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Exploring a Nursing Faculty's Perceived Level of Engagement with High-Fidelity Simulation Experiences

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Walden University
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Abstract

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MSN, University of Phoenix, 2008

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Dissertation Submitted in Partial Fulfillment

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Doctor of Philosophy

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Abstract

Researchers from several disciplines concluded that deep engagement in an organization is critical to its success. However, little is known about a nursing faculty's engagement experiences with high-fidelity simulation (HFS), which could establish the critical link between deep engagement and HFS' successful integration in nursing programs. Grounded in the alternative model of engagement in learning, bridging this knowledge gap was the purpose of this study. The research question of this phenomenological study explored the nursing faculty's perceived level of engagement with their HFS experiences. A purposeful sampling of 10 nursing faculty were interviewed using semistructured interview process. Van Kaam's interpretative, phenomenological approach guided data analysis. The final themes were: (a) evolving engagement, (b) emotional response, (c) varying levels of engagement, and (d) pedagogical engagement. According to the findings, it is critical that nursing faculty be fully invested in simulation practice for simulation to be successfully integrated in nursing programs. Results from this study will inform simulation experts in revising existing simulation training programs and include initiatives supporting faculty's full assimilation in their simulation role. Such use of these data would positively impact social change by providing the community with a well prepared and equipped future nursing workforce, through effectively delivered simulation-based education by a nursing faculty who are deeply engaged in the HFS process.

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Dedication

This dissertation is dedicated to all those who supported me throughout my Ph.D. journey, especially to my husband, Lamberto Hernandez, who provided me with much support I needed to complete this monumental feat successfully. To my daughters Nicole, Airah, and Ysabelle, your love and understanding held me through those moments, I felt overwhelmed. I want to dedicate this work to my parents, who instilled in us siblings the value of formal education. To my father, Dr. Leoncio Herrera, who has highly educated himself, served as my role model to push forward and attain my seat in society as a woman by becoming highly educated. To my mother, Celerina Herrera, who inspired me with her life amidst having three small children, she persevered to be educated and pursue her passion as an elementary school teacher. To my siblings, Gloria, Jasmin, Eva, and Leoncio Jr., our journey growing up together helped me overcome any arduous event in this endeavor. I also want to dedicate this to the memory of my furry boy Rocky-Mocci who diligently accompanied me every night in my wake since I started this dissertation journey.

And lastly, I dedicated this work to the Almighty God, thank you for the guidance and strength. All of these, I offer to you.

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Chapter 1: Introduction to the Study

Introduction

Over the years, healthcare organizations and higher education have undergone significant changes brought about by disruptive innovations shaping the directions of health profession education programs. Such programs, including nursing programs, touch on technological innovations to deliver high-quality, student-centered education. Innovative teaching-learning paradigms with technologies, such as gaming and virtual and high-fidelity simulations (HFS), facilitate metacognitive learning outcomes (Doolen et al., 2016; Rode, Calliham, & Barnes, 2016; Shin, Park, & Kim, 2015; Tutticci, Lewis, & Coyer, 2016; Vlachopoulus & Makri, 2017). Scholars suggested that HFS is an innovative pedagogy that is aligned with the present generation's learning styles and impacts learning in a multidimensional way because it encompasses various pedagogical approaches (Beroz, 2017; Brydges et al., 2015; Cant & Cooper, 2014; Clapper, 2015; Clapper & Kardong-Edgren, 2012; Davis, Kimble, & Gunby, 2014; Dieckmann et al., 2017; Gould, Sadera, & McNary, 2015; Kleinheksel, 2014; Vlachopoulus & Makri, 2017). However, traditional pedagogical approaches continue to pervade health profession education programs (Rojas, Cowan, Kapralos, & Dubrowksi, 2014), while nurse educators' intention to adopt HFS has not changed, despite faculty development and training in simulation (Davis et al., 2014; Doolen et al., 2016). Perplexed with the current research findings, I posited that meaningful and deep faculty engagement is critical to the adoption and integration of HFS, and to sustaining its use in a nursing education program.

Deep engagement means an encompassing psychological commitment (Kahn, 1990) characterized by immersion, absorption, passion, affiliation, and incorporating oneself into one's role within the organization (Bryson, 2016; Graffigna, 2017; Kahu, 2013; O'Brien & Toms, 2008; Maguire, Egan, Hyland, Maguire, 2017; Whitton & Moseley, 2014). The individual's deep engagement in their role is an organizational-behavioral concept that is valuable to various organizations (Kahn, 1990; Schaufeli, 2013), including healthcare (Graffigna, 2017) and higher education (Bryson, 2016; Kahu, 2013), particularly in the context of student engagement (Kahu, 2013; Kahu & Nelson, 2018; Kahu, Nelson, & Picton, 2017; Kahu, Stephens, Leach, & Zepke, 2015; Whitton & Moseley, 2014) and technological engagement with education (O'Brien & Toms, 2008; Whitton, 2011). Although engagement's ontological concept is widely theorizedand researched in many disciplines, the faculty's engagement experiences and their position—superficial or deep in their engagement experience with HFS—is not known. In-depth insight into faculty's engagement experiences and their perceived level of engagement with technological innovations, such as HFS, are key to understanding the factors that influence faculty adoption of HFS and its integration into the nursing program.

This study was about understanding the nursing faculty's perceived level of engagement with their HFS simulation experiences. Using a qualitative, interpretative phenomenological analysis (IPA), the faculty's perceived level of HFS engagement was explored, shedding light on their position: superficial or deep. The study was unique because it aimed to reveal the elements believed to be critical in facilitating the faculty's

growth in their engagement with HFS experiences. Also, the study contributed to the corpus of literature on HFS in nursing education, and education in general, because the construct of a deep level of engagement, in the context of simulation-based learning and technology in learning, was unknown. The patterns that emerged from the findings are pivotal to the development of simulation training programs and faculty development initiatives premised on frameworks that support a deeper level of engagement. Also, the emergent themes are useful for other scholars who aim to develop tools that measure a deeper level of engagement in learning.

The study could influence positive social change at the student level, in nursing and healthcare communities, at the nursing discipline level, and at the patient level. Student learning is positively influenced because the faculty who are deeply engaged in HFS are more confident in adapting and optimizing the advantage of this technology in the classes they teach. The nursing and healthcare communities could benefit because of the use of effectively delivered simulation education; new nursing students are better prepared for providing care through their ability to enact care processes. At the nursing discipline level, the nursing program would graduate nursing students ready to enter practice with confidence and understanding of the actual care processes. At the patient level, patients would receive care from new nurses who are more confident in basic care processes and able to concentrate on the patient as an individual rather than a care process to be done. Also, patient safety is not jeopardized because HFS provides a realistic and nonthreatening learning environment, where students develop their nursing skills without practicing on real patients, thus avoiding patient care errors. Health care

organizations and nursing schools would both benefit from the study because an increase in the uptake of HFS in nursing education programs would alleviate the problem with the lack of clinical placements for nursing students. Thus, clinical sites are not overwhelmed with the number of students whose education training programs are requesting clinical space for their students.

In this chapter, I briefly discuss the phenomenon of interest, the purpose of the research study, and the main research question that guides the study. The significance of the study to nursing education, nursing practice, theory, and social change are also presented. Additionally, the definition of terms, assumptions, scope and delimitations, limitations, significance of the study, and summary are discussed in this chapter.

Background of the Study

The number of technologically engaged faculty must be increased to deliver high-quality education that is interactive, engaging, and learner-centered, thus aligning education to meet the needs of a technology-driven society. This need stemmed from the challenge to health profession education leaders to reform health professional education (HPE) curricula leveraging on technological innovations to address the complex and technology-driven landscape of healthcare (Dzubian & Florida, 2015; Gould et al., 2015; Stuart & Triola, 2015). High-fidelity simulation (HFS) is an example of technologically innovative pedagogies that support transformative learning outcomes (Davis et al., 2014; Kleinheksel, 2014; Lonie & Desai, 2015; Vlachopolous & Makri, 2017). Meta-analysis and systematic reviews confirm that simulations and gaming contribute positively to students' cognitive, behavioral, and affective learning outcomes, thus bridging the

practice-to-theory gap in nursing education (AL-Dossary, Kitsantas, & Maddox, 2014; Basak, Unver, Moss, Watts, & Gaioso, 2016; Bland & Tobbell, 2016; Davis et al., 2014; Lawrence, Messias, & Cason, 2018; Rojas et al., 2014; Simkins & Jaroneski, 2016; Vlachopoulos & Makri, 2017). Further, simulation-based education is a sound solution to clinical placement shortages that pervade nursing education programs (Al-Ghareeb & Cooper, 2016; Au, Lo, Cheong, Wang, & Van, 2016; Basak et al., 2016; Berragan, 2014; Cheng et al., 2016; Jeffries, Dreifuerst, Kardong-Edgren, & Hayden, 2015; National League for Nursing [NLN], 2015; Pesico & Lalor, 2019; Rutherford-Heming, Nye, & Coram, 2016; Stroup, 2014; Walters, Potetz, & Fedesco, 2017). Thus, the number of vested faculty in this pedagogy must be increased to optimize the use of HFS technology, which positively impacts students' learning outcomes.

Efforts to train and develop faculty in simulation have been made to optimize uptake and adoption of HFS in the nursing education program. A critical strategy to address the need for a contextual, experiential type of learning through simulation is a faculty training with core and advanced simulation courses, providing the basic knowledge that is essential to begin using simulations (NLN, 2015). Scholars claimed that simulation training increases the facultyknowledge and enables them to use simulation (Al-Ghareeb & Cooper, 2016; Jones, Fahrenwald, Ficek, 2013; Kim, Park, & Rourke, 2017). However, findings showed that faculty remained inadequately trained, while HFS remain underused (Taibi & Kardong-Edgren, 2014). Notably, the faculty's perception and intention to adopt simulation did not change after training, which is similar to previous studies (Al-Ghareeb & Cooper, 2016; Jones et al., 2013). There is a

need for an in-depth examination of the faculty's perceptions and intention to use simulation, regardless of the training received, because perceptions do influence intent to adopt HFS (Kim et al., 2017). However, the nursing faculty's engagement experiences and their perceived position—superficial or deep engagement with their HFS experience—is a critical point that is missing from previous and current studies.

Engagement encompasses the human dimension and human behavior as indicated by their continued involvement in and commitment to seeking positive outcomes—a process that occurs in a continuum and develops over time. Engagement is a transformative process, transforming the person's involvement from mere participation to co-creating behavior (Graffigna, 2017; Bargagliotti, 2012; Hoffman, Perillo, Hawthorne Calizo, Hadfield, & Lee, 2005). Deeply engaged human resources are linked to higher job satisfaction and work-related mindset that is positive and fulfilling (Schaufeli, 2013; Sohrabidazeh & Sayfouri, 2014). Engagement is a valuable organizational behavioral concept where people's active participation, combined with psychological commitment, is instrumental to an organization's sustainability (Graffigna, 2017; Hoffman et al., 2005; Kahn, 1990; Schaufeli, 2013; Sohrabizadeh & Sayfouri, 2014). Thus, organizational leaders acknowledge engagement as a promising means to sustain the transformation and survival of organizations in today's highly competitive landscape (Graffigna, 2017). Scholars from other disciplines claimed the significance of beneficial engagement (Craswell, Moxham, & Broadbent, 2016) and a deeper level of engagement in sustaining the use of technological innovations with learning (O'Brien & Toms, 2008; O'Brien, 2016; Whitton & Moseley, 2014; Whitton, 2011). In higher education, engagement of

students with their learning is instrumental to their educational success (Barnacle & Dall'Alba, 2017; Bryson, 2014; Kahu, 2013; Kahu et al., 2015; Kahu et al., 2017; Kahu & Nelson, 2018). As such, engagement is a widely explored construct in various organizations and higher education, giving rise to different ontological perspectives on engagement.

The ontological concepts of engagement have been described as multicontextual, multicomponent, and multidimensional, suggesting a hierarchy within the process or continuum. As a highly theorized construct, engagement has been defined and described by scholars within the context of their disciplines. For instance, engagement is an expression of preferred self in actively performing one's role to work and to others (Kahn, 1990); it is a cognitive, affective, and conative participation of the individuals towards their role within the organization (Graffigna, 2017); or the continued involvement with information and computer technology use driven by its benefits to stakeholders (Craswell et al., 2016). Higher education described learner engagement as encompassing of complex factors such as motivation, autonomy, interest, cognitive, and social factors (Whitton & Moseley, 2014), while user engagement with technology in education is a positive response to computer-mediated activities that occur in stages (O'Brien & Toms, 2008). The multicontextual definition of engagement converges to a construct linked to positive behaviors rooted in various components and dimensions.

The complexity of engagement as a construct is inherent to its multicomponent attributes, that are critical in facilitating and deepening a person's engagement within a continuum. Critical attributes to personal and organizational engagement include,

physical, emotional, and psychological presence (Kahn, 1990), and meaningfulness and benefits of getting involved (Craswell et al., 2016). Interplay of cognitive, affective, and behavioral elements are instrumental to students' engagement with learning, where self-regulation (Corno & Mandinach, 1983) and making sense of the experience are critical to deepening the level of engagement (Harper & Quaye, 2010). Relating to technological engagement in education, heightened sensual, emotional, spatiotemporal experiences, clear goals, immediate feedback, and immersive activities are essential to technological engagement (Csikszentmihalyi,1992; O'Brien & Toms, 2008). The presence of these components facilitates a person's engagement with an activity while its absence is a barrier to the person's engagement progress in the continuum.

The multidimensional nature of engagement was another attribute that makes an engagement experience a complex construct. Engagement is multidimensional psychological conditions of self-employment and self-expression (Csikszentmihalyi, 1982; Deci & Ryan, 1985; Kahn, 1990), beyond physical and cognitive engagement. Various dimensions to engagement encompass behaviors and elements, describing a person's position in their engagement experience of a phenomenon (Graffigna, 2017; Whitton & Moseley, 2014). For instance, students' position with their engagement experiences with learning could be superficial or deep (Whitton & Moseley, 2014). Students' attendance to activities and submitting coursework indicates superficial levels of engagement, because it indicates behaviors of participation and attention which are engagement at a cognitive level, that is easy to measure quantitatively (Whitton & Moseley, 2014). However, dimensions indicating deep engagement constitute complex

behaviors like captivation, passion, affiliation, and incorporation (Whitton & Moseley, 2014). Meaningful and deeper levels of engagement are complex construct, because it is an internal experience accessible only to a person experiencing it (Whitton & Moseley, 2014), as with a person's position with his or her engagement experience with the phenomenon (Bryson, 2016; Graffigna, 2017). Thus, determining the person's position within the dimensions of deep engagement experience is a challenge.

There was a hierarchical dimension in a person's position in their engagement experience that occurs in the continuum. Whitton and Moseley (2014) described engagement in six dimensions: participation, attention, captivation, passion, affiliation, and incorporation, where one is more profound than the preceding dimension, but dependencies from these dimensions may or may not exist. Hence, Zepke's claim (2018) resonated: various versions of student engagement coexist as there is a hierarchy in student engagement. O'Brien and Toms' (2008) suggested that technological engagement with education is a process composed of four phases: point of engagement, engagement, disengagement, and reengagement. Further, engagement (technological engagement in education) occured within a continuum, starting with a person's initial engagement that eventually progresses to sustained engagement as influenced by factors that heighten participants'experience; thus facilitating their progression within the continuum (Csikszentmihalyi, 1992; O'Brien & Toms, 2008). Such hierarchy in the dimensions of engagement suggested that people may have a varying position in their engagement experiences, and at a level that is higher or more profound than others.

Dimensions to engagement experience were described as superficial and deep where the person may start with superficial engagement and grows in a deeper degree of engagement with their course of experience. Whitton and Moseley's (2014) six dimensions to engagement posited that participation and attention are both superficial types of engagement, where attention is more profound because it constitutes commitment at a cognitive level, while participation is indicated by behavior of going through the motion (Whitton & Moseley, 2014). Because participation and attention are dimensions of engagement driven by instrumental motivators such as rewards, are task-based; hence considered false and superficial (Kahu, 2013). In a technological engagement with education, the person initially participates because of the aesthetic appeal, motivations, interests, ability, and desire to be situated in their interactions; however, continued participation is not guaranteed (O'Brien & Toms, 2008). Although engagement is superficial, such level is critical because further, and meaningful engagement will not exist without participation and attention.

A higher level of engagement was described to be deeper and meaningful due to its far complex construct. However, Whitton and Moseley (2014) described four deep dimensions to engagement: captivation, passion, affiliation, and incorporation, where each dimension is more profound than the preceding dimension. A person who is enthralled or engrossed with the activity is said to be captivated, but the longevity of engagement is not guaranteed for one may continue to be immersed in the activity but not captivated overtime (Csikszentmihalyi, 1992; Whitton & Moseley, 2014). Engagement that highlights passion is more profound than captivation, because it involves heightened

affective behaviors such as empathy, anger, or excitement that are strong enough to sustain the person's engagement across series of activities (Kahu, 2013; Whitton & Moseley, 2014). Further, a person who lost interest, no longer feel challenged (Csikszentmihalyi, 1992; Malone, 1980; Whitton, 2011) or situated in his or her interactions may disengage with the activity (O'Brien & Toms, 2008). Thus, a person's deep engagement at the dimensions of captivation and passion are temporal, as with his or her continued progression within the engagement continuum, depending on the presence of factors that heightens the engagement experience.

The engagement experience at its highest level involves psychological and social belongingness, and is said to be at its pinnacle, when the person is fully incorporated in his or her role within the organization. Whitton and Moseley (2014) described affiliation and incorporation as a type of deep dimension more profound and sustaining than captivation and passion. Affiliation involves belongingness and renegotiation of the individual's identity (Whitton & Moseley, 2014). The deep dimension, incorporation is an engagement more profound than affiliation because the person is seen as an integral part of the activity, because there is enculturation, feeling of presence, and total immersion that impacts the person's overall sense of self and identity (Whitton & Moseley, 2014). Further, affiliation and incorporation constitute psychological and social identification, epistemic engagement of the individual (Whitton & Moseley, 2014), relational engagement to others and their task and position in the organization (Graffigna, 2017), and partnership and ownership of the process and the outcome (Bryson, 2016). An engagement at the dimensions of affiliation and incorporation level suggests that

engagement at its highest level is a self-transformative experience where the person consciously and intentionally takes a proactive role in his or her organization.

