank you so much for joining us today! Please
take a few moments and complete
the simulation survey:

APPENDIX J

Simulation Debriefing Worksheet

[redacted]
Nursing Resource and Simulation Center
PEARLS Worksheet for Simulation

Reactions
Any initial reactions? How are you feeling?

Description
Summarize the clinical situation
What happened?

Analysis
What went well and why?

What would you change and why?

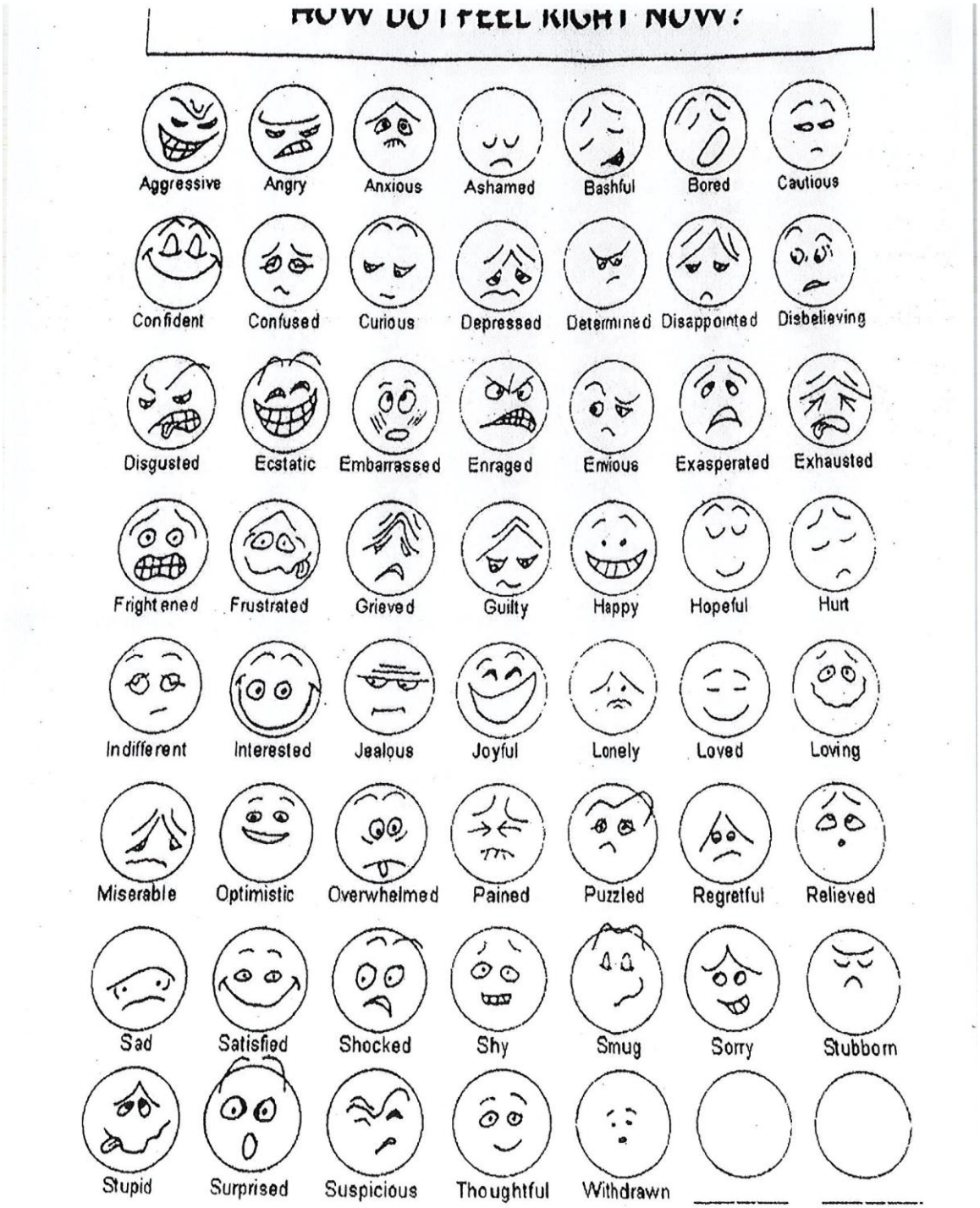
Application/Summary
What are the take-aways from this discussion for our clinical practice? What were the key learning points for the clinical scenario?