The faculty development and simulation training initiatives may have increased faculty knowledge about simulation, but were not effective in increasing the adoption and integration of HFS in nursing programs. Thus, indicating that there was a missing link as to why the adoption and integration of HFS did not increase, despite efforts to train and develop nursing faculty in HFS. A professional value on meaningful and deep engagement with learning as the key to effective and transformative learning, led me to explore the concept of engagement. Findings from various disciplines' scholarly works, indicated the value of stakeholders' meaningful and deep engagement to the organization's success and progress in today's highly competitive society. Thus, nursing faculty's deep and meaningful engagement with HFS could be the missing link to increasing the uptake of HFS in nursing programs. However, the discourse presented described the construct of engagement, while research studies found that the person's level of engagement experience: superficial or deep was limited.

Further, literature in nursing simulation research offered little information on nursing faculty's engagement experiences, while the faculty's perceived levels of engagement with HFS experiences is unknown. Thus, this study focused on exploring nursing faculty's engagement experiences and their perceived level of engagement experience with HFS. Findings from this study has shed light to the missing link as to why faculty adoption and integration of HFS has not increased despite development and simulation training received.

Problem Statement

The meaningful gap discovered by reviewing existing scholarly works on HFS was that the faculty's level of engagement experience with HFS was unknown. Thus, this identified gap became the focus of this research study. Scholars determined that the current development and simulation training programs for faculty were not effective at increasing HFS adoption and sustaining its use in nursing education (Davis et al., 2014; Doolen et al., 2016; Kim et al., 2017; Min & Rourke, 2017), suggesting that further investigation into the faculty's perception of HFS use was needed (Kim et al., 2017). However, meaningful, and deep engagement of stakeholders, particularly of the nursing faculty, may be a critical means to the successful adoption of HFS, as well as optimizing and sustaining its use in a nursing program. A deep level of engagement among stakeholders is valuable in sustaining organizations' efforts to succeed (Graffigna, 2017; Kahn, 1990; Schaufeli, 2013; Sohrabizadeh & Sayfouri, 2014). Likewise, in higher education, where students' educational success is strongly linked to students and faculty's meaningful engagement with one another (Barnacle & Dall'AQlba, 2016; Bryson, 2016, Kahu, 2013; Kahu et al.;., 2015; Kahu et al., 2017; Kahu & Nelson, 2018; Whitton & Moseley, 2014). However, the critical link between faculty's level of engagement experience with HFS and its adoption and successful integration in the nursing program was not established in previous HFS studies. Existing quantitative and qualitative studies on HFS and gamification in learning, were primarily focused on the students' learning outcomes (Vlachpolus & Makri, 2017), on the nursing faculty's perceived barriers and challenges, and on the intention to adopt (Cant & Cooper, 2017; Doolen et al., 2016;

Nehring, Wexler, Hughes, & Greenwell, 2013). Understanding faculty's level of engagement experience with HFS is instrumental in illuminating the factors that influence faculty adoption of HFS and especially their continued use of the technology. Furthermore, clarifying the faculty's level of engagement with HFS will serve as a springboard for HFS scholars in developing sustainable faculty development initiatives, that will support and even facilitate the continuity of faculty's growth in their HFS' engagement.

Purpose of the Study

The purpose of this qualitative study using the interpretative phenomenological approach (IPA) was to explore the nursing faculty's perceived level of engagement: superficial or deep with HFS. The phenomenological approach was used because engagement is a complex construct, known only to the person experiencing it (Kahn, 1990; Graffigna, 2017; Whitton & Moseley, 2014). Speaking directly to nursing faculty about their lived experiences engaging with HFS, provided a different perspective and rich descriptions of the phenomenon investigated in this study (Creswell, 2016; Creswell & Creswell, 2018).

Research Questions

What is the nursing faculty's perceived level of engagement with their high-fidelity simulation experiences?

Conceptual Framework

The focus of the research study was the nursing faculty's perceived level of engagement with their HFS experiences, whether superficial or deep (Graffigna, 2017;

Whitton & Moseley, 2014). The framework for this study was the alternative model of engagement with learning (AMEL); this model represented various levels of engagement, from superficial to deep. AMEL's premise provided a transformative perspective that shaped and informed the study's design and methodology. The main research question was premised on the model's assumption that there are hierarchical dimensions to engagement, such that ursing faculty could be at a more profound level of engagement with HFS. Also, the interview questions were based on AMEL's conceptual framework and served as basis of the analysis of this study's findings.

In AMEL, engagement with learning was comprised of six dimensions: participation, attention, captivation, passion, affiliation, and incorporation (Whitton & Moseley, 2014). Attention was more profound compared to participation as it involves a participant's commitment at the cognitive level, while participation is indicated by behaviors of going through the motions void of meaningful action (Whitton & Moseley, 2014). Both were superficial and initial dimensions to engagement, as they were associated with behaviors driven by extrinsic motivators such as getting rewards; hence, engagement is false and task-based (Whitton & Moseley, 2014). However, a superficial level of engagement as in participation that is motivated extrinsically, was critical to progress in an engagement experience, as further action will not take place without the initial action of doing.

The next four dimensions: captivation, passion, affiliation, and incorporation are deep levels of engagement because of the emotional and psychological interactions involved with the learner' engagement experience (Whitton & Moseley, 2014). The third

dimension, captivation is characterized by feeling of enthrallment indicated by awe and psychological absorption with learning (Whitton & Moseley, 2014). However, this dimension of engagement is temporary because the person may continue engaging with the activity but not captivated (Whitton & Moseley, 2014). On the other hand, passion is the fifth dimension to learning engagement that is deeper than captivation because of the strong emotional pull experienced by the person; thus, extending his or her immersion across the series of activities (Kahu, 2013; Whitton & Moseley, 2014). The last two dimensions of engagement: affiliation and incorporation were levels of deep engagement that were more profound than captivation and passion as these involve psychological and social identification and self-transformation. Whitton and Moseley (2014) claimed that feelings of belongingness are an indicator of engagement at the fifth dimension at affiliation, because the person engages with the group or community, seeing herself or himself as part of that community. At this level, the person is epistemically engaged in developing activities and practices within the community of disciplines (Bryson, 2016; Whitton & Moseley, 2014). A person who sees herself or himself as an integral, rather than a distinct part of the activity, is fully incorporated; thus, engagement experience was at the deepest dimension of engagement. At the level of incorporation, self-transformation occurs through enculturation, a feeling of presence, a total immersion that impacts the person's overall sense of well-being (Graffigna, 2017; Whitton & Moseley, 2014). A person whose engagement experience is at a transformative level makes a willful decision to take a proactive role within his or her organization.

As posited in AMEL's framework, the nursing faculty engagement experience with HFS starts with initial participation in HFS driven by intrinsic or extrinsic motivators, or both. Examples are curiosity, beliefs, a positive attitude towards the activity, or its perceived benefits (Craswell et al., 2016; O'Brien & Toms, 2008; Whitton, 2011). The presence of these factors facilitated continued participation; thus, engagement is facilitated at the attention level as there is cognitive involvement (Whitton & Moseley, 2011). Further, the desire to participate and continued participation is strengthened if the participant can establish a connection between HFS activities and his or her core values and beliefs (Csikzentmihalyi, 1992). Initial or subsequent participation will not guarantee continued and sustained HFS involvement, as a continuation of participation does not necessarily? indicate deep and meaningful engagement. Thus, HFS activity must provide a captivating experience that promotes an immersive HFS experience. The continued presence of factors, such as aesthetic and sensory appeal, feedback, variety or novelty, interactivity (O'Brien & Toms, 2008; Whitton, 2011), and appropriate level of challenge, will immerse the person in his or her HFS experience (Csikszentmihalyi, 1992). However, captivation is temporary because boredom and lack of challenge disrupt the flow of an enthralling experience, where the person may continue to be immersed but no longer captivated (Csikszentmihalyi, 1992; Whitton, 2011). Thus, lack of technological elements that make engagement challenging affect the person's engagement experience negatively and possibly resulting in disengagement (O'Brien & Toms, 2008). To sustain the adoption of HFS and facilitate its integration requires a deep level of engagement that transcends superficial engagement and supersedes temporal captivation. Engagement at a

level of passion involves emotional involvement (Whitton & Moseley, 2014) that is facilitated and strengthened by aligning the person's thoughts, feelings, and intentions with the goals of the activity (Csikszentmihalyi, 1992). A passionate attitude towards HFS activity is a deeper level of engagement that supersedes temporal captivation and is facilitated and sustained when the activity has clear goals that are aligned with the core values and beliefs of the participants. Affiliating with the community of experts in simulation indicates that the faculty member is psychologically and socially identifying herself as a contributing member of that community of discipline. Affiliation is signified by epistemic engagement, where the participant becomes involved in developing activities and practices within the community of discipline (Bryson, 2016; Whitton & Moseley, 2014).

A nursing faculty member who no longer sees himself or herself as distinct, but an integral part of the HFS activity, is said to be fully incorporated and is expert in the use of HFS as an innovative pedagogical approach in nursing education. Although incorporation is more profound than affiliation, both encompass overarching behaviors indicating engagement at the highest level of the engagement hierarchy. Thus, membership with affinity groups in simulation, espousing the values and beliefs of that simulation organization, and serving either as a contributing member, an expert, or one who holds a leadership role, indicates engagement at its deepest level. Such a level of engagement is valuable to sustaining organizations' transformation and survival in today's complex and highly competitive world.

The AMEL conceptual model was related to the study because it provided valuable information that supported the ideas and assumptions of this study. The tenets that framed AMEL were aligned with this study's assumptions that there were varied levels of faculty engagement with their HFS experience, there were dimensions within HFS, and that faculty's engagement level occurred within the continuum. Also, theories that underpin AMEL supported the assumption that the faculty's position in their engagement experience with HFS was influenced by the interplay of the elements attributed to the dimensions (superficial and deep) of engagement. This framework was vital in the development of the study, particularly in selecting the research design and in framing the research question. The premise of AMEL showed that engagement at a deep level was a complex construct that is only known to the person experiencing. Thus, supported this study's research question: What is the nursing faculty's perceived level of engagement with their high-fidelity simulation experiences? Thus, justified the study's interpretative phenomenological approach. AMEL's tenets were grounded in multidisciplinary theories that are critical in guiding the analysis and interpretation of the findings of this study.

Nature of the Study

An IPA was used to explore the research question: What are the nursing faculty's perceived level of engagement with their HFS experiences? The IPA approach was selected because it allows for the in-depth insight into the nursing faculty's firsthand account of their engagement experiences and the perceived level of engagement: superficial or deep with their engagement experience with HFS, and the interpretation of

the meaning of the experience (Moustakas, 1994; Smith, 2017). Per Moustakas (1994), scientific investigation is valid if the knowledge sought is arrived at thorough descriptions that make possible an understanding of the meaning and essence of experiences (p. 2). This approach had shed light on the essence of the experience as mutually shared by the nursing faculty who engaged in HFS.

The participants in the study were nursing faculty who are currently engaged in HFS in teaching nursing courses in the nursing program. A homogenous purposive sampling method was used where 10 participants were selected based on their knowledge and experience of HFS (Adler & Adler, 2012; Fusch & Ness, 2015; Guest, Bunce, & Johnson, 2006; Mason, 2010). Thus, inclusion criteria were nursing faculty who currently had engaged with HFS in teaching nursing courses in a nursing program for at least a year. The candidates must be teaching in a nursing program that has a simulation lab and uses HFS and must know the process of simulation, including pre-simulation, simulation, and debriefing. A survey screening using Survey Monkey (2018) was initially conducted with candidates to determine who met or did not meet the inclusion criteria.

Data collection was conducted through phone and video calls. The first 10 candidates who completed the survey and met the inclusion criteria were entered into the participant pool. They were interviewed using open-ended questions to elicit in-depth responses (Alshenqueeti, 2014; Daher, Carré, Jaramillo, Olivares, & Tomicic, 2017; Siedman, 2006). An interview guide was used to maintain responsive interviewing throughout the interview process that lasted 45-60 minutes (Jacob & Furgeson, 2012; Myers & Newman, 2007). The interviews were recorded to ensure that everything was

captured (Sutton & Austin, 2017). A debriefing process with whom? was conducted after the verbatim transcription of data.

Further, a copy of the verbatim transcript was emailed to the participants for review and to confirm accuracy. The actual recording was made available to the participants upon request. To protect the participants, ethical procedures stipulated by the IRB were followed throughout the recruitment and data collection processes. Data were analyzed using the modified Van Kaam method for IPA, as suggested by Moustakas (1994). This method for IPA included the epoche process or bracketing, phenomenological reduction (PR), imaginative variation (IV), and the invariant structure (IS) (Creswell, 2016; Moustakas, 1994).

Definitions

Affiliation. A behavior indicating a deep level of engagement where the person's engagement experiences resulted to a feeling of belongingness renegotiating one's identity within the context of his or her task, position, and relationship within the organization (Bryson, 2016; Graffigna, 2017; Whitton & Moseley, 2014).

Attention. A behavior indicating a superficial level of engagement as the person's involvement with the activity is at the cognitive level that could be driven by extrinsic motivators (Appleton, Christenson, Kim, & Reschly, 2006; Whitton & Moseley, 2014).

Captivation. A behavior is indicating a deep level of engagement where the person is immersed cognitively and psychologically with the activity (Calleja, 2011; Csikszentmihalyi, 1992; Whitton & Moseley, 2014). Although deeply engaged, a person's captivation is temporal where he or she may continue to immerse with the

activity but not captivated overtime (Csikszentmihalyi, 199; O'Brien & Toms, 2008; Whitton, 2011).

Deep engagement. The person's position in his or her engagement experience is at the level more profound than superficial engagement (Graffigna, 2017: Whitton & Moseley, 2014). Such engagement is indicated by behaviors of captivation, passion, affiliation, and incorporation (Whitton & Moseley, 2014), resulting in self-transformation where the person takes proactive ownership of one's role in the organization (Graffigna, 2017).

Engagement. A multicontextual, multidimensional, and multicomponential construct of human dimension and behavior resulting from the individual's deliberate desire to transform (Appleton et al., 2006; Barnacle & Dall'Alba, 2017; Burrage, Hattell, & Habermann, 2005; Corno & Mandinach, 1983;; Kahn, 1990; Kahu, 2013; McMahon & Portelli, 2004; Schaufeli, 2013; O'Brien & Toms, 2008; Whitton & Moseley, 2014), and acquire psychological ownership of one's role (Graffigna, 2017) in the organization.

Faculty engagement with simulation technology. An involvement: superficial or deep of the nursing faculty to the development of innovative simulation-based pedagogy, optimizing and sustaining its use in the nursing program (Burrage et al., 2005; Craswell et al., 2016; O'Brien & Toms, 2008).

High-fidelity simulation. A technology-based simulation pedagogy that uses computer-enhanced mannequins to create real-life situations allowing the participants to interact and immerse in the simulated experience *(*Gaba, 2004; Jeffries, 2005; Jones, Passos-Neto, Freitas, & Braghiroli, 2015).

Incorporation. A behavior indicating a deep level of engagement where the person sees oneself as an integral part of the activity characterized by enculturation, total presence, and immersion affecting the person's overall sense of self and identity (Whitton & Moseley, 2014). Being incorporated is a result of self-transformative experience where the person takes epistemic engagement within the community of discipline or organization (Bryson, 2016), and a proactive role within the organization (Graffigna, 2017).

Level of engagement experience. The person's perceived position within the dimensions of engagement relating to his or her involvement with the activity, learning, or role in the organization (Graffigna, 2017; Whitton & Moseley, 2014).

Participation. A behavior indicating a superficial level of engagement as the person's involvement with the activity is task-based (Appleton et al., 2006; Whitton & Moseley, 2014).

Passion. A behavior indicating a deep level of engagement where the person is engaged emotionally or affectively with the activity (Whitton & Moseley, 2014). The emotional pull the person experiences is at the intensity that extends his or her immersion across a series of activities (Kahu, 2013; Whitton & Moseley, 2014).

Simulation. A technique of amplifying or mimicking the reality with guided, immersive, and interactive experience recreating the real world with devices or mannequins (Gaba, 2004; Jeffries, 2005; Society for Simulation in Healthcare, 2019).

Simulation-based pedagogy. An approach to learning using one or various modalities of simulation in replicating situations close to real life as possible (Gaba,

2004; International Nursing Associations for Clinical Simulation and Learning Standards Committee [INACSL], 2016; Keskitalo, 2015; Yoo & Kim, 2018).

Superficial engagement. The person's position in his or her engagement experience is at the first level of dimension indicated by behaviors of participating and attending at a cognitive level (Libbey, 2004; Whitton & Moseley, 2014). Such engagement is task-based as the person's reason for participation and attention to the activity could be related to extrinsic motivators (Appleton et al., 2006; Whitton & Moseley, 2014).

Technology-based simulation. The use of technological innovations to deliver simulated reality such computer gaming applications, haptic technologies, virtual simulator, computer-enhanced mannequins (e.g. human patient simulator) (Gaba, 2004; Jeffries, 2005; Jones et al, 2015; O'Brien & Toms, 2008; Rojas et al., 2015; Doolen et al., 2016, Whitton, 2011).

Assumptions

I assumed that nursing faculty's meaningful and deep engagement with HFS was critical to increasing the adoption of HFS and sustaining and optimizing its use in the nursing program. I assumed that the nursing faculty's position in their engagement experience with HFS varied, where one can be at a level of engagement that is more profound than other levels. I assumed that dependences among dimensions or levels of engagement exist, allowing the nursing faculty to grow in his or her degree of engagement along with their experience of the HFS. Thus, the nursing faculty's level of engagement with HFS moves from superficial to deep. Such a change in the nursing

faculty's level of engagement experience with HFS was influenced by elements interwoven in each level or dimension of engagement. Optimizing these elements facilitate the nursing faculty's engagement experience from superficial to deep engagement, thus, allowing upward movement within the hierarchy.