Adapted from PEARLS Debriefing Model

Eppich, W., & Cheng, A. (2015). Promoting Excellence and Reflective Learning in Simulation (PEARLS). *Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare,10*(2), 106-115.

APPENDIX K

Emoji Reactions Document


HOW DO I FEEL RIGHT NOW?
Aggressive
Angry
Anxious
Ashamed
Bashful
Bored
Cautious
Confident
Confused
Curious
Depressed
Determined
Disappointed
Disbelieving
Disgusted
Ecstatic
Embarrassed
Enraged
Envious
Exasperated
Exhausted
Frightened
Frustrated
Grieved
Guilty
Happy
Hopeful
Hurt
Indifferent
Interested
Jealous
Joyful
Lonely
Loved
Loving
Miserable
Optimistic
Overwhelmed
Pained
Puzzled
Regretful
Relieved
Sad
Satisfied
Shocked
Shy
Smug
Sorry
Stubborn
Stupid
Surprised
Suspicious
Thoughtful
Withdrawn

APPENDIX L

Simulation Evaluation Survey

Felician UNIVERSITY
THE FRANCISCAN UNIVERSITY OF NEW JERSEY

Default Question Block

Image previewPlease take a moment to answer the following questions:

In which program are you currently enrolled?

- ○ Traditional four-year Bachelor of Science in Nursing
- ○ Accelerated Bachelor of Science in Nursing
- ○ Graduate/Advanced Practice
- ○ Other

What was the date of your simulation? (Please use MM/DD/YYYY format).

Which course was this simulation for?

- ○ NURS 306: Health Assessment
- ○ NURS 326: Foundations of Nursing
- ○ NURS 356: Adult Nursing I
- ○ NURS 436: Adult Nursing II
- ○ NURS 416: Maternal-Newborn Nursing
- ○ NURS 422: Pediatric Nursing
- ○ NURS 486: Population & Community Health Nursing
- ○ NURS 346: Mental Health Nursing
- ○ NURS 530: Advanced Health Assessment
- ○ NURS 681: Primary Care Across the Lifespan
- ○ NURS 682: Primary Care Across the Lifespan II
- ○ NURS 683: Women's Health/Pediatric
- ○ Other

Evaluate the following statements:

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
The orientation to the simulation environment and technology was helpful.	○	○	○	○	○
Observing my peers was as beneficial for me.	○	○	○	○	○

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
I feel better prepared to work as a team member in the care environment.	○	○	○	○	○
I was challenged in my thinking and decision-making skills by the scenarios presented.	○	○	○	○	○
I developed a better understanding of the client's condition after the simulation experience.	○	○	○	○	○
I feel better prepared to apply client care technology and information management tools to support safe processes of care.	○	○	○	○	○
The debriefing session helped me to process what occurred during the simulation.	○	○	○	○	○
I would like to do more simulation scenarios.	○	○	○	○	○

Please use this space to help us improve your simulation

experience. We welcome your comments.

Powered by Qualtrics

APPENDIX M

Informed Consent Form

INFORMED CONSENT FORM

The Benefit of Doubt: Uncertainty and Clinical Humility in the Simulated Learning Environment

---

1. INTRODUCTION

You are invited to be a participant in a research study about uncertainty and clinical humility in the simulated learning environment. You were selected as a participant because the study involves nursing students in their senior year of a nursing program. Your participation in this study is voluntary. We ask that you read this document and ask any questions you may have before agreeing to be in the study. Participants must be 18 years old or older.

The study is being conducted by: Mary Clare Smith, Medical Humanities doctoral student at Drew University.

2. BACKGROUND

The purpose of this study is to explore students' perceptions of and experiences with uncertainty and clinical humility in simulation. Clinical humility is defined as an awareness of one's own limitations in a clinical setting. In professional practice, nurses face complex care scenarios daily. Much is known about the potential for students to gain knowledge and skill and improve self-confidence through simulation. More information is needed about how students experience uncertainty and clinical humility in simulated care settings.

3. DURATION

Research will be conducted August through December 2024. The expected time for this research will be a total of five hours for each group. Thirty minutes is for a presimulation

activity to be delivered asynchronously as a recorded PowerPoint and video. The clinical component will be a four-hour simulation and debriefing session. An additional hour will be required for individual interviews afterwards.