In contrast, the absence of these elements hinders the nursing faculty's growth within the continuum of the engagement experience or even result in disengagement. I assumed that the reality about the nursing faculty's level of engagement with HFS is subjective and can be seen from multiple perspectives; thus, nursing faculty that uses HFS in teaching nursing is best positioned to answer the research question. Although engagement is bound within the context of the nursing faculty's experience with HFS, I assumed that patterns and theories can be explicated to develop a profound understanding of the phenomenon of interest. Thus, understanding of the nursing faculty's perception of their engagement experience with HFS will shed shedding light on the problem gap identified from the body of literature on simulation.

The assumptions served as the bases on which to conduct the study. The assumption that the reality of the phenomenon is subjective because level of engagement was a construct known only to the person who experienced this phenomenon, justified the paradigmatic approach selected for the study. Also, the assumptions were critical to selecting a sampling method and data collection method.

Scope and Delimitations

The study focused on exploring and understanding the nursing faculty's engagement experiences with HFS and their perceived level of engagement, whether

superficial or deep. Part of the study was to discover the elements or attributes that contributed to the nursing faculty's engagement experience and how these elements impacted their position with their engagement experience. The study was delimited to the nursing faculty who have at least 1 year of experience using HFS and are currently engaged in HFS in teaching nursing courses in the nursing program. The data collection method was delimited to phone and face-to-face interviews to obtain rich and thick responses from the participants. IPA was used to analyze data because the study sought to forge patterns from the participants' multiple perspectives about their engagement experiences with HFS, and to describe and interpret the essence of these experiences.

Because engagement is widely theorized construct in various disciplines, there is potential transferability to other context and respondents (Bryson, 2016; Graffigna, 2017; Kahn, 1990; Kahu, 2013; O'Brien & Toms, 2008; Maguire et al., 2017; Schaufeli, 2013; Whitton & Moseley, 2014). The transferability of the study was ascertained by using purposive sampling method and carefully constructed interview guide to include open-ended questions ensuring that thick and contextual descriptions are from the participants who knew the phenomenon of interest.

Limitations

A limitation to the study was, there were no previous studies on the nursing faculty's perceived level of engagement experience with HFS, although the construct, engagement, is widely used in other contexts by other disciplines. Therefore, I must review literature and research studies from other disciplines like education, engineering, and management about the construct engagement.

Biases may stem from my professional background and relationships with the participants. I am a nursing faculty member who is directly involved in delivering HFS to nursing courses taught in my nursing program. Thus, I am a strong advocate for innovative pedagogies, particularly in the use of technology-based simulation like HFS, virtual, or web-based simulation. The personal and professional values I hold for HFS may result in biased analysis and interpretation of the data. Also, I may personally know the participants because I work closely with them in simulation. Thus, they may provide responses that they think will support my beliefs about simulation instead of their actual experiences with HFS. The plan to address such biases to avoid threats to study's transferability and dependability included strategies such as maintaining reflexivity through use of journals, and by recording personal and professional views on the research process, particularly the analysis and the findings of the study (Kjortsens & Moser, 2018; Ravitch & Carl, 2016). I used audit trails to record all procedural details, and I maintained transparency with my committee chair and members allowing them access to these records.

Significance of the Study

Significance to Practice

The study was significant to nursing education and health profession education disciplines because it informs HFS scholars in faculty development and simulation training programs that support, facilitate, and sustain the nursing faculty's growth in their role with HFS and other innovative, simulation-based pedagogies. Additionally, the emergent themes themes may serve as the foundation for developing tools that will

measure a deep and meaningful level of engagement. Nursing faculty who are deeply and meaningfully engaged in their role as nurse educators are more confident in adapting and optimizing innovative techniques, such as the use of HFS in their pedagogical approach, thus positively influencing learning outcomes.

Significance to Theory

The study was significant to nursing education because the findings addressed the specific problem identified from scholarly works on HFS where the faculty's level of engagement with HFS was not known. An in-depth understanding of the nursing faculty's engagement experience with HFS and their perceived level of engagement shed light on the broad problem identified in the nursing faculty's slow uptake of HFS use in the nursing education programs, despite the development and simulation training they have received. Findings from this study contributed to knowledge on HFS, and the nursing education and health profession education communities, because the construct of deep and meaningful engagement in the context of technology-based simulation and learning was explored.

Significance to Social Change

Findings of this study is expected to influence positive social change on multiple levels: students, nursing and healthcare communities, the nursing profession, and the patient. At the student level, nursing faculty who are meaningfully engaged use active learning pedagogical strategies, such as HFS, that improve student learning. At the nursing discipline level, an effectively delivered nursing program tapping on technologically innovative pedagogies, such as HFS education, will better prepare

nursing students in their roles in providing patient care. The nursing and healthcare communities could benefit because nursing graduates entering the nursing workforce are better prepared for their frontline role in a complex healthcare system. Patients could benefit because they would be receiving care from new nurses who were more confident in providing patient-centered care.

Summary

The use of technology innovations, such as HFS, with simulation-based pedagogies in delivering nursing programs is critical aspect of the nursing education transformation process as nursing education leaders align programs to meet the complex demands of current and future healthcare landscape. This initiative is as effective as the members of the nursing faculty who are deeply engaged in their role as educators, as they play a key role in the adoption and effective implementation of simulation-based learning. Thus, the use of HFS in nursing programs is optimized and sustained. However, the nursing faculty's engagement experience and their perceived level of engagement with HFS were not known; thus, this was the focus of the study.

Chapter 2 is a review of the extant literature on the phenomenon of engagement particularly deep engagement. This chapter explores the impact of HFS to learning outcomes, what is known about nursing faculty's experience with HFS, nursing education leaders' efforts to increase uptake of HFS in the nursing program, and the history and the context of HFS and technology-based simulation. The review also discusses the construct of engagement from various points of view and the conceptual models that form premise of the study.

Chapter 3 details the plans for this study's research methodology that includes participants selection, inclusion criteria, the recruitment process, data collection procedures, and instrumentation. In this chapter, data analysis plan and issues of trustworthiness like credibility, dependability, transferability, and confirmability are discussed. Also, Chapter 3 provides details on this study's ethical procedures.

Chapter 4 provides detailed discussion of this study's results. In this chapter, the setting, demographics, data collection method used, data organization processes, and analysis are presented. Also, Chapter 4 provides details on the process for data interpretation, and steps undertaken to address issues of trustworthiness.

Chapter 5 provides this study's discussion of the findings, conclusion, and recommendations. This chapter details the study's key findings, and how the results confirmed, disconfirmed, and extended the knowledge from previous and current literature and related studies. Also, Chapter 5 describes this study's limitations, recommendations for further research, and the findings' implication to positive social change.

Chapter 2: Literature Review

Introduction

The focus of this study was that the faculty's level of engagement with HFS was not known. The specific problem was drawn from the broad problem identified in the current literature on HFS: the faculty's intention to adopt HFS did not increase despite their development and simulation training programs (Davis et al., 2014; Doolen et al., 2016; Kim et al., 2017; Min & Rourke, 2017; Nehring et al., 2013). Thus, the purpose of the study was to explore the nursing faculty's engagement experience with HFS and their perceived level of engagement with HFS. The study was relevant to the current literature given that nursing faculty holds a key role in the adoption and integration of HFS in a nursing program. As such, the faculty's meaningful and deep engagement of in technologically innovative simulation-based education, such as HFS, is critical to the adoption of HFS and optimizing its use in the nursing education program (Graffigna, 2017; Kahn, 1990; Schaufeli, 2013; Sohrabizadeh & Sayfouri, 2014). However, in previous and current literature on HFS, the link between the faculty's deep engagement with HFS and increasing the uptake and successful integration of HFS in nursing education was not established. Furthermore, the current HFS literature did not explore construct of meaningful and deep engagement with respect to the faculty's experience with HFS, and the faculty's perceived level of engagement: superficial or deep.

The review of the literature was instrumental in providing the structure for studying the phenomena level of engagement. The search strategy was followed by a discussion of the conceptual framework, the alternative model for engagement with

learning (AMEL), whose premise the study followed. The body of the review included the following topics: (a) the impact of technology on healthcare and nursing education's current and future direction, (b) the need for nursing education to reform leveraging on current technology, (c) the important constructs about HFS, (d) the role of the nurse educators in implementing HFS, (e) nurses' attitude and intention to adopt HFS, (f) the faculty development and simulation training programs provided to the nursing faculty to increase uptake of HFS and optimize its use in nursing education, (g) syntheses of studies that deconstruct engagement, and (h) elements indicating deep and meaningful engagement.

Literature Search Strategy

I conducted a search on the topics of interest in a variety of sources, such as peer-reviewed journals, dissertations, books, scholarly reports, and presentations. I used the following databases: Thoreau, Google Scholar, Cumulative Index to Nursing and Allied Health Literature (CINAHL) Plus, Medline through OVID and PubMed, Excerpta Medical Database (EMBASE), Elsevier, ERIC on EBSCOhost, ScienceDirect, SAGE, Taylor and Francis Online, Academic Search Complete, and ProQuestI used the following keywords: *educator nurse, patient simulation, human patient simulator, high fidelity simulation, faculty nurse, perception, barriers to simulation, simulation adoption, simulation training, faculty development, technology-based simulation, gaming, virtual simulation, engagement, deep engagement, technology engagement, work engagement*.

The literature review was organized on central topics: simulation training, technology-based simulation, high-fidelity simulation, faculty development, and

simulation training, users; perception of simulation training, intention to adopt simulation technology, faculty engagement in technology-based simulation, and levels of engagement experience with high-fidelity simulation. The review explored factors associated with users' levels of engagement with the success of simulation technology integration and adoption in education. The search on the main concept of the study was extended to other disciplines outside nursing education, including education in general, educational technology, computer engineering, organizational leadership topics, and psychology. Such a search strategy was undertaken because no current literature was found on HFS related to the faculty's level of engagement.

Conceptual Framework

Levels of Faculty's Engagement Experience

The concept, faculty's level of engagement experience within the context of HFS, is the focus of the study. This concept level of engagement was defined operationally as the person's perceived position within the dimensions of engagement relating to his or her involvement with the activity, learning, or role in the organization (Graffigna, 2017; Whitton & Moseley, 2014). The main concept was premised on the assumption that framed this study where the nursing faculty's meaningful and deep engagement with HFS is critical to successful adoption and optimization of simulation technology in nursing education. However, the nursing faculty's perception of level of engagement experience with HFS was not known; thus, warranted an in-depth study.

Primary Writings and Seminal Works on Engagement

Engagement is a highly theorized construct as it is well researched in various disciplines. Primary writings and seminal works related to engagement are Kahn's (1990) personal engagement, critical democratic engagement in learning (McMahon & Portelli, 2004), multiperspective of student engagement (Kahu, 2013), alternative models in learning engagement (Whitton & Moseley, 2014), work engagement (Schaufeli, 2013; Sohrabizadeh & Sayfouri, 2014), scholarship engagement of faculty (Burrage et al., 2005), beneficial engagement (Crasswell et al., 2016), transdisciplinary theory of engagement (Graffigna, 2017), and in technology education (O'Brien & Toms, 2008; Whitton, 2011). In Kahn's (1990) personal engagement theory, the researcher argued that personal engagement is promoting self to work and to others, and the involvement of personal presence: physical, cognitive, and emotional. Also, personal engagement is an active and full role performances through task behaviors of employing an expressing the preferred self simultaneously (Kahn, 1990). Schaufeli (2013) claimed that engagement is a positive, fulfilling, work-related state of mind; hence, a valuable organizational behavioral concept linked to job satisfaction (Sohrabizadeh & Sayfouri, 2014). In a healthcare organization, Craswell et al. (2016) argued that beneficial engagement is critical to the adoption and continued use of information and computer technology. Graffigna's (2017) meta-analysis offered a transdisciplinary concept of engagement because of the diverging and overlapping attributes of engagement in the context of the employee, consumer, and patient engagement. In the transdisciplinary concept of engagement, Graffigna (2017) offered five propositions: engagement is not

empowerment and activation; engagement is a multicomponential psychological experience; engagement is a self-transformative process; engagement develops within relational context; and engagement is s systemic phenomenon. In higher education, a member of the faculty involved in works that engage students as active participants in their learning process is an attribute of the faculty's scholarship engagement (Burrage et al., 2005). In student learning, McMahon and Portelli (2003) conceived the critical-democratic engagement claiming that student engagement is a "result of dialectical processes between teachers and students, and from different patterns that evolved out of transformational actions and interactions" (p.70). Kahu (2013) synthesized multifaceted perspectives on student engagement in higher engagement as: behavioral, psychological, psychosocial, socio-cultural, and political, and holistic. O'Brien and Toms (2008) argued that the engagement of the user with technology in education occurs as a process involving desirable and essential human response to computer-mediated activities. Related to technology in education is Whitton's (2011) work linking game engagement theory to adult engagement in their learning, postulating that factors: challenge, control, immersion, interest, and purpose are critical attributes of engagement with gaming in learning. There is an extensive list of scholarly works that delineated factors describing engagement, but concepts concerning the person's level of engagement experience with the activity remain unclear. Thus, the concept levels of engagement warrant an investigation because it is the foreground of this study. The following discussion focused on the conceptual model that guided this study's research approach, framed the research questions, and used in selecting the appropriate research methodology.

Superficial and Deep Engagement as Key Concepts in Alternative Model of Engagement with Learning

This study was framed on the conceptual model AMEL by Whitton and Moseley because it provided an insight on the levels of engagement where individuals may engage with their learning that is deeper compared to others. Whiton and Moseley (2014) claimed that individuals continue to sustain their engagement to the point of incorporation. The AMEL was drawn primarily from the concepts of engagement with learning and game-based learning (Whitton & Moseley, 2014). Whitton and Moseley (2014) posited that engagement could be superficial and deep, and there were six dimensions to engagement with learning: participation, attention, captivation, passion, affiliation, and incorporation. The AMEL model indicated that superficial engagement was associated with behavior and was driven by extrinsic motivators while deep engagement was associated with profound psychological interaction with the experience (Whitton & Moseley, 2014).

Participation and attention are dimensions in engagement at superficial levels, while dimensions: captivation, passion, affiliation, and incorporation indicated deep engagement (Whitton & Mosely, 2014). Associated with superficial engagement are behaviors indicating participation or extrinsic motivations, such as getting rewards, while emotional and psychological interaction with an experience represents deep engagement (Whitton & Moseley, 2014). The following discourse explained the levels of engagement as framed in AMEL's tenets. Also, key statements and definitions inherent to the selected conceptual model were explicated.

Superficial engagement. The conceptual model AMEL indicated that dimensions: participation and attention are both superficial levels of engagement, although participation precedes attention (Whitton & Moseley, 2014). Whitton and Moseley (2014) claimed that the dimension participation is a behavioral engagement because it indicated observable behaviors such as attending, handing in coursework, or logging onto the computer. Further, Whitton and Moseley (2014) noted that although the person's participation in the activity may not be meaningful, further action will not occur without this person's initial action of participation. The dimension attention is another type of superficial engagement because the individual's reason to commit to the activity is not assumed (Whitton &Moseley, 2014). However, the dimension attention is a learning engagement higher than participation because it indicates commitment beyond participation - a positive attitude and paying attention to the activity at the cognitive level (Whitton & Moseley, 2014). Further, the dimension attention is observable when the learner is providing sustained and engaged attention to tasks, extending engagement in complex cognitive activities leads to authentic and useful learning (Corno &Mandinach,1983).

Further, AMEL indicated that the person's engagement experience starts at the superficial level leading to a deeper level of engagement (Whitton & Moseley, 2014). Also, AMEL's tenets indicated that the person's initial engagement with the activity is encompassing of observable behaviors attributed to superficial dimensions. Although superficial, participation and attention are dimensions to engagement that are crucial to subsequent engagement because subsequent participation in the activity will not take

place without taking the initial action of participating and attending. Also, the concept of superficial engagement indicated hierarchy in the engagement process where the person's engagement experience with the activity starts at a superficial level.

Deep engagement. In AMEL's model, superficial engagement is succeeded by four dimensions of deep engagement: captivation, passion, affiliation, and incorporation (Whitton & Moseley, 2014). Each dimension indicated a level of engagement that is deeper compared to its preceding dimension. The third dimension captivation is the first construction of deep engagement characterized by enthrallment because the person at this dimension is at a state of psychological absorption in the activity (Whitton & Moseley, 2014). Although captivation constitutes elements that were attributed to deep engagement, Whitton and Moseley (2014) argued that this level is temporary, and longevity is uncertain where the participant may become immersed temporarily in the activity but not captivated overtime. The fourth dimension passion, is another deep level of engagement because it involves strong emotions with the activity (Whitton & Moseley, 2014). Whitton and Moseley (2014) argued that at the dimension of passion, the learner develops strong emotional pull extending learner immersion across a series of temporal events. Thus, passion is a dimension that is more profound compared to captivation. The fifth dimension affiliation is another deep level of engagement indicated by feeling of belongingness where the person engages with a group or community, and sees himself or herself as a part of that community in a meaningful way (Whitton & Moseley, 2014). Also, tenets to the dimension affiliation include feeling of belonging to a social structure and connectedness with the community's ideas of psychologic and social

engagement (Whitton & Moseley, 2014). Whitton and Moseley (2014) claimed that affiliation is the start of the epistemic engagement, where the participant becomes involved in developing activities and practices within the community of discipline. Incorporation is the sixth dimension described as the transformation of self that occurs through enculturation, feeling of presence, and immersion at a deep level of physical actions, thoughts, and emotions at the highest or deepest level (Whitton & Moseley, 2014). The AMEL's sixth dimension: incorporation is of the highest level of engagement in learning because the person views himself or herself as an integral part of the organization, taking a deliberate decision in assuming new role identity in the organization (Whitton & Moseley, 2014). Whitton and Moseley (2014) argued that a person who is at the level of incorporation takes a proactive role in contributing knowledge to the practice of discipline and the success of the organization.

The conceptual model AMEL served as a foreground for this study because it provided a clear insight that there is a dimension: superficial and deep to a person's engagement experience in his or her role in the activity or organization. Further, AMEL model provided an implicit insight that engagement occurs in a hierarchy. Thus, the person's engagement experience could be at a higher level compared to others. Also, because engagement occurs in a continuum and is a dynamic process, individuals could potentially grow in their degree of engagement along the course of the experience.

Theoretical Underpinnings of Alternative Model of Engagement with Learning

The assumption that there were different levels of engagement, were evident in previous and current literature related to engagement. The characteristics that

differentiate superficial from deep engagement in learning were premised in Marton and Saljo's (1976) claim, that how the learner is engaged in the learning process: deep- or surface-level of processing determines what is learned. The concept that there were different types of engagement in learning was seen in similar taxonomies like Coates' (2007) four typologies: intense, collaborative, independent, and passive to student engagement styles. Also, this concept about levels of engagement is evident in Appleton, Christenson, Kim, and Reschly's (2004) student engagement as academic, behavioral, cognitive, and psychological. The premise that participation is an engagement by doing was underpinned in Ryan and Deci's (2000) extrinsic motivators to learning and resonates Kahu's (2013) behavioral perspective on engagement supporting the idea that instrumental motivators like rewards drive behavioral and cognitive engagement. Thus, engagement is task-based and therefore is false and superficial (Whitton & Moseley, 2014). Also, attention is a dimension of engagement that is higher in level compared to participation because it involves commitment (Whitton & Moseley, 2014). This posit about participation mirrors Corno and Mandinach's (1983) claim that complex cognitive level of engagement was indicated by a sustained and engaged attention to tasks requiring mental effort. This construct on complex cognitive level of engagement was evident in multiple scholarly works relating to learning theories (Kahu, 2013; Pitterson, Brown, Padcoe, & Fisher, 2016; Maguire et al., 2017).

A deep engagement where the person is captivated in his or her experience was linked to existing theoretical concepts like Csikszentmihalyi's (1992) Flow Theory, and Kahn's (1990) Personal Engagement Theory, and Kearsley and Shneiderman's (1998)

seminal work in technology-based teaching and learning. In the Flow Theory, the person who is immersed in the activity experiences a sense of control, loss of self-consciousness, and transformation of time (Csikszentmihalyi, 1992). Kahn (1990) claimed that the nature of tasks where the job involves less or more challenges, variety, and creativity influences the psychological dimensions of engagement. The dimension captivation was evident in O'Brien and Tom's (2008) User Engagement theory claiming that aesthetic, sensory appeal, variety or novelty, and interactivity are critical attributes to technological engagement with learning as these heighten user's experience with technology in learning. In contrast, lack of challenge and attributes to technological engagement results in boredom disrupting the flow of engagement (Csikszentmihalyi, 1992; Kearsley & Shneiderman, 1998; O'Brien & Toms, 2008; Whitton, 2011). Thus, supporting the assumption that captivation is a deep engagement that could be temporal as it was influenced by various elements that could facilitate or hinder captivation and immersion. Over time, a person may continue to engage but not captivated and may impact the person's level of engagement.

The assumption that passion is a deeper engagement because the learner develops strong emotional pull extending and sustaining immersion across series of temporal events (Whitton & Moseley, 2014) is aligned with Kahn's (1990) personal engagement theory. Kahn (1990) argued that being engaged personally requires personal presence at the physical, cognitive, and emotional level. Also, emotional engagement is facilitated when thoughts, feelings, intentions, and senses are aligned with the goals of the activity (Csikszentmihalyi, 1992). Emotional engagement is influenced by the individual's

perception that the preferred self-image, status, and influence fits one's role in the organization (Kahn, 1990). Meaningful engagement resonated with Harper and Quaye (2010) posit on feelings and sense-making. Thus, supporting the idea that engagement demonstrating a passionate behavior towards the activity is deeper than the preceding dimensions of engagement (Whitton & Moseley, 2014). The concept relating to the dimension passion mirrors Kahu's psychological perspective of engagement where the person's motivation to learn stems from pleasure and interest with learning (Kahu, 2013). This concept of psychological perspective contrasts with behavioral perspective where learner's motivation to engage cognitively and behaviorally is based on reward or obligation (Kahu, 2013). Barnacle & Dall' Alba's (2017) claimed that caring about or being interested in a topic is critical to students' commitment. Also, positive topic-related emotions, interest, and enthusiasm from life-integrated learning are linked to enhanced student engagement (Kahu et al., 2015). Thus, supporting the assumption posited in AMEL that deep interest and strong emotional involvement leads a deeper level of engagement that sustains over time.

The assumption that deep engagement indicated by affiliation where the person develops a feeling of belongingness; thus, engages with the group or community of discipline in a meaningful way was evident in previous and current scholarly works. In the taxonomy of higher education, belonging is described as the connectedness between students and the learning institution, other students, and faculty and staff (Baumister & Leary, 1995; Bryson, 2014; Thomas, 2012). Thus, influence retention and academic success through its impact on student engagement where the sense of alienation produces

anxiety that hinders behavioral and emotional engagement (Coates, 2014; Kahu et al., 2015; Kahu et al., 2017; Kahu & Nelson, 2018). Further, this concept on connectedness with the community was linked to scholarly works relating to social engagement in higher education (Anderson, Christenson, Sinclair, & Lehr, 2004). The implied relational and belongingness of the concept affiliation was underpinned on the premise that meaningful experience occurs when the person's experiences with task performances include rewarding interpersonal interactions with clients and co-workers, allowing the person to feel valued and valuable (Kahn, 1990). As such, a positive interpersonal relationship promotes psychological safety that was linked to sustained personal engagement in the organization. Graffigna's (2017) transdisciplinary synthesis mirrored the dimension affiliation as deep level of engagement wherein an organizational setting, engagement develops within a relational context because individuals engage about others, their task, and position within the organization in performing their role. Bryson's (2016) claim that learning includes partnership characterized by collaborative decision-making and ownership of the process and outcome, mirrors AMEL's concept that affiliation is a deep level of engagement because it involves belongingness. Thus, suggesting that the person who reached this dimension of engagement identifies self as integral part of the organization.

As the individual becomes affiliated with the organization and continues to take an active role in organizational life, that person goes through a self- transformative experience seeing oneself as an integral part of the organizational life. The transformation of self occurs through enculturation, feeling of presence, and total immersion at a deep

level of physical actions, thoughts, and emotions were linked to various taxonomies relating to engagement (Brown & Cairns, 2004; Whitton & Moseley, 2014). For instance, the idea of self-transformation related to technological engagement with learning was linked to various theoretical concepts like transformation in-being similar to self-actualization (Healy, 2016; Maslow, 1943). Self-actualization is created by a feeling of presence and total immersion at a deep level of physical action, thoughts, and emotions (Brown & Cairns, 2004). The dimension incorporation resonated Graffigna's (2017) claim that with self-transformation experience, the individual makes a deliberate decision to modify his or her role in the organization assuming a more proactive role in the organizational life. Thus, suggesting that the individual has transformed towards a new identity role of that of the organization.

Alternative Model of Engagement with Learning as a Framework for the Study

The study benefited from AMEL because it provides a source of valuable ideas and information critical to the development of the study, and in selecting the appropriate research design and methodologies. AMEL's tenets were aligned with the assumptions of the study where levels of engagement are superficial and deep, and that the person's level of engagement could be more profound compared to others. The study's assumption that there were hierarchy and continuum to the faculty's engagement experience with HFS was aligned with AMEL's claim that there were different dimensions to superficial and deep engagement where each dimension is more profound than preceding dimensions. Further, the study's assumption that the nursing faculty's position in their engagement experience with HFS was influenced by the interplay of the elements attributed to each

dimension was evident in the various theoretical underpinnings that premise AMEL. The following discourse articulated in detail how AMEL's construct, its theoretical underpinnings, and current studies linked to AMEL's premise supported the assumptions of this study, justified the use of qualitative study as research design, framed the research question, and guided the study's data analysis and interpretation.

Faculty adoption of HFS starts with behavioral and cognitive engagement. Faculty adoption of HFS starts with participation with HFS driven by various elements. This assumption was aligned with AMEL's first and second dimensions of engagement: participation, and attention, respectively. The level of engagement at the dimension participation is superficial because it involves observable behavior of doing that is motivated by extrinsic motivators (Whitton & Moseley, 2014; Kahu, 2013; Ryan & Deci, 2000). Following the dimension participation is the dimension attention, which is also a superficial level of engagement but more profound than participation because it describes commitment (Whitton & Moseley, 2014). The assumption that attention is a dimension more profound than participation is aligned with complex cognitive engagement driven by intrinsic motivators, and other factors influencing positive attitudes towards HFS (Corno & Mandinach,1983; Craswell et al., 2016; Kahu, 2013; Maguire et al., 2017; Malone, 1980; O'Brien & Toms, 2018; Pitterson et al., 2016; Whitton, 2011). The dimensions participation and attention are both superficial levels of engagement and may not be meaningful because the person's motivation to engage in the activity was not explicated. However, these dimensions are pivotal to the person's evolvement to deep level of engagement because subsequent action will not occur without taking the initial

action of participation. In this study, AMEL's tenets relating to superficial engagement and theoretical concepts that underpin this type of engagement, the behavioral, and the cognitive engagement was used to examine the nursing faculty's perceived level of engagement with HFS as related to superficial engagement.

Antecedents and elements attributed to engagement with HFS. The AMEL's theoretical underpinnings indicated that there were elements antecedents to participants' initial engagement with the activity. Examples are the participant's curiosity, beliefs, positive attitude towards the activity, and of the activity were antecedents to initial engagement with HFS (Craswell et al., 2016; Csikzentmihalyi,1992; O'Brien & Toms, 2008; Whitton, 2011). Thus, the study assumed that the nursing faculty's decision to participate in HFS activity was driven by various factors like interest, curiosity, positive attitude towards HFS, and the activity's benefits to students' learning outcomes. Further, the nursing faculty desires to continue engaging with HFS because there is a complex cognitive engagement involved with HFS, and a connection existed between the activity and faculty as the user of technology (Corno & Mandinach,1983; Craswell et al., 2016; Csikzentmihalyi,1992; Whitton & Moseley, 2014). Per Corno and Mardinach (1984), cognitive engagement is beyond behavioral engagement because it involves self-regulation, which is a deeper level of engagement.

In contrast, Whitton and Moseley's (2014) claimed that the dimension attention is a cognitive engagement at a superficial level of engagement because the participant's motivation to participate in the activity was not explicated (Whitton & Moseley, 2014). On the other hand, Draper (1999) claimed that a connection between the activity and the

player's core values, and beliefs must exist for engagement to occur. Craswell et al. (2016) claimed that the user engages with technology when there is a perceived benefit; hence, optimizing the benefits of the activity is crucial in overcoming the barriers to engagement. Thus, a positive attitude is essential to initial engagement with the activity and is deepened by the presence of the elements attributed to the cognitive engagement with HFS. Also, the faculty's decision to initially participate with HFS is strengthened by factors such as curiosity, perceived benefits of HFS, and positive attitude towards simulation. Participation is facilitated when the participants' values and beliefs are aligned with the goals of the activity. Therefore, a simulation activity must provide a challenging experience and should be aligned with the participant's goal and role. This alignment between the simulation activity and the participant's goal is critical to optimizing engagement at a cognitive level resulting to a useful and meaningful learning.

Faculty's engagement experience with HFS at a deep level: captivation.

Initiatives promoting faculty's deep engagement with HFS are critical to the adoption of HFS because the initial participation to HFS simulation will not guarantee that the participant will continue to engage and sustain HFS. As Whitton and Moseley's (2014) assumption relating to the dimension captivation, participants in HFS must be enthralled in their engagement experience with HFS through structural features such as technological innovations like the use of high-fidelity simulators, multi-media, moulage, and challenging scenarios. Also, the presence of attributes to technological engagement is critical to creating a captivating and immersive experience (Csikszentmihalyi, 1992; O'Brien & Toms, 2008; Whitton, 2011). Thus, suggesting that the experience is more

engaging and immersive when there is increased presence of technological. However, participants may not continue engaging if they no longer feel captivated by the experience, feel bored, or when the scenarios are no longer challenging.

Faculty's engagement experience with HFS at a deep level: passion. Critical to faculty adoption of HFS and sustaining its use is the faculty's deep level of engagement with simulation practice that transcends superficial participation and supersedes temporal captivation. AMEL's fourth dimension passion indicated that immersion extending across a series of temporal events occurs when the person develops a strong emotion toward the activity (Whitton & Moseley, 2014). In the same manner, a passionate attitude is essential to sustaining faculty engagement with HFS beyond temporary engagement that is brought about by captivation and intrinsic motivation. Being engaged passionately means engagement is facilitated when the person's thoughts, feelings, intentions, and senses are aligned with the activity's goals (Csikszentmihalyi, 1992; Harper & Quaye, 2009; Kahu, 2013). Kahn (1990) asserted that personal engagement requires personal presence at the physical, cognitive, and emotional level. Based on the concept of captivation, the nursing faculty's deep level of engagement with HFS is marked with a passion for innovations in learning. Thus, suggesting that engagement at a deeper level involves emotional engagement demonstrating a passionate behavior towards the activity. In the same manner, a passionate attitude beyond captivation is essential to sustaining faculty engagement with HFS. Further, passionate engagement is facilitated when the activity's goals are clear and are aligned with the core values and beliefs of the participants.

Faculty's engagement experience with HFS at a deep level: affiliation.

AMEL's fifth dimension affiliation is a deep level of engagement that is more profound than the dimensions captivation and passion, because the person at this dimension develops a sense of belongingness seeing self as part of the community or organizational life (Whitton & Moseley, 2014). An indication that the person is at this dimension affiliation includes social and epistemic engagement where the person becomes an active contributor to the organization or community of disciplines he or she is affiliated with (Barnacle & Dall' Alba, 2017; Bryson, 2016; Kahu, 2013; Kahu & Nelson, 2018; Whitton & Moseley, 2014). As the key players in the adoption of HFS, nursing faculty level of engagement must transcend engagement beyond captivation for successful integration and optimized use HFS in the nursing programs. Thus, suggesting affiliation characterized by membership and active participation to affinity groups in HFS indicates a deeper level of engagement compared to other preceding dimensions of engagement. Joining affinity groups provide the nursing faculty who practices simulation the opportunity to socially and professionally network. Such social and professional networking is essential in maintaining and advancing the practice with the most current trends and practices in simulation. Further, becoming affiliated with organizations in simulation means identifying oneself with those disciplinary communities indicating that the faculty espoused the values and beliefs of that organization.

Faculty's engagement experience with HFS at a deep level: incorporation.

The study assumed that the pinnacle of the nursing faculty's level of engagement with HFS is when he or she is fully incorporated in the use of the pedagogical approach in the

nursing program. Members of the nursing faculty who practices simulation no longer see themselves distinct from the activity but an integral part of the simulation team. This assumption was based in AMEL's sixth dimension incorporation where the learner engagement is at the deepest level (Whitton & Moseley, 2014). At this dimension, the person's transformation occurs through enculturation, feeling of presence, and immersion at a deep level of physical actions, thoughts, and emotions (Brown & Cairns, 2004). Graffigna (2017) described such engagement as a self-transformative experience where the individual makes a deliberate decision to modify his or her role in the organization assuming a more proactive role in the organizational life. Thus, suggesting that the individual has transformed towards a new identity role. A member of the nursing faculty who reached this level of engagement with simulation has assumed a new identity role of someone who is an expert in the pedagogy of simulation, contributing to the knowledge and practice of technology-based simulation.

Overall, the study assumed that the nursing faculty's level of engagement with HFS varies where one could be engaged deeper than others. Although not explicated, AMEL indicated that there is a hierarchy in the six dimensions of engagement occurring in a continuum as a result of the interplay of elements attributed to each dimension of engagement (Whitton & Moseley, 2014).The nursing faculty's perceived level of engagement their HFS experiences was analyzed and interpreted based on the elements and attributes that premise the theories relating to engagement.

Healthcare's Current and Future Direction and its Impact on Nursing Education

The current and future directions of the healthcare landscape become more complex as healthcare leaders seek to provide people with quality healthcare they deserve. Such complex healthcare transformation impacts the role of healthcare professionals, particularly nurses, to support healthcare vision that is patient-centered, accessible, affordable, safe, quality, effective equitable, and efficient (Institute of Medicine [IOM], 2011; Stuart & Triola, 2015). Stakeholders and multisector institutions were called to accelerate HPE transformation (IOM, 2011; McDonald et al., 2014) to a system that is competency-driven, affordable, and accessible to learners leveraging on educational technologies (Stuart & Triola, 2015; Thibault, 2013). Nurses must be educated in new ways that will better prepare them to be adaptive to the changing needs of the patients and current improvements in health care science and technology (IOM, 2011; American Association of Colleges of Nursing, 2019). Thus, HPE leaders concluded with a recommendation to redesign HPE curriculum as a "complex adaptive system, explicitly engineered to address the healthcare and health sciences needs of the nation" (Stuart & Triola, 2015, p. 131). Tenet to this transformation are the six pillars of high-quality HPE: patient-responsive, equitable, effective, efficient, and flexible, technology-enhanced, and driven, and lifelong and continuous (Stuart & Triola, 2015). Reforming nursing education for a better-prepared nursing workforce that effectively functions in a dynamic and complex healthcare system is a seemingly daunting task. The success of this endeavor begins from within each nursing faculty who committed him or herself to improve the quality of health through a quality nursing education program.

Leveraging Educational Technologies to Transform Education

The HPE programs are challenged to integrate technology-based, teaching-learning strategies as technology plays a role in shaping the direction of the healthcare industry. There is a need for accelerated transformation of that leverages on educational technologies (Dzubian & Florida, 2015; Gould et al., 2015 2015; Stuart & Triola, 2015). Virtual and high-fidelity simulators are examples of technology innovations used to deliver simulation-based pedagogies. A quality HFS can support students' cognitive, behavioral, affective, and transformative learning outcome (Davis, et al., 2014; Kleinheksel, 2014; Lonie & Desai, 2015; Rode et al., 2016; Shin et al., 2015; Vlachpolus & Makri, 2017). HFS is an alternative approach for training and teaching nursing students before exposure to the real clinical setting and actual patient care because it impacts students' learning outcomes positively (Rojas et al., 2014). Scholars claimed that with simulation-based education, learners' critical thinking skills, application to practice, and self-confidence improved (AL-Dossary et al., 2014; Basak et al., 2016; Beroz, 2015; Bland & Tobbell, 2016; Davis et al., 2014; Lawrence et al., 2018; Rojas et al., 2014; Simkins & Jaroneski, 2016; Vlachopoulos & Makri, 2017). Thus, bridging the practice-to- theory gap in nursing education.