4. PROCEDURES

If you agree to be in this study, we will ask you to do the following things:

- Complete a brief demographic survey. Your answers will provide information about your age, and education.
- Participants will be asked to view a recorded PowerPoint with and an integrated video as a presimulation activity. The presimulation activity will take approximately thirty minutes to complete.
- Participants will attend a simulation activity in the Nursing Resource and Simulation Center.
- At the start of the simulation, students will have the opportunity to review a handoff report for the simulated patient, review the patient's electronic medical chart, and participate in an orientation to the manikin and the simulated care environment. Students will have an opportunity to ask questions about the equipment and the patient's record during the orientation.
- During the simulation, students will act in the role of a nurse, a family member, or an observer, while faculty and NRSC staff control the manikin and observe the simulation from an adjacent control room.
- Student observers will view a live video feed of the simulation from a debriefing room.

- The simulation scenario will address a topic in pediatric nursing and is expected to last approximately twenty minutes.
- A facilitated debriefing discussion will immediately follow the simulation scenario activity and is expected to last approximately forty minutes.
- At end of each session, students will participate in interviews with the researcher. The interviews will be audio-recorded, and will encompass questions such as but not limited to:
    - What does humility mean to you?
    - What were your feelings before, during, and after the experience?
    - Reflecting on the simulation activity, please share an example of a time that you were uncertain about or felt open to revisiting your viewpoint about the patient's care.
    - How might participating in this simulation contribute toward your openness to reassessing your viewpoint about a patient's care?
    - How has this experience changed your views about uncertainty in the context of patient care?
    - How has this experience changed your views about clinical humility?

Please note: You may end your participation at any time without consequence or penalty.

5. POTENTIAL RISKS/BENEFITS

This study has the following risks:

Risks are not likely, but for some participants, anxiety, sadness, and fear may occur.

Contact information for the Director of Student Counseling and Wellness Services, Kathy Murray, will be available if any participant feels the need to discuss concerns related to participation in the study.

Potential benefits of participation include that those who participate may develop a better understanding and new perspectives on clinical humility and uncertainty in patient care. A ten-dollar gift card will be given to you.

6. CONFIDENTIALITY

All information taken from the study will be coded to protect each participant's name. The researcher will not disclose names or other identifiers when reporting data. The investigator will maintain all files and data collected in a secured locked cabinet in the principal investigator's office. Once the data has been completely analyzed, it will be destroyed. Except for this form, the Informed Consent document, your name will not be required on any of the forms you submit. Students will pick a code from a hat and then put this code on any further forms they submit. Forms will be coded with these numbers and the primary investigator will maintain a list that correlates participant names to the code numbers separate from the consent and survey forms. Audio recordings of interviews and transcripts will be maintained on a password-protected account on a device in the researcher's office. Audio records will be destroyed after the data analysis has been completed. During the recorded interview, participants will be identified only by their randomly selected code number. Only the researcher and research assistants will have access to the research forms and audio records. If the data generated by this research is published, the publication will not include any participants' names.

7. VOLUNTARY NATURE OF THE STUDY

Participation in this study is completely voluntary. If you decide not to participate in this study, it will not affect your academic record, services, or benefits to which you are entitled as a student in this program.

8. WITHDRAWAL FROM THE STUDY AND/OR WITHDRAWAL OF AUTHORIZATION

Participants may withdraw their consent to participate in this study at any time if they do not wish to continue. If at any time you choose to withdraw, you will need to inform the primary investigator, Mary Clare Smith, by email to [redacted].

9. COSTS/REIMBURSEMENTS

There is no cost for participating in this study. Any expenses resulting from participation in this study will not be reimbursed by the investigators.

9. CONTACTS AND QUESTIONS

The researcher who is conducting this study is Mary Clare Smith. You may ask any questions you have right now. If you have questions later, you may contact the researcher at [redacted].

If you have questions or concerns regarding this study and would like to speak with someone other than the researcher(s), you may contact: The IRB Chair at Drew University, IRB Chair Felician University or the Director for Student Counseling and Wellness Services at Felician University.

10. STATEMENT OF CONSENT

The procedures of this study have been explained to me and my questions have been addressed. I understand that my participation is voluntary and that I may withdraw at any time without penalty. If I have any concerns about my experience in this

study (e.g., that I was treated unfairly or felt unnecessarily threatened), I may contact the Chair of the Drew Institutional Review Board or the Felician Institutional Review Board regarding my concerns.

I voluntarily agree to participate in this research study (please select one option below).