Further, nursing education programs use simulation hours to substitute clinical practice hours to address shortages in clinical placement sites (Al-Ghareeb & Cooper, 2016; Au et al., 2016; Basak et al., 2016; Berragan, 2014; Cheng et al., 2016; Jeffries et al., 2015; Hayden, Smiley, Alexander, Kardong-Edgren, & Jeffries, 2014a; Hayden, Smiley, & Gross, 2014b; NLN, 2015; Pesico & Lalor, 2019; Rutherford-Heming et al.,

2016; Stroup, 2014; Walter, Potetz, Fedesco, 2017). Technology-based simulation is used widely in the clinical setting for improving and advancing the skills competency of nurses, and healthcare practitioners because it has a broader scope of applicability (Beroz, 2017; Hogewood, Smith, Etheridge, & Britt, 2015; Veltri, Rowe, Bell, Arwood, & Kindler, 2014). The value of technology-based simulation such as HFS to medical and nursing education in providing lifelong learning, and in enhancing clinical practice towards safe and quality patient-centered care and interprofessional learning experience are evident in existing research (Cook, Brydges, Zendejas, Hamstra, & Hatala, 2013; NLN, 2015; Stuart & Triola, 2015; Watts et al., 2014). Tapping on technology innovations such as HFS to deliver high-quality education that is interactive, engaging, and student-centered is critical in aligning the face of HPE programs to meet the complex demands of current and future healthcare landscape.

Defining High-Fidelity Simulation

The term simulation was defined by Gaba (2004) as a technique of amplifying or replacing real experiences with guided, immersive, and interactive experience to evoke or replicate substantial aspects of the real world. Similarly, Jeffries (2005) described simulation as "activities that mimic the reality of a clinical environment and are designed to demonstrate procedures, decision-making, and critical thinking through techniques such as role-playing and the use of devices such as interactive videos or mannequins" (p. 97). Per International Nursing Associations for Clinical Simulation and Learning Standards Committee (2016), simulation is "an education strategy where the particular set of conditions are created or replicated to resemble authentic situations that are possible in

real life" (p. S44). In the simulation, the use of one or more modalities is incorporated to promote, improve, or validate participant's performance (International Nursing Associations for Clinical Simulation and Learning Standards Committee, 2016). The Society for Simulation in Healthcare (2016) defined simulation-based education as the application of simulation for training, assessment, and research in healthcare to improve patient safety. Simulation-based learning is widely used in medical education to improve clinical practice through a safe and controlled environment premised on problem-based learning and high standard competencies (Jones et al., 2015; Cook et al., 2013).

On the other hand, technology-based simulation is the use of technological innovations to deliver simulated reality such computer gaming applications, haptic technologies, virtual simulator, computer-enhanced mannequins (e.g. human patient simulator) (Gaba, 2004; Jeffries, 2005; Jones et al., 2015; O'Brien & Toms, 2008; Rojas et al., 2015; Doolen et al., 2016, Whitton, 2011). Hence, simulation, high-fidelity simulation, simulation-based education or learning, and technology-based simulation intersects at a contextual definition where simulation is a strategy that is core to simulation-pedagogy. HFS aims to create experiences replicating the real ones where participants interact and immerse themselves during the simulated experience using technological innovations.

History of High-Fidelity Simulation

The use of technology-based- simulation started with aviation. It was in 1929 when Edwin Albert Link invented the first airplane simulator "Pilot-Maker" (National Aviation Hall of Fame [NAHF], 2019). Link's idea was driven by the thought that with

airplane simulator, pilots will learn to fly safely and inexpensively; thus, he opened his aeronautic school and used the Pilot-Maker as the trainer (NAHF, 2019). It was during World War II when the Army Air Corps recognized the Pilot-Maker as an effective training tool using Link's basic trainer the "Blue Box" to train almost half-million airmen at that time (NAHF, 2019). Link's advanced his simulation works to navigation and gunnery simulators leading to the development of the first jet simulator that eventually evolved to more sophisticated and digitally operated simulators that United States' space program now used to train astronauts (NAHF, 2019). Today, flight simulators are cost-effective measures used in civilian aviation and transportation industries (Rosen, 2008). Technology-based simulators have evolved to more sophisticated systems that are used today in air, space, and ground transportation industries.

The history of clinical simulation spanned over earlier centuries with the use of anatomical models to help students about human anatomy (Rosen, 2008). However, the modern era of clinical simulation started in the early 1960s, starting with Peter Safar's work on the efficacy of mouth-to-mouth cardiopulmonary resuscitation (Cooper & Taqueti, 2005). Asmund Laerdal, a successful Norwegian manufacturer of plastic toys, created and designed Resusci-Anne in the early 1960s that is used widely for training mouth to mouth ventilation (Cooper & Taqueti, 2005; Rosen, 2008). In the mid-1960s, Dr. Stephen Abrahamson, an engineer, and University of Southern California's physician Dr. Judson Denson, developed Sim One (Bradley, 2006). Bradley (2006) described it as the start of the true computer-controlled mannequin simulator of an entire patient but failed to achieve acceptance because of the cost to reproduce. In the late 1960s, the

University of Miami presented Cardiac Harvey, a cardiac patient simulator named after Dr. Proctor Harvey (Jones et al., 2015; Rosen, 2008). Jones et al. (2015) described the mannequin as one that can simulate the heart sounds, pulses, breathing, and blood pressure of cardiac diseases. Further, the mannequin was said to be an efficient tool throughout time and has been used as training tools in medical schools and the emergency department (Jones et al., 2015).

From 1980 to 1990, high-fidelity simulators like the comprehensive anesthesia simulation environment (CASE) and the Gainesville anesthesia simulator (GAS) came out (Cooper & Taqueti, 2006). Scholars from Stanford University and the University of Florida led by David Gaba and the latter by Michael Good developed high fidelity simulators (Cooper & Taqueti, 2006). Later, MedSim and GAS, which became the Medical Education Technologies, Inc. (METI) commercialized the CASE (Cooper & Taqueti, 2006). During the early 2000s to current, integrated simulators like the combined manikin and computer-controlled physiological and pharmacological parameters emerged in the market. Examples are the METI MedSim is a high-fidelity (HF) human patient simulator, while Laerdal's SimMan is a moderate-fidelity simulator (Jones et al., 2015). Further, more practice-specific simulators emerged like the PediaSim by Laerdal, and HF obstetric simulator Noelle by Gaumard (Jones et al., 2015). The literature showed more than four decades of history of simulation use in the field of healthcare, particularly in medicine and nursing. Notably, each generation of simulation evolved to a more sophisticated version with features and functionalities aligned to the current and future needs of its stakeholders.

Attitude and Intention to Adopt High Fidelity Simulation

Nursing faculty's attitude and intention to adopt HFS are concepts that emerged from reviewed literature and studies relating to the problem of interest. For instance, Kim et al. (2017) claimed that the attitude of the participants influences the intention to adopt HFS (HFS). This claim resonated with Moser's (2007), where adoption of technology into teaching is influenced by factors like commitment, competence, and past experiences. Further, Min & O'Rourke (2017) posited that nursing faculty beliefs such as comfort with and competence in using HPS are the measure to faculty attitude. In addition, lack of faculty support and training (Doolen et al., 2016), fear of technology (Al Ghareeb & Cooper, 2016) and lack of knowledge (Beroz, 2017; Fey & Jenkins, 2015; Jeffries et al., 2013; Jeffries et al., 2015) influence attitude towards simulation negatively and are barriers to intention to adopt HFS. In educational technology, elements such as trust with the technology, genuine interest in the technology, and perceived ability of the person were indicative of positive attitude towards technology use and were antecedents to user engagement that are pivotal in initiating HFS engagement (Craswell et al., 2016; O'Brien & Toms, 2008; Whitton, 2011). Faculty who are familiar with the benefit of technology in promoting learner engagement and higher learning levels responded positively to adopting technology to support new learning models (McDonald et al., 2014). The latter was similar to the theory of beneficial engagement were the scholars assumed that an in-depth understanding of the benefits of technology in perinatal data entry is the foreground for nurses' engagement in the use of technology (Craswell et al., 2016). The discourse presented showed that the concept of attitude as a factor influencing

the adoption of technology was evidenced not only in nursing education literature but well noted in other disciplines.

Faculty Development and Training to Increase High-fidelity simulation Adoption

As nursing education leaders recognized the value of technology innovations in reconceptualizing nursing education, various efforts were undertaken to increase HFS adoption and sustain its use, including faculty development and training. Per the National League for Nursing (NLN) (2015), faculty development in simulation-based education becomes critical as the nursing curriculum transforms from heavy content to experiential learning. Previous and current research in simulation showed that opportunities for students to meet learning outcomes are minimized due to nurse educators' lack of knowledge in simulation-based pedagogies (Beroz, 2017; Fey & Jenkins, 2015; Jeffries et al., 2013; Jeffries et al., 2015). Further, faculty training for core and advanced simulation courses to acquire the foundational knowledge needed to begin using simulations has been identified as a critical strategy to address the need for a contextual, experiential type of learning through simulation (NLN, 2015). Proponents and scholars in HFS claimed that to ensure the success of student learning outcomes, nursing programs who substitute clinical hours with simulation must have faculty members receive education and skills in simulation and debriefing (Jeffries et al., 2015). Thus, the rise in faculty training and development programs to promote technology adoption has been evident in nursing education programs and other HPE disciplines.

Faculty's Adoption of HFS did not Increase

Faculty adoption of HFS did not change after training despite efforts to increase HFS adoption through faculty development and simulation training. Findings from previous and current literature showed that simulation training increases the nursing faculty's knowledge and is an enabler to HFS use (Al-Ghareeb & Cooper, 2016; Jones et al., 2013; Kim et al., 2017). However, faculty's perception and intention to adopt simulation did not change significantly after training (Kim et al., 2017) resonating previous studies (Al-Ghareeb & Cooper, 2016; Jones et al., 2013: Nehring et al., 2013). Individual perspectives, concerns, skepticism, or acceptance of simulation were related to the level of engagement, experience, usage, policies, simulation resources, and the level of training which influenced performance more than other identified attributes to simulation use (Fey & Jenkins, 2015; Lemoine, Chauvin, Broussard, & Oberleitner, 2015).

On the other hand, McDonald and colleagues claimed faculty who received training in how to adapt and revise technology-based learning strategies to align with pedagogical objectives responded positively to the program initiative of incorporating technology to promote learner engagement and higher levels of learning (McDonald et al., 2014). Further, the faculty development: Review, Revise, and Refresh (R3) program was framed on pedagogical approach Quality Matters involving a highly collaborative process of revising course design to align with the critical components of the course (McDonald et al., 2014). Notably, the effectiveness of technology adoption training in influencing faculty's decision to adopt technology is related in the participant's

perspectives of their experience, level of engagement, and technology use. Further, faculty responded positively to their experiences with the faculty development initiatives that provide opportunities for faculty engagement in designing courses to align technology-based learning pedagogies with student learning outcomes. Hence, other factors need to be investigated, as suggested in Kim et al. (2017), where a need for an in-depth examination of the faculty's perceptions and intention to use simulation regardless of the training received. The following literature review covered an exhaustive review of engagement in multicontext, as the level of faculty's engagement experience with HFS is remained unknown in the context of HFS.

Deconstructing Engagement

Engagement is a complex construct described as multicontextual, multidimensional, and multicomponential. As a multicontextual and multidisciplinary construct, researchers used engagement within the context of personal engagement (Kahn, 1990), work engagement (Schaufeli, 2013), organizational engagement (Graffigna, 2017), scholarship engagement of faculty (Burrage et al., 2005), student engagement (McMahon & Portelli, 2004), and in technology education (O'Brien & Toms, 2008; Whitton, 2011). As a multicomponential and multidimensional construct, there are cognitive (Corno & Mandinach, 1983; Graffigna, 2017); and behavioral, emotional or affective, and psychological (Appleton et al., 2006; Barnacle & Dall'Alba, 2017; Graffighna, 2017; Kahn, 1990) elements to engagement. Engagement with learning is a multidimensional construct suggesting hierarchy where there are superficial and deep levels of engagement (Whitton & Moseley, 2014). Further, engagement is a complex

construct described as a process (O'Brien & Toms, 2008), as a continuum (Carman et al., 2013; Csikzentmihalyi, 1992; O'Brien, 2016; Graffigna, 2017), and as an outcome (Whitton & Moseley, 2014) that is self-transformative (Graffigna, 2017). Deconstructing engagement is imperative to understanding the elements critical to engagement relating to the contexts of personal engagement, learning engagement, and technological engagement.

Multicontextual Construction of Engagement

The notion of engagement has been conflicting, necessitating the need to define how the authors used the term within their disciplines. For instance, personal engagement is promoting self to work, to others, personal presence (physical, cognitive, and emotional), and active and full role performances through task behaviors of simultaneously employing and expressing the person's preferred self (Kahn, 1990). In an organization, engagement is a "positive, fulfilling, work-related state of mind" (Schaufeli, 2013, p. 693) link to job satisfaction (Sohrabizadeh & Sayfouri, 2014). Engagement is a self-transformative experience resulting from the individuals' deliberate decision to assume a proactive role in his or her participation in organizational life (Graffigna, 2017). Burrage et al. (2005) described scholarship engagement as faculty works that engage students as active participants in the learning process. Craswell et al. (2016) argued that engagement in healthcare technology is a continued involvement with the use of information and computer technology. In a healthcare organization, engagement is likened to a process involving multidimensional experience because of the cognitive, affective, conative participation of the individuals towards their role within the

organization (Graffigna, 2017). In technology education, user-engagement with technology occurs as a process demonstrated by "desirable and essential human response to computer-mediated activities" (O'Brien & Toms, 2008, p. 938). Whitton and Moseley (2014) described engagement in education as behaviors implying conformity and compliance while learner or student engagement encompasses more complex factors such as motivation, autonomy, learners' interest, and cognitive, emotional, and social factors. The above discourse exemplified the use of engagement in various contexts within many disciplines. There were inherent ambiguity and different nuances to construct engagement. However, engagement was linked to positive behaviors.

Multicomponential Construction of Engagement

The multi-contextual nature of engagement was rooted in its complex construct embodied by various components and dimensions. For instance, there were psychological components to personal engagement and personal disengagement; these include psychological meaningfulness, psychological safety, and psychological availability (Kahn, 1990). In his seminal work on Engagement Theory, Kahn (1990) referred to psychological meaningfulness as the feeling of worth, usefulness, and value in performing the role while being able to employ self without fear of negative consequences to self-image, status, or career refers to psychological safety. Kahn (1990) argued that in psychological availability, the person could personally engage at that moment due to the presence of physical, emotional, or psychological resources. The presence of this experiential conditions influences people to personally engage while, in its absence, people disengage (Kahn, 1990). Craswell et al. (2016) posited that continued

involvement with healthcare technology is contingent on its beneficial or meaningful use. Scholars posited that engagement with learning is composed of distinct but interrelated elements: cognitive, affective, and behavioral (Appleton et al., 2006; Barnacle & Dall'Alba, 2017; Corno & Mandinach, 1983; Kahn, 1990). Corno and Mardinach (1983) claimed that cognitive engagement with learning is more than just participation but a deeper level of engagement at the heart of self-regulation while Harper and Quaye (2009) argued that affective engagement involves feelings and sense-making. O'Brien and Toms (2008) noted that relating to threads of experience, sensual, emotional, and spatiotemporal are attributes to technological engagement. The multicomponential of engagement was resonated in Csikszentmihalyi's (1992) flow theory claiming that there are factors that make an experience enjoyable, engaging, and immersive, and that engagement and experience is heightened if more of these elements are present. In computer gaming, Whitton (2011) identified the challenge of the activity that requires skills, complete absorption with the activity, clear goals, immediate feedback, concentration on the task, sense of control, loss of self-consciousness, and transformation of time as the elements that make engagement enjoyable and immersive. The above discourse indicated that there were various components to the construction of engagement regardless of the context it was used. Also, the components to engagement were identified as antecedents, defining elements, and or consequences that are instrumental in initiating, facilitating, and heightening the engagement process and experience.

Engagement Occurs in Hierarchy within a Continuum

Hierarchy within a continuum was another element noted from deconstructing engagement where dependences from the dimensions of engagement may or may not exist. A hierarchy was noted in Whitton and Moseley's (2014) work, where there are six dimensions to engagement; these are participation, attention, captivation, passion, affiliation, and incorporation. The first two levels of dimensions are superficial, while the other four dimensions are deep types of engagement (Whitton & Moseley, 2014). Participation is a superficial type of engagement indicated by behaviors of going through the motions or without meaningful participation, while attention is another superficial type that is more profound because of the participant's commitment as indicated by attention at the cognitive level while (Whitton & Moseley, 2014). Relating to cognitive engagement as superficial, Kahu (2013) claimed that cognitive and behavioral engagement driven by instrumental motivators like achieving high grades or rewards is a false engagement and superficial because it is task-based. The construct that premised superficial types of engagement resonated the initial phase of technological engagement with education. O'Brien and Toms (2008) have shown that at the point of engagement phase, the users initially engage due to the aesthetic appeal or novel presentation, motivations, interests, ability, and desire to be situated in their interactions (O'Brien & Toms, 2008). When users of technology maintained their attention and interest in the application, engagement is sustained, allowing the user to move to the next phase (O'Brien & Toms, 2008). The discourse indicates areas of conceptual overlap where both constructions to a dimension of engagement are superficial and temporary.