- Yes
- No

Participant Name

(Print)_____Date_____

Participant

signature_____Date_____

Name of Witness

_____Date_____

Witness signature _____Date_____

Person Obtaining Consent

_____Date_____

Person Obtaining Consent signature _____Date_____

Note: A copy of the signed, dated consent form must be kept by the Principal Investigator(s) and a copy must be given to the participant

APPENDIX N

Comparison of Demographic Trends and Qualitative Themes

Comparison of Demographic Trends and Qualitative Themes

This section will highlight correlations between demographic and qualitative findings around students' perceptions of clinical humility. Participants' demographic data and qualitative themes were correlated and compared to generate this analysis. Against the backdrop of the students' demographic data, analysis of their interview transcripts revealed some trends in relation to gender, age, and progression of their studies. Some students engaged with multiple themes for each research question.

Gender

An exploration of students' engagement with themes for Research Question 1 revealed that both male (75%) and female (73.3%) students engaged with Theme 2, which construed humility as other-oriented openness. When discussing aspects of simulation that they viewed as supportive of clinical humility, males were most likely to engage with Theme 1, Psychological Safety (50%), and Theme 4, Working in Teams (75%). Females demonstrated engagement across themes for the second research question, with the strongest engagement in Psychological Safety (46.7%) and Mistakes as Opportunities (26.7%). Data for Research Question 3 revealed that female participants showed substantially more engagement with the first theme, Lifelong Learning (66.7%), while males had no engagement with the first theme (0%). In other words, respondents whose transcripts suggested they believed humility supported professional competence through lifelong learning (Theme 1), were females.

Age

An analysis of students' engagement with themes for Research Question 1 showed that 100% of students in the 25 to 34 age range engaged with the second theme,

suggesting high relevance of humility as openness and awareness of others for those students in this sample. Responses from 18- to 24-year-old participants showed they were more equally engaged with humility as self-awareness (42.9%) and humility as openness (64.3%). For the second research question, the 25- to-34-year-old age group showed strong engagement with Theme 4 (80%), Working in Teams, while students in the 18- to-24-year-old age range were more engaged with Psychological Safety (42.9%). There was balanced engagement across the themes for Research Question 3, as students in both groups showed similar engagement with Lifelong Learning and Ethical Caring. In the 18–24 age group, 57.1% engaged with Theme 1, Lifelong Learning, and 50% engaged with Theme 2, Ethical Caring.

Interrupted Studies

In the demographic survey, students were asked whether their progression in the nursing program had been interrupted. Students who are unsuccessful in coursework or require a leave of absence are delayed in progress and may wait a semester or a year to retake a course or return from a leave of absence. Students in both categories, those who reported interruptions in their progress and those who reported no interruption in their progress, showed engagement in both themes for Research Question 1. Both students with interrupted progression (66.7%) and those without interruptions (85.7%) seemed to favor Theme 2 for Research Question 1. Students with interrupted progression were most engaged with Theme 4 (50%), Working in Teams, and also engaged with Theme 1, Psychological Safety (41.7%) for Research Question 2. Students who had not experienced interruptions in their studies were more engaged with Theme 1, Psychological Safety (57.1%) and Theme 2, Normalizing Uncertainty (14.3%).

Responses to Research Question 3 among those who experienced interruptions and those who had not experienced interruptions show engagement with both themes, Lifelong Learning (41.7%—71.4%), and Ethical Caring (58.3%—42.9%). This suggests that interruption in studies did not seem to have a compelling association with students' engagement for themes across the three research questions.

Previous Health Care Experience

Qualitative findings, when organized around prior health care experience, were more subtle. For example, prior work experience in health care did not seem to correlate with students' views on the role of clinical humility in professional formation. Participants showed roughly equal engagement in both themes (50–55.6%). This suggests that prior work in health care may not influence students' perceptions of the influence of clinical humility on their professional identity as it relates to competence or compassionate care. Students without health care experience were only slightly more likely to engage with humility as ethical caring than their more experienced counterparts.

VITA

Full name: Mary Clare Smith

Place and date of birth: Drexel Hill, Pennsylvania, January 11, 1964

Parents' names: Louis D. DeSantis & Joanne R. DeSantis

Educational Institutions:

	School	Degree	Date
Secondary:	Springfield High School	Diploma	June 1982
Collegiate:	Georgetown University	Bachelor of Science in Nursing	May 1986
Graduate:	Felician University	Master of Science in Nursing	May 2014