After the two superficial types of engagement are the four dimensions of deep engagement, these are captivation, passion, affiliation, and incorporation (Whitton & Moseley, 2014). Each dimension is more profound than the preceding dimension. Captivation and passion are dimensions to deep engagement premised on enthrallment with activity and emotions, but passion is a dimension more profound than captivation (Whitton & Moseley, 2014). In captivation, the longevity of engagement is not guaranteed because a learner may immerse in an activity but may not continue to be captivated overtime (Whitton & Moseley, 2014). In passion, there is an emotional pull like empathy, anger, or excitement strong enough to extend learner's participation across a series of activities. Relating to captivation and passion, Kahu (2013) has shown that emotion's intensity attached to learning, feeling of belongingness, and or immediate enjoyment and interest in the tasks results in a deeper engagement with learning. Such engagement is true distinguished by intrinsic motivators rather than instrumental motivators driven by a means to an end (Kahu, 2013). In technological engagement, user engagement with technology is sustained with positive affect such enjoyment, fun, and physiological arousal facilitating the user's progression from the initial phase to the next phase of engagement (O'Brien & Toms, 2008). The person's engagement progresses from one level or phase or may disengage during the activity, depending on the presence of the factors that heighten the engagement experience (O'Brien & Toms, 2008; Whitton & Moseley, 2014; Whitton, 2011). The discourse indicated that although engagement is deep, engagement relating to captivation, intense emotions, and psychological absorption are temporal where learner immersion with the activity may continue but not captivated

overtime. Further, the presence of influencing factors played a critical role in heightening the engagement of the participants facilitating their progression within the continuum.

A deeper type of engagement beyond the dimensions captivation and passion involved belongingness and renegotiation of the individual's identity. Belonging is an element to the dimension affiliation, making deeper than the dimensions captivation and passion (Whitton & Moseley, 2014). With the dimension affiliation, the learner engages with a group or community identifying oneself with the group and have a feeling of belonging with the group's social structure (Whitton & Moseley, 2014). There is a psychological and social identity of the learner with an institution of learning, and epistemic engagement indicated by the development of activities and practices within the community of discipline (Whitton & Moseley, 2014). The construct of belonging was aligned with Bryson's (2016) claim that engagement with learning includes partnership far from the spectrum of participation and involvement and characterized by collaborative decision-making and ownership of the process and outcome. With belonging, Graffigna (2017) claimed that engagement was developed within the context of relational, where the individuals engage about others, their task, and position within the organization. Per Whitton & Moseley (2014), engagement at the dimension incorporation is the highest level of engagement among the six dimensions to engagement. In the dimension incorporation, the learner sees oneself as an integral part of the activity (Whitton & Moseley, 2014). A critical element to the dimension incorporation is the engagement as a being because there is enculturation, feeling of presence, and immersion impacting the individual's overall sense of self and identity

(Graffigna, 2017; Whitton & Moseley, 2014). Engagement as a being resonated with Graffigna's (2017) proposition that engagement is a self-transformative experience indicated by conscious and willful decision to take a proactive role within the organization. The discourse presented above suggested that engagement occurs in a hierarchy within a continuum that develops over time and is driven by the interplay of various dimensions and elements that define

Deep Engagement is a Complex Construct

Deconstruction of the concept engagement showed that engagement at a deeper level is a complex construct that is only known to the person experiencing it. Unlike superficial engagement, that is measured quantitatively, measuring engagement has been problematic because it implies an internal experience that is accessible to the person experiencing it (Kahn, 1990; Graffigna, 2017; Whitton & Moseley, 2014). Further, the nature of deep engagement mirrored the constructivist's ontological and epistemological assumption that the meaning of reality is created by the individual who experienced the phenomenon and is understood only within the context it occurs (Creswell, 2016; Creswell & Creswell, 2018; Ravitch & Carl, 2016; Patton, 2015). There was no existing literature in HFS relating to the faculty's level of engagement with HFS. Existing research literature related to engagement was used in the context of personal engagement (Kahn, 1990), organizational engagement (Graffigna, 2017; Schaufeli, 2013, Sohrabizadeh & Sayfouri, 2014); scholarship engagement (Burrage et al., 2005), and healthcare technology engagement (Craswell et al., 2016). In education, engagement has been used in various contexts like engagement with technology (O'Brien & Toms, 2008;

Whitton, 2011; Whitton & Moseley, 2014), and student learning (Appleton et al., 2006; Barnacle & Dall'Alba, 2017; Corno & Mandinach, 1983; Kahu, 2013).

Because of the latter, this research study aimed to explore the nursing faculty's perceived level of engagement with their HFS experiences, as it seeks to answer the research question: What is the nursing faculty's perceived level of engagement with their high-fidelity simulation experiences? The study applied the qualitative research method using Moustaka's (1994) interpretative phenomenological approach (IPA). A qualitative research method shares similar perspectives of that of the constructivist approach (Creswell, 2016; Creswell & Creswell, 2018; Ravitch & Carl, 2016; Patton, 2015). As a philosophy, IPA focuses on how human beings make sense of their lived experience of the phenomenon (Creswell, 2016; Patton, 2015; Sloan & Bowe, 2014) and as a methodology, the human experience and perceptions must be described, explicated, and interpreted to be fully understood (Patton, 2015). Thus, obtaining firsthand information from faculty who experienced HFS is critical to understanding their experience with HFS, their perceived position with their engagement with HFS, and the factors that influence their perceptions relating to their level of engagement with HFS.

Summary and Conclusion

Technology shapes the current and future direction of nursing education and higher education at large as it taps to current technological innovations to prepare students in assuming their role in a highly competitive technology-driven society. Thus, increased the demand in technology innovated simulation like HFS; evidence supporting the value of this pedagogy in preparing nurses and other health practitioners. As nursing

education leaders recognize the importance of nursing faculty buy-in, the success of HFS integration in the nursing programs, nursing faculty development, and simulation training was provided. However, studies indicated that nursing faculty development and simulation training were not effective in increasing the nursing faculty's intention to adopt HFS. With the problem identified, I assumed that the nursing faculty's meaningful and deep engagement in their role in HFS is instrumental to the success of HFS adoption and sustaining its use in the nursing program. However, there was no literature from the previous, and current HFS literature exists establishing the link between faculty's deep engagement with HFS and the successful adoption of HFS in the nursing programs. Stemmed from this discovery was the focus of this study, where there was a need to explore the construct of the faculty's deep and meaningful engagement in the context of HFS.

What was known was that the nature of deep engagement is complex as it encompasses multicontextual, multidimensional, and multicomponential construct. From behaviorism to constructivism, measuring the deeper level of engagement was a challenge as engagement that is deep and meaningful could only be described by the individual who has firsthand experience of the activity or event. Although existing literature provided evidence of the different dimensions to engagement: superficial to deep suggesting hierarchy to its nature, a consolidated view on the construct of engagement remained fragmented. The latter is true because of its multicontextual, multidimensional, and multicomponential nature. Thus, the nature of deep and meaningful nature is clarified and understood within the context it exists.

What was not known was the nursing faculty's perceived level of engagement with their experience with HFS. Existing literature supporting the study was primarily based on the synthesis of the existing literature in education and other disciplines that have theorized the deep construct engagement and the elements. Also, literature that provided a consolidated perspective of the dimensions of engagement and its hierarchical nature was limited to education and remained unexplored in the context of HFS. Thus, warrants for conducting this study as understanding the faculty's experience with HFS and their position in the engagement experience with HFS clarified why faculty adoption and integration of HFS did change despite development and simulation received.

Chapter 3: Research Method

Introduction

The purpose of this qualitative research study was to explore the nursing faculty's perceived level of engagement with HFS experiences, using the interpretative phenomenological approach (IPA). The study was driven by the meaningful gap in the literature on HFS, where the faculty's level of engagement with HFS was not known. Although engagement is a widely theorized concept in various disciplines, what was known about the levels of engagement is limited.

The chapter provides a detailed discussion of the study's research approach used, the role of the researcher, and the methodology used relating to participant selection, instrumentation, and data collection method. The chapter explicates the procedures for participants' recruitment and for the data analysis plan. Furthermore, issues of trustworthiness relating to credibility, transferability, dependability, confirmability, and intercoder reliability are discussed. The chapter also covers in detail the procedures that were undertaken to ensure that the ethical concerns about the recruitment of participants, data collection methods, treatment of data, confidentiality, and data protection were addressed.

Research Design and Rationale

The research question for this study was as follows: What are the nursing faculty's perceived level of engagement with their HFS experiences? The central concept, level of engagement, was defined as the person's perceived level of engagement relating to his or her involvement with the activity, learning, or role in the organization

(Graffigna, 2017; Whitton & Moseley, 2014). The dimensions of engagement described the person's level of engagement with his or her experience with the activity, or role in the organization (Graffigna, 2017; Libbey, 2004; Whitton & Moseley, 2014). In this study, superficial engagement was defined as engagement experience at the first level as indicated by these behaviors: participating and attending at a cognitive level that is task-based and could be motivated extrinsically (Appleton et al., 2006; Libbey, 2004; Whitton & Moseley, 2014). Deep engagement was indicated by four behaviors: captivation, passion, affiliation, and incorporation (Whitton & Moseley, 2014). Deep engagement results in a self-transforming experience, where the person takes proactive ownership of her role in the organization (Graffigna, 2017). Thus, deep engagement encompasses attributes more profound than superficial engagement.

This study was conducted according to the qualitative research method using Moustakas' (1994) IPA. This research paradigm and design was selected because this was premised on the constructivist's perspectives, which was grounded on the ontological and epistemological assumption that there was no single truth or reality to a phenomenon (where reality is the meaning created by the individual who experienced the phenomenon) (Crewell, 2016; Creswell & Creswell, 2018; Dawidowiz, 2016; Patton, 2015). The phenomenon is understood only within the context in which it is studied (Ravitch & Carl, 2016). Likewise, the nursing faculty's level of engagement experience with HFS was understood only within the context in which it was studied. The central phenomena, levels of engagement are complex construct known only to the person

experiencing it. Hence, the study did not aim to generalize, but to understand the realities surrounding the phenomenon of interest.

I selected the IPA because it allowed deeper insight into the nursing faculty's engagement experience with HFS and their perceived position in their engagement experience with HFS. The interpretative approach was selected over descriptive because IPA focused not only in describing (the what and how) the experience but through searching for themes and the interpretative engagement of data, also understands the meaning of the experience (Sloan & Bowe, 2014). Unlike its descriptive counterpart that focused purely on the description of the participants' experience of the phenomenon (Matua & Wal, 2015). Per Moustakas (1994, p. 2), the scientific investigation is valid if knowledge sought is arrived at the thorough descriptions that make possible an understanding of the meaning and essences of experiences. In this study, obtaining the nursing faculty's firsthand experience with HFS provided detailed descriptions and different perspectives on the phenomenon of interest. Thus, it made it possible to understand and interpret the meaning and essences of the nursing faculty's position in their engagement experience with HFS.

Role of the Researcher

As the primary researcher for this study, I assumed the role of an observer and interviewer during the data collection process. I analyzed and interpreted the data collected during the interview. As a researcher, I have extensive knowledge about the phenomenon of interest. I am a nursing faculty teaching in an associate degree program in nursing and act as a simulation educator. I am directly involved in a high-fidelity

simulation, where I incorporate various technology-based simulations, particularly HFS, in teaching multiple nursing courses. Also, I am associated with professional organizations for simulation educators, locally and nationally. Thus, I may have personal or professional relationships with potential participants of this study as recruited participants within the circle of my professional network as a nurse and a simulation educator. As an advocate for the innovative pedagogies, I may have influenced the participants' feelings and responses inadvertently during the interview. I may be introjected in the analysis and interpretation of data my views about innovative pedagogies. Such views may result in leaning to themes and look for evidence that may support my stance on the phenomenon of interest.

Because I may have professional relationships with the participants, I instituted measures to ensure the trustworthiness of data is not compromised and to minimize threats to the transferability and dependability of the study findings. Acknowledging and accepting the responsibility of the power the researcher has and mitigate that by maintaining an inquiry stance that remains authentic to the participants' experiences are critical to a valid, ethical, and rigorous qualitative study (Ravitch & Carl, 2016). Thus, I maintained reflexivity throughout the study approaching the data collection process with an understanding that the participants are the experts of their experiences. As a researcher, I maintained consciousness and constantly examined my approach and skills ensuring study' methodology was carried out supporting valid and generative data collection. I used Ravitch and Carl's (2016) reflexive data generation questions as a guide in my reflexivity, ensuring that I maintained fidelity in exploring and understanding the

complexity of the participants' experiences. As the researcher, I was the instrument for data collection. Part of the robust and rigorous reflexivity, I used journals, recorded personal and professional views on the research process, particularly the analysis and the findings of the study (Kjortsens & Moser, 2018; Ravitch & Carl, 2016). Also, I used audit trails to record all procedural details, and I maintained transparency with my dissertation supervisory committee chair and member, allowing them access to data records. This process kept any personal perspectives and biases from potentially influencing research decisions across all phases of the research study.

The potential participants included nursing faculty within the researcher's professional network. As the researcher's co-workers are also members of a professional organization for simulation educators, there was a possibility that they could become potential participants. Thus, it may pose a potential ethical concern as their decisions to participate could be influenced by their relationship with the researcher and power differential related to the researcher's role and position in the organization. To address this concern, nursing faculty that I directly work within teaching a course were not selected as participants. Potential participants were selected through nurse educator and simulation educators' professional organizations, and colleagues from other nursing schools.

Another ethical issue that could arise was giving incentives to the participants of the study as they may be compelled to participating because of the incentives. This problem was addressed by giving a minimal incentive of a $10.00 Starbucks gift card.

Such amount of incentive was not significant to influence the participant's decision to participate other than their desire to contribute to this researcher's scholarly work.

Methodology

Participant Selection Logic

The target participants for the study were nursing faculty who teach in a pre-licensure nursing program and actively use HFS in teaching their nursing courses. A homogenous purposive sampling method was used in selecting the participants.

In qualitative research, participants were identified and selected for a specific purpose related to the phenomenon in question; thus, purposive sampling was often used (Cleary, Horsfall, Hayter, 2014). A homogenous purposive sampling was used where participants are selected based on their shared experienced, or the same or very similar characteristics or traits, and when a research question that is being examined is specific to the characteristics or shared experience by a particular group of interest (Cleary et al., 2014; Creswell & Creswell, 2018; Patton, 2015). Also, this sampling method was selected as research questions were examined through a phenomenological approach that aimed to examine the participants' experience of the phenomenon and the meaning they ascribed to the phenomenon (Crewell, 2016; Creswell & Creswell, 2018). Per Creswell (2016), the participants must be chosen carefully to be individuals who have experienced the phenomenon so that the researcher can forge a common understanding. Thus, it justified the inclusion and exclusion criteria selected and the sampling method used.

Inclusion Criteria

The data collected from the individuals who experienced the phenomenon of interest to satisfy the research question was examined through phenomenological inquiry (Creswell, 2016; Creswell & Creswell, 2018; Dawidowicz, 2016). Thus, the inclusion criteria were nursing faculty who teach in a prelicensure nursing program and actively use HFS in teaching their nursing courses. Nursing faculty must have at least a year of experience using HFS in their assigned courses. The potential participants must know the process of simulation that includes pre-simulation, simulation, and debriefing. Also, participants must be teaching in a nursing program that has a simulation lab that uses the HFS. These inclusion criteria were drawn from the central phenomenon of the nursing faculty level of engagement with HFS.

Further, in choosing information-rich cases, I first conducted a survey screening for my potential participants to determine who meets or did not meet the inclusion criteria. Per Creswell (2016), the participants must be chosen carefully to be individuals who have all experienced the phenomenon so that the researcher can forge a common understanding. Thus, I used Survey Monkey (Survey Monkey, 2018) to deliver and conduct a survey using screening questions to my target population. From the survey responses, I identified the participants who met the criteria.

Ten participants were selected based on their knowledge and experience about the phenomenon of interest. The use of 10 participants was based on qualitative research scholars' recommendation that 5–25 participants who experienced the phenomenon of interest as the aim of the phenomenology study was not to generalize but to obtain a

detailed and thick description of the participants' experience about the phenomenon (Adler & Adler, 2012; Cresswell 2016; Dawidowicz, 2016; Fusch & Ness, 2015; Guest et al., 2006; Mason, 2010). The final participants selected for the study were interviewed using open-ended questions to elicit views and opinions from the participants. The depth of the data and not the number determines data saturation (Fusch & Ness, 2015). Further, the homogeneity of the sample influences data saturation where saturation is reached sooner when participants in a sample have more similarities in their experiences concerning the research domain (Guest et al., 2006).

Recruitment Process

The plan for the recruitment process started with the review of the IRB requirements as detailed in the Research Ethics Planning Worksheet (Walden University, n.d.a; Walden University, n.d.b). The participants were identified from the members of simulation organizations, and the researcher's professional network from other nursing schools. To access participants from universities and colleges, I first inquired from the institution's IRB office of any specific approvals needed to recruit their nursing faculty to my research study. This inquiry included contacting each university's or college's IRB department seeking guidance on how to contact their program directors and nursing faculty about my research study. I was informed by one university to directly email the program director or dean of their school of nursing. Another university asked me to send them a copy of my approved IRB and a copy of the email invitation to participate in the study as they were the ones who sent it to their nursing faculty.

For simulation organizations, I contacted their administration to inquiring their guidelines for recruiting their members to participate in my study. I followed the organization's guidelines for accessing, contacting, and recruiting their members as potential participants in my study. For instance, with one of the simulation organizations, I had to have Walden University's IRB approval (number 01-08-20-0642436) to get the simulation organization's application (see Appendix F) approved. Then, that simulation organization informed Walden University's IRB that my request to post in the organization's social media (see Appendix G) and recruit potential participants from the members was approved. To access Walden U participant pool, a request to use the site to post about my study was coordinated with Walden University IRB. I followed Walden U participant pool guidelines how to use the site. The Center for Research Quality sent out an email to users letting them know that a new study is available. The users of this site will decide for themselves in which study to participate.

Consent

The emails sent to program directors, nursing faculty, and simulation organization's coordinators have the link that leads to the consent page and online survey. Clicking the link in the email will take the volunteers to the first page of the survey, which was the consent to participate in the study. Continuing with the survey indicates consent to participate in the study survey and interview. The consent form included background information on the study, procedures, the voluntary nature of the study, risks, benefits of being in the study, payment or incentives, privacy, and contacts and questions

for the researcher. The consent also advised the volunteers that not all who participated in the survey will be asked to be interviewed.

Data Collection Procedures

Emails for program directors, nursing faculty, and simulation organizations were developed (see Appendix A). The email provided brief information about the researcher, the research study's title, inclusion criteria, and brief information about the survey and the interview. The email included a statement on a $10 e-gift card from Starbucks that will be given after the interview. Also, the email included the researcher's contact information and the link to the consent page and the online survey. Volunteers who clicked the link to the online survey consented to participate in the study survey and interview.

The purpose of the online survey was to determine if the respondents meet the inclusion criteria to for the study. Completed surveys were reviewed immediately. I provided feedback to the respondents if they have met or did not meet the inclusion criteria. All respondents who met the inclusion criteria were added to the pool of participants. However, not all in the pool will be asked to be interviewed. An email to set-up an individual interview (see Appendix C) was sent to the first 10 respondents who met the inclusion criteria. A schedule for an individual interview was arranged with the respondents who replied to the email. Follow-up emails were sent to respondents who did not reply to the first email requesting to schedule an interview. I sent an email to other respondents who are in the pool of potential participants if one of the first ten final participants did not respond to follow-up emails to arrange for an individual interview

An individual interview was arranged on the respondent's preferred time and method like face-to-face via video call (i.e., Skype, Face Time, or Messenger). The interview lasted from 45–60 minutes and was done one time. The interview was audio-recorded, and observations during the interview were recorded in the field notes. The interview was done in a private, comfortable, and safe for both the participant and the researcher. The researcher used the interview guide and protocol (see Appendix D) during the interview. The consent was reviewed before the interview. The participants were informed that an email would be sent for them to review and confirm the accuracy of the interview transcript. A $10 e-gift card was emailed to the participant at the end of the interview as my appreciation for their participation in the study. The interview process concluded with reiterating to the participant that debriefing will be conducted after the verbatim transcription of data. In the debriefing process, the participants were emailed an e-copy of the verbatim transcript for them to review and respond. Also, a copy of the actual audio recording was made available to the participants upon request. The participant's confirmation that the content of the interview is accurate indicated their exit in the study.

Instrumentation

I served as the data collection instrument in this study as I was the interviewer using the interview protocol and guide in interviewing participants individually. The source of the data collection instrument was a researcher-produced question guide framed from this study's conceptual framework, and research question: What is the nursing faculty's perceived level of engagement with high-fidelity simulation experiences? The

data collection method of interviewing the participants using the researcher-produced question guide was sufficient to answer the research question because it encompassed questions that were aligned with the tenets of phenomenological approach (Fusch & Ness, 2015; Guest et al., 2006; Mason, 2010). Also, a researcher-produced question guide was developed based on the reviewed literature related to this study, and the AMEL conceptual framework.

The interview questions were open-ended to elicit elaboration and depth from the participants' responses. Interview questions were primarily open-ended to encourage in-depth and detailed response from the interviewee and serve as the scaffold for the interview (Alshenqueeti, 2014; Daher et al., 2017; Creswell, 2016; Rubin & Rubin, 2012; Siedman, 2006). The reviewed literature about the phenomenon of interest, the AMEL's concepts that premise the study, and my personal and professional experience in HFS were used as bases to formulate the main questions, follow-up questions, and probe questions in the interview guide (Jacob & Furgeson, 2012; Rubin & Rubin, 2012; O'Brien & Toms, 2008). For instance, the main question, "As a nursing faculty, tell me about your experience with HFS?" was drawn from the research question. By beginning with the statement, "tell me about…" aimed to build confidence and trust with the participants (Jacob & Furgeson, 2012). Also, the follow-up question aimed to narrow and obtain further detail, nuance, vividness, and richness (Rubin & Rubin, 2012).

Further, an operationalized definition of the central phenomenon nursing faculty' level of engagement with HFS was included in the interview guide to clarify with the participants the contextual use of the term used for the phenomenon of interest (Creswell,

2016). Examples of main and follow-up questions “In your perspective, what is superficial and deep engagement to you?” and “How would you describe your current level of engagement with your HFS experience” were based on the study’s assumptions and the conceptual premise that there are dimensions: superficial and deep to engagement (Graffigna, 2017; Whitton & Moseley, 2014). Identifying the keywords and phrases framed from the conceptual framework that informs the research study and its methodology, and use these keywords as bases to form interview questions were critical to interview questions (Walden University (n.d.c). The follow-up question, “what makes you think that your current engagement is deep?” is a question that aimed to fill in the missing pieces where I want to hear details on a sequential step (Rubin & Rubin, 2012). This question was based on AMEL’s posits that there are several dimensions to deep engagement where each dimension has attributing elements making each dimension of deep engagement more profound than others (Whitton & Moseley, 2014). This question was also premised on the reviewed literature that there is a hierarchy in an engagement. The person may start with superficial engagement and grow in a deeper degree of engagement with their course of experience.

Efforts to ascertain the study’s credibility and content validity were demonstrated in the research study’s design complexity that is encompassing strategies geared towards answering the research question in the most complex, rigorous, and nuanced ways possible. For instance, the interview guide was primarily made of open-ended questions. At the same time, the interviewer used the responsive interviewing technique to have a deep and rich understanding of the context that is based on the participants’ perspectives

and experiences (Creswell, 2016; Rubin & Rubin, 2012; Shenton, 2004). A well-established method was adopted, such as employing specific procedures as demonstrated in the manner of questioning during a data-gathering session and data analysis that reflected the credibility of a study (Creswell, 2016; Shenton, 2004). Also, credibility and content validity were ascertained in the study as the interview protocol, and guide reiterated the informed consent, particularly the participant's right to refuse, withdraw, or discontinue participation as this ensures that only those who are willing take part in the data collection process. The latter was a tactic to ensure honesty in the informants when contributing data; hence, it added to the credibility of the study (Shenton, 2004). Another method was the use of debriefing, where participants were provided a copy of their interview's verbatim transcript to review information for content accuracy.

Additionally, a peer debriefing method was used where another nursing faculty who was not involved in the study evaluated the rigor of the interview questions. Hence, added credibility and content validity to the study (Tracy, 2010) as such technique ensured that questions elicited participants' responses that were in-depth, detailed and dense that was believable and appeared truthful for the readers (Billups, 2014; Creswell & Miller, 2010; Halej, 2017; Toma, 2014). Thus, obtaining thick and rich descriptions that answered this study's research question.

Data Analysis Plan

The purpose of conducting a qualitative interpretative phenomenological study was to explore the nursing faculty's perceived level of engagement with their HFS experience. The study aimed to answer the research question: What is the nursing

faculty's perceived level of engagement with their HFS experiences? Thus, data that were collected in this study provided a rich and detailed answer to this study's research question. The data analysis plan followed the modified Van Kaam method for IPA, as suggested by Moustakas (1994). This method for IPA included the Epoche process or bracketing, phenomenological reduction (PR), imaginative variation (IV), and the invariant structure (IS) (Creswell, 2016; Moustakas, 1994).

The following described the data analysis plan detailing the type and coding procedure as guided by the key elements drawn from Moustakas phenomenological analysis:

Epoche Process

The Epoche Process The process involved the researchers' reflection of their own experience and the context and situations that have influenced their experiences setting aside their prejudgment, biases, and preconceived thoughts about the POI (Creswell, 2016; Moustakas, 1994). However, I completed the Epoche process at the beginning of the research, where I reflected on my role as the researcher, perspectives, biases, and positionality (Creswell, 2016; Moustakas, 1994; Ravitch & Carl, 2016).

Phenomenological Reduction

The next step was the PR that involved describing in textural language what the participants see from the external, including the internal act of consciousness (Moustakas, 1994). The PR process involved horizonalization, where every statement initially is treated equally (Moustakas, 1994). Then followed by bracketing, where significant statements, sentences, or quotes, providing an understanding of what was experienced

were highlighted, focusing the entire research process on the topic and question (Moustakas, 1994). Repetitive and overlapping statements were deleted, leaving the significant statements and themes to write the textural description and invariant constituents of the phenomenon (Creswell, 2016; Moustakas, 1994).

Under the PR, I started the analysis by extracting significant verbatim statements from the interview, drawing meaning from those statements, and clustering meanings into series of themes (Creswell, 2016; Moustakas, 1994; Saldana, 2016). The latter step involved structural coding in identifying the themes that initially categorize the data. Structural coding was more appropriate for interview transcripts than other researcher generated data (Saldana, 2016).

Imaginative Variation or Structural Description

This step involved describing the context or setting that influenced how the participant's experience of the phenomenon (Moustakas, 1994). In this step, I started a first cycle coding of the clustered significant statements using In Vivo coding. In Vivo coding was aligned with the research question and the phenomenological approach as it was one of the coding methods that will catalog and better reveal the ontologies found within the phenomenological data (Saldana, 2016). Also, In Vivo coding used short phrases drawn from the actual language of the participants; hence, it has more evocative analysis compared to descriptive coding (Saldana, 2016).

Invariant Structure or the Synthesis of Meaning and Essences

The final step was the development of the composite description of the essence of the experience for all the individuals consisting of the integration of the textural (what

was experienced) and structural (how they experienced it) descriptions (Creswell, 2016; Moustakas, 1994). In this step, was a second cycle of coding to identify emerging concepts or themes from the InVivo coding (Saldana, 2016). The concepts or themes that were identified were supported with excerpts from the interview data describing what, how, and why the participants experienced the POI (Creswell, 2016; Moustakas, 1994). The final step was developing the composite description of the essence of the experience for all the participants (Creswell, 2016; Moustakas, 1994).

Part of the data analysis plan was considering the use of a qualitative data analysis software (QDAS) in analyzing collected data for the planned qualitative research. QDAS were software tools that help qualitative researchers examine the transcribed data, code, and interpret the text, analyze content and discourse, and alike (Predictive Analysis Today, 2016). In determining the right QDAS, I considered essential elements to a QDAS, like the software's features and functionalities that will serve my purpose as a qualitative researcher. Further, a QDAS tool that comes with transcription was preferred as I conducted phone interviews or video calls. The software must be user-friendly to novice qualitative researchers offering readily available customer and technical support when needed. Further, the hand-coding method of organizing and analyzing the data using Microsoft Excel for this project was used. The coding process started with preliminary coding identifying themes to organize and cluster data. All data collected were equally important as they reflected participants' unique experience about the POI. Thus, all data, including discrepant cases, were reported in Chapter 4.

Issues of Trustworthiness

The trustworthiness of a qualitative research study was displayed in the dimensions of credibility, dependability, confirmability, and transferability (Shenton, 2004). The following discourse presented what strategies were undertaken to maintain each dimension of trustworthiness across the research process.

Credibility

The credibility of this study was demonstrated through efforts to align methodology, particularly the interview questions, the interviewing process, and the data analysis method with the research question and the purpose of the study. The concept of credibility in the constructivist approach was demonstrated in answering the question "how congruent the findings are with the reality" (Shenton, 2004, p. 64). Strategies to ensure credibility included adopting established data collection methods for PA like of open-ended questions and responsive interviewing (Alshenqueeti, 2014; Daher et al., 2017; Creswell, 2016; Rubin & Rubin, 2012; Shenton, 2004 Siedman, 2006). The iterative questioning was reflected in the interview guide, like the use of follow-up and probe questions aimed to elicit thick and rich information. Also, credibility was ascertained by detailing the participation selection using inclusion criteria, ensuring that participants are knowledgeable about the POI. Discussion on the recruitment process, detailing the informed consent, and ethical considerations were delineated to add credibility to the study (Shenton, 2004; Toma, 2014). The credibility of the study was displayed through debriefing, where participants could review the verbatim transcript of their interview for content accuracy. Another strategy to ensure the credibility of the

study was the use of peer debriefing in reviewing the instrument, transcribed data, and data analysis. Peer debriefer is another nursing faculty who was not part of this research study. A confidentiality agreement (see Appendix E) was signed by the nursing faculty, who acted as a peer debriefer in this study.

Transferability

Another dimension of trustworthiness was the transferability of the study. The transferability in qualitative studies was demonstrated in the thick and rich contextual descriptions provided, giving the readers the feeling as though their experience overlaps with the story told in the research. Thus, this study used purposive sampling to obtain thick descriptions of participants' behavior and experiences that will include contextual descriptions (Cleary et al., 2014; Creswell, 2016; Kortsjens & Moser, 2018). The study detailed the inclusion criteria and the recruitment process, ensuring that participants contributing to data are those who have the knowledge and experience of the phenomenon of interest; thus, strengthening the transferability of the study. Also, the study detailed the data collection method, particularly the instrumentation and the interview process, to ascertain thick and contextual information is obtained. For instance, the interview guide was carefully constructed to include open-ended questions while responsive and iterative questioning is undertaken to ensure data obtained are thick and contextually rich.

Dependability

The dependability of this study was demonstrated in the detailed description of the research design, data collection procedure, and transparency in reporting steps and

missteps, and ethical issues and challenges throughout the. Scholars claimed that the dependability of the study is reflected in the sufficiency of the procedural details provided in the study (Billups, 2014; Kortsjens & Moser, 2018; Shenton, 2004). The use of peer debriefer serving as an external auditor providing feedback during the development of the instrument, a preliminary review of the data collected, and during analysis of the data ascertained the dependability of this study (Fusch & Ness, 2015; Ravitch & Carl, 2016). Other strategies used were audit trail records of research paths like research design and its implementation, operational details of data gathering process, and reflective appraisal of one's biases.

Confirmability

The confirmability in this study was ascertained by maintaining researcher reflexivity throughout the process of the study. Detailing a description of my role, positionality, and biases that may influence data collection process and analysis and interpretation of data ascertained confirmability (Kjortsens & Moser, 2018; Ravitch & Carl, 2016). Also, the transparency of the research process, such as the use of an audit trail, added to the confirmability of the study. Using peer debriefer as a triangulation strategy strengthened the confirmability of the study (Fusch & Ness, 2015). I used diary or journal and field notes to record personal views, implicit assumptions, and other preconceptions that may influence research process.

Ethical Procedures

In this study, the IRB ethical and compliance procedures were followed strictly in treating the participants using the Research Planning Worksheet (Walden University,

n.d.). As one way of identifying the potential participants was through a professional organization, I sought the permissions of these organizations as appropriate. For instance, a target simulation organization required researchers to follow the guidelines for posting information about their research studies and study participants' recruitment. Per the organization's guidelines, a request form (see Appendix F for redacted organization form) must be submitted with an approved IRB before a researcher can post about the study, and recruit participants. Thus, the actual document of this request form was provided to IRB with the IRB application. Once the IRB approval was obtained, the request form was submitted to the organization for approval. Finally, the IRB was emailed by the organization approving the researcher's request to post about the study and recruit participants.

If the professional organization has no guidelines in place for recruiting participants, I sought the organization's advice as to the best route to reach out to their members about this study, including posting information to their website and accessing the members' email addresses. Also, the organization's name and identity were masked in the study to ensure its anonymity and privacy. I applied and coordinated with Walden U's IRB the use of its participant pool (see Appendix H) as submission of application before proposal approval is allowed to doctoral students (Walden University, 2019.)

This study did not target vulnerable populations and issues that have a social stigma. Thus, ethical concerns identified included privacy concerns, confidentiality and anonymity, and coercion to participate. The plan for addressing these ethical concerns related to recruitment materials and processes included a clear articulation of the

researcher's role and responsibility in the recruitment process. The email sent to program directors, nursing faculty, and simulation organizations included the link to consent and survey. The consent detailed the brief background of the study, data collection process, the inclusion criteria, and the preferred method for an interview: a phone call or video call if inclusion criteria were met. The consent detailed the data collection process where a 45 to 60-minute individual interview will be conducted one time, either phone or video call, at a time they preferred. Also, the consent included the payment of $10 e-gift card to Starbucks after the interview, voluntary nature of the study, risks, and benefits of being in the study and privacy practice. Additionally, the email included a statement advising the nursing faculty that consent is implied by completing the survey.

All respondents who completed the online survey were advised via email if inclusion criteria were met or not. All who met the inclusion criteria were entered into the participants' pool. The first ten respondents in the participants' pool were sent an email to arrange for an individual interview. The interview was scheduled at the participant's preferred time and method. The entire interview was recorded using an audio recorder, and field notes were used to record observations. Participants' responses were kept secure and confidential, where interview responses were shared with the dissertation chair and member. Information shared leading to their identity was redacted. Also, during the interview, participants were informed that they need not answer questions that they do not want to answer, and they may withdraw or end the interview at any time. A sample of the questions from the interview guide was provided in the consent. The participant was informed of the debriefing process where he or she was provided a copy of the interview

transcript to review for accuracy. The nursing faculty role as participant ends upon confirmation of the accuracy of the interview transcript.

Consent was reviewed on the day of the actual interview. The participants need not identify his or her name, including the affiliated organization during the interview. During the actual interview, responsive interviewing was maintained where respect for the interviewee's response or behavior, no matter how vital the information takes precedence. As such, perspectives and experiences triggering emotions and feelings that the interviewee wanted to avoid were respected. The participant's desire to end the interview at any time during the interview process was respected.

The data collection procedure was not 100% anonymous as I interviewed the participants. However, I took necessary measures to ensure participants and their data are 100% confidential. These measures included maintaining the organization's and nursing faculty's participation in the study confidential, including field notes and audio recordings of the interviews for any information that will lead to the patient's identity. Any information leading to the participant's identity that was recorded on tape was redacted in the interview transcript to ensure participants' identities were not directly and unintentionally disclosed. The participants' demographic details, except for their number of years in their position or experience in simulation, were not be disclosed in the final results of the study. Information relating to participants' position in the organization, number of years in their position, and their experience with simulation were shared in a manner that did not make the participant identifiable.

Data security and confidentiality were protected by storing all audio recordings and field notes in a locked drawer in the researcher's private office. Electronic copies were saved in a password-protected portable drive and were kept with the rest of the documents in the locked drawer. The researcher's personal computer was secured with password access; likewise, the soft files relating to the study stored in the computer were password encrypted. All stored data was accessible to the researcher only. Data sharing was limited to the researcher's dissertation supervisory chair and second member as they take part in the member checking process to ascertain this study's credibility. A nursing faculty who acted as a peer debriefer was asked to sign a confidentiality agreement to protect participants' privacy. The member checking process included reviewing the data collection instrument, reviewing the field notes, audio recordings, the transcribed data, and data analysis.

Summary

In Chapter 3 detailed the plans for research methodology. As the central phenomenon level of engagement was a construct known and unique to the nursing faculty who have experienced HFS, a qualitative research design using the IPA method was selected for this study. The chapter detailed the researcher's role in the study was defined, and any personal and personal biases that may influence this study's processes were clarified. The methods for addressing possible biases and plans for addressing any issues related to this were discussed in the chapter. The chapter delineated the participation plan as homogenous purposive sampling to ensure nursing faculty who have the knowledge and experience about the phenomenon of interest were selected as the

participants for this study. The chapter also detailed the data collection process where individual interviews of the participants who met the inclusion criteria were conducted.

In this chapter, the process for developing the instrument was discussed, where a researcher-developed interview guide composed of open-ended questions was used to collect data. The individual interview was conducted one time through phone or video call, or face-to-face interview if feasible for both parties. The chapter discussed the study's plan for data analysis, such as the use of Moustakas' phenomenological analysis method, while coding included hand-coding and spreadsheets. Also, the issues of trustworthiness relating to credibility, transferability, dependability, and confirmability, and plans to address strategies to ascertain the study's trustworthiness were articulated. Following the IRB guidelines, this chapter explicated the details of the study's ethical procedures and plans in place, ensuring ethical risks were avoided.

The next chapter included detailed discussions involving the actual data collection conducted in the research study. The discussion includes the setting where the data were collected, the participants' demographics relating to their position and role in the organization, and several years in experience with simulation. The chapter discusses the number of participants interviewed for the study, and the data collection methods used. Any variations from the data collection procedure from the proposal are discussed in Chapter 4. In Chapter 4, the process for data analysis is reported, including the coding process, specific codes, categories, themes that emerged, and discrepant cases. Evidence of trustworthiness, including the measures undertaken to ensure credibility, transferability, dependability, and confirmability, were discussed. The final part of

Chapter 4 covered the discussion of the study's results detailing the themes that addressed the research question and data presentation.

Chapter 4: Results

Introduction

The purpose of this qualitative research study was to explore the nursing faculty's perceived level of engagement with their HFS experiences using IPA. The research question was as follows: What are the nursing faculty's perceived level of engagement with their high-fidelity simulation experiences? This illuminated participants' lived experiences with simulation and the essence of their experience. Also, the central concept, the level of engagement with HFS, was clarified in this study. It was defined operationally as the nursing faculty's perceived level of engagement relating to their overall involvement with simulation. In this chapter, I cover the setting, demographics, data collection, and the processes for data organization and analysis. I also provide details on the process for data interpretation, the results of the study, and issues of trustworthiness.

Setting

The study did not target a specific setting, as participants were identified based on meeting the inclusion criteria for the study. The participants were from 10 different colleges and universities in the United States that offer prelicensure and graduate nursing programs. They taught in a prelicensure nursing program, for example, an Associate of Science in Nursing (ADN) and Bachelor of Science in Nursing (BSN). Because participation was voluntary, it was assumed that participants' personal needs and organizational status did not influence their participation. The prescreening survey (see Appendix B) was completed by the participants online through Survey Monkey. Those

who met the inclusion criteria were interviewed individually by phone or video call at the time and date they chose. During the interviews, I was in my home office to ensure privacy and confidentiality. Each participant was interviewed at a place of their choosing, wherever they felt comfortable, and that the information shared was safe.

Demographics

The participants for this study were all 18 years and older. Other demographic information, such as gender and ethnicity, were not collected because they were not relevant. The participants were nursing faculty who had been teaching for 1 to more than 5 years in prelicensure nursing programs (see Table 1) and had simulation experience ranging from 1 to more than 10 years (see Table 2). The nursing faculty currently use HFS in teaching their nursing courses and work in nursing schools with high-fidelity simulators in the simulation lab. These demographics are relevant because participants had to meet inclusion criteria (nursing faculty with at least 1 year of experience teaching in prelicensure nursing, currently using HFS in a simulation lab, and knowledge of the simulation process).

Table 1

Total Years of Experience as Nursing Faculty

Years of Experience	Frequency	%
1–3	1	10
>3–5	1	10
> 5	8	80
Total	10	100

Table 2

Total Years of Experience in Simulation

Years of Experience	Frequency	%
1–3	2	20
>3–5	2	20
>5 – 7	1	10
>7 –9	2	20
>9–11	0	0
>11	3	30
Total	10	100

Data Collection

A total of 28 nursing faculty responded to the prescreening survey, of which ten participated in the individual interview. An online prescreening survey made of ten questions through Survey Monkey was used to determine the nursing faculty who meets the inclusion criteria. Surveys were collected from January 16 through February 3, 2020. There were 28 nursing faculty responded to the survey, of which 23 met the inclusion criteria and entered the pool of participants. The emails sent to the respondents who did not meet the inclusion emphasized my sincere appreciation of their interest and participation in the study. All nursing faculty who met the inclusion criteria were sent an email advising them that they have met the inclusion criteria based on the survey completed for the study. These nursing faculty were added to the pool of participants who will be asked for an individual interview. Nursing faculty in the pool of participants were advised that not all who completed the survey and met the inclusion criteria will be asked for an individual interview. All respondents were sent an email thanking them for their

time and interest in participating in the study. I monitored and reviewed survey responses daily, and emails were sent to the respondents, advising them if the inclusion criteria were met or not.

I emailed the respondents who met the inclusion criteria immediately to set up an individual interview. I did this for the first 10 respondents who met the inclusion criteria. There were four of the first ten respondents who met the inclusion criteria who did not reply to the email invitation to set up for an interview. The four respondents did not respond after two follow-up emails; thus, I went back to the pool of participants and selected the next four respondents to set up an individual interview. The rest of the nursing faculty in the participants' pool who were not interviewed were advised that they will not be interviewed, and they were appreciated for their interest in participating in the study. The nursing faculty who responded to the invitation for an individual interview were interviewed between January 15 through February 15, 2020. Two participants were interviewed via FaceTime call, while eight were interviewed through telephone. An interview guide protocol that contained eight semistructured questions was used during the interview (Appendix D). Although the manner of interviewing was responsive, the semistructured interview guide used was critical in reaching data saturation as the same questions were asked from the participants (Fusch & Ness, 2015). In this study, data saturation was noted after six interviews when participants' responses to the interview questions become similar. Thus, it reached the point where no new additional data was attained, and no further codes or themes emerged.

The interviews lasted for 45–60 minutes and were audio recorded using a digital recorder. During the interviews, I maintained reflexivity in my manner of probing as I wanted nuance from the responses without introjecting my personal views. While listening, I took notes and paid close attention to their expressions as applicable and to their manner of speech, voice, intonations, and pacing, noting any emotions. With the use of a transcribing app (Transcribe-Speech to Text), I transcribed the audio recordings immediately from the digital recorder to a verbatim transcript. A copy of the interview transcript was emailed back to the participant to confirm the accuracy. I took note of the corrections made by the participants in their interview transcripts. A nursing faculty colleague acted as a peer debriefer, where she reviewed the interview protocol guide and the congruency of transcripts with the codes drawn from the first and second cycle coding. Interviews transcripts were redacted of confidential information like name, email address, and work organization before these were shared with the peer debriefer. For transparency, interview transcripts were shared with the members of my supervisory committee. Also, redacted interview transcripts and data analyses were reviewed by a qualitative methodologist.

Data Storage

Surveys collected were automatically saved in my Survey Monkey account, which is password protected. I downloaded the individual and summary of all the surveys collected and stored it to my cloud drive, secured by two-tier of password encryptions. Audio-recordings of the interviews were stored in my electronic device, which is protected by a fingerprint password. The digital audio files, spreadsheets that organized

my data, the analyzed data, and all documents related to the data collected were stored in my cloud drive. These documents are also saved in my personal computer's hard drive that was secured by two-tier of password encryptions. All documents will be disposed of after five years following Walden University's protocol. For instance, paper documents will be placed in a secured shredder box, while media files will be reformatted and destroyed.

Variants in Data Collection

There were no variations in the data collection plans presented in chapter 3. However, one survey respondent met the inclusion criteria but did not provide an email address or any form of contact information. Because of this missing contact information, I could not advise this respondent that the inclusion criteria were met. Another participant completed the online prescreening survey and met the inclusion criteria but noted in the survey that they did not want to participate in the interview.

Data Analysis

The data analysis process followed the modified Van Kaam method for IPA, starting with the Epoche process or bracketing, phenomenological reduction (PR), imaginative variation (IV), and the invariant structure (IS) (Anderson & Eppard, 1998; Creswell, 2016; Moustakas, 1994). The Epoche process or bracketing was done at the beginning of the study, where I clarified my role as the researcher, perspectives, biases, and positionality. The Epoche process has been maintained throughout data collection, organization, and analysis, where I engaged in self-reflection of my simulation experiences, ensuring that I do not introject any preconceived thoughts or biases relating

to each interview question. The Phenomenal Reduction (PR) and Imaginative Variation (IV) (Moustakas, 1994) were used to guide the data organization process and initial data analysis. The Invariant Structure (IE) (Moustakas, 1994) phase was used to conduct final data analysis that included the second cycle coding and data visualization for identifying patterns for categorization and emerging themes. I maintained reflexivity throughout the data analysis process. Also, I had my committee members and a methodologist review the emergent codes, ensuring that the themes emerged reflected the participants' lived experiences of the phenomenon of interest and reduced researcher bias risk. Part of data analysis is data preparation, where audio recordings of the interviews were transcribed verbatim. Data preparation is followed by delineating and processing meaning units, and then generation and organization of categories. The process of generating categories was followed by finding the overall organizing structure for the data and abstracting the main findings.

Data Preparation and Organization

The first step in the data analysis is preparing the data. Data preparation started with transcribing verbatim the interview recordings using a transcribing app (Transcribe-Speech to Text). Verbatim interview transcripts were emailed back to the participants to confirm the accuracy of the content. Once interview transcripts were confirmed for accuracy, the initial reading of the transcripts was done. During this stage, I had a whole picture of each participant's experience of the phenomenon, and insights and understandings of their lived experiences begin to unfold. Emergent codes and categories from the first and second analyses and statements supporting these codes were organized

in a spreadsheet per participant. For the third analysis, a table was developed listing down all codes across all participants; the codes from first and second categorization, the sub-themes, and the final themes.

Processing Meaning Units and Structuring the Data

After data preparation, I began data analysis with an initial reading of interview transcripts treating all statements equally significant. Then, I re-read the interview transcripts dividing the data into distinctive meaning units. Even if standing out of the context, data would convey sufficient information providing vital meaning to the reader is called meaning units (Elliott & Timulak, 2005). During this stage of delineating and identifying the meaning units, I eliminated redundant statements making sure that meanings contained in these statements did not change. I noted participants' statements, sentences, or quotes describing what had happened and how it happened.

There were also different sets of meaning units describing various aspects of participants' experiences with the phenomenon. For instance, the set of meaning units that emerged from participants' statements describing their first time engaging with simulation illuminated positive or negative feelings. Another example is the set of meaning units that emerged from the participants' responses describing what caused them to engage with simulation in the first place, showed that participation was required of their role. Further, relationships existed between these different sets of meaning units describing how the phenomenon came about, how it unfolded over time, and the meaning of these things. The various kinds of relationships between these sets of meaning units could be described as a temporal sequence, causes, and significations type of structuring

data (Elliott & Timulak, 2005). Elliott and Timulak (2005) described the temporal sequence as these things happened before these things, causes as this influenced this, and signification because that is what these things mean now. The identified relationship between different sets of meaning units was used to frame the interpretive process of categorization, sub-themes, and final themes.

Generation of Codes, Categories, and Themes

From these sets of meaning units, I generated codes and categories starting with the first cycle of descriptive coding, followed by the second cycle of concept coding. In the first cycle coding, descriptor nouns or short phrases from the participants' terms (Saldana, 2016) were attached as descriptive codes to the meaning units noting significant statements highlighting their experiences related to the identified descriptive codes. A second analysis was done with an emphasis on the evolving meanings of meaning units from which descriptive codes were drawn. A memo of my reflections and thoughts were added, ensuring reflexivity in the coding process. The first and second cycle coding processes were repeated for all participants' responses.

The third cycle of data analysis was done across all participants. During this process, concept codes were examined and visualized for similarities across all participants for initial categorization (Elliott & Timulak, 2005). Meaning units were compared to each other and other categories until all codes were sorted using category labels close to the participant's original language. Also, as categorization is an interpretive and interactive process with priority given to the data (Alase, 2017; Elliott & Timulak, 2005; Matua & Van Der Wal, 2015), ideas for category labels came in part

from my previous knowledge as a researcher, and findings from reviewed literature and related studies. Next is the second categorization, where categories from the initial categorization were refined further by incorporating similar meanings from subsequent meaning units. This refining process and incorporating subsequent meanings were meticulously done so that categories representing the essence of the participants' responses were not misrepresented. During the second categorization, some of the meaning units were also assigned to different categories as refining the categories evolved (Alaise, 2017; Elliott & Timulak, 2005). Assigning data to more than one domain is possible if it is conceptually meaningful (Elliott & Timulak, 2005). For instance, the concept codes Awed and Amazed were categorized under Positive Feelings because it denoted positive emotions describing the participants' essence of their overall lived experiences with simulation. On the other hand, these concept codes were also categorized under Captivated because it was drawn from the set of meaning units that described participants' thoughts and feelings the first time engaging with the simulation, that eventually developed to passion.

Identifying the subthemes followed the second categorization process, which involved delineating the categories' relationship and illuminating the relationship between the different sets of meaning units. This process of delineating the relationship between categories is a vital aspect of the categorization process (Elliott & Timulak, 2005). The delineated relationship between categories evolved into structures aligned with the relationships between the different sets of meaning units identified during data organization. For instance, the subtheme, From required to intentional involvement,

showed a temporal sequence (these things happened before these things) type of relationship (Elliott & Timulak, 2005) between two categories: participation is required (this thing happened first), and participation became intentional (then this happened after).

The final step to data analysis was abstracting the main findings. Sub-themes were further grouped into final themes that described and interpreted participants' overall lived experiences with HFS, as stated in the participants' responses. The process of abstracting the main findings followed the rule of essential sufficiency, where the researcher looks for the simplest way to depict the phenomenon (Elliott & Timulak, 2005). Thus, the final themes were overarching sub-themes translated to taxonomies that captured the phenomenon's essence in its simplest form that can be traced back to the data.

Emerging Codes, Categories, and Themes

Data saturation was achieved with the sixth interview; however, additional interviews were completed to ensure that saturation was achieved. The participants' lived experiences in their engagement with simulation from the time they started participating in HFS until to this date provided me a more in-depth insight into the uniqueness of each participant's journey on this phenomenon. From these unique experiences, four overarching final themes emerged: Evolving Engagement, Emotional Response, Varying Levels of Engagement, and Pedagogical Engagement. The final themes captured the essence of participants' experiences engaging with simulation.

The first theme, Evolving Engagement, was an overarching theme illuminating the trajectory pattern in the participants' engagement experiences in simulation. This final theme was framed from subthemes (a) From required to intentional involvement; (b) From being inexperienced to becoming experienced; (c) From awed to passion. These subthemes captured the temporal sequence of relationships existing between categories (Elliott & Timulak, 2005). For example, a common thread of experiences among participants was that they initially participated in HFS because they were required or mandated by their immediate superiors. As the participants' stories unfold, it showed that initial participation led to subsequent engagement in simulation- related activities motivated by their desire to deepen knowledge about high fidelity simulation. For example, Participant 1 stated, "When I was initially hired, I was hired as staff, I mean, I was new, so basically, my dean said, 'By the way, you're going to be running SimMan.'" Later in Participant 1's story, she said, "So as time has progressed, I've become more and more involved." Such a temporal sequence of relationships is also captured in the subtheme, from inexperienced to experienced. Participants expressed that they had no experience, limited to no knowledge, or had no background in HFS when they initially participated. Over time, with continuous engagement in simulation, they now see themselves as experienced and knowledgeable simulation faculty. For example, Participant 2 shared, "I felt lost, it is like fly by the seat of your pants and figure out what you were going to do, and I made a lot of mistakes.…" Then, Participant 2 stated, "it continues just to grow and improve, and there's always change.… I've also mentored a lot more people in the last few years. Other people that are newer to simulation and have

come to me for my expertise." Participants expressed that they felt captivated with HFS the first time they engaged with it. Such feelings led them to become passionate about their engagement experiences in simulation. For example, Participant 9 shared, "So I was sold for it. That's how I got interested in simulation. I was excited, I mean the whole concept kind of seemed intimidating to start with…" Participant 9 expressed, "I felt so passionate because I know what I'm doing. So, knowing what we've been putting out there and what the student can gain out of it, and being that I'm a part of the pioneers in this new teaching." Thus, the subtheme, from captivated to passion, emerged.

The second theme, Emotional Response, was framed from the subtheme felt negative and positive emotions. The subtheme was framed from the participants' negative and positive feelings experienced in their engagement with simulation. For example, Participant 5 shared, "I was completely lost. I didn't know what to say to the students. The terminology and everything that they were using were a little bit too much. I felt very overwhelmed at least the first day…. The first one was a disaster." Then as Participant 5 story continued to unfold, she expressed, "So I loved it…. I started feeling a little bit more confident. So, I was like, Oh, wow! So those students that had never had a chance to see a birth before going to clinical, that is a great experience." Another example was from Participant 3's account, "I felt kind of lost because back then we didn't have very much in the way of training. It was kind of fly by the seat of your pants and figured out what you were going to do." Then, Participant 3 added, "It was so long ago, but it was fun, and it was new, and it was different." Participant 4 shared, "I got a little more intimidated just because, especially watching the facilitator do pre-brief and debrief."

Participant 4 added, “Oh my gosh, I'll never be able to do that,” indicating a lack of confidence.

The third theme, Varying Levels of Engagement, was the taxonomy provided to capture participants’ experiences related to subthemes (1) Fully immersed in simulation practice, and (2) Superficially engaged. Nine out of ten nursing faculty shared their engagement experiences with simulation as fully immersed in simulation practice. For example, Participant 3 expressed, “I'm very involved in the conferences and teaching…I mean I'm engaged in simulation and interprofessional education…” Participant 3 added, “I'm engaged in all of them, but primarily high fidelity. So, I teach conferences. I've been to Jamaica and taught a simulation class, and we use all high fidelity mannequins.” Participant 10 shared, “I would still say it was more towards deep now because I am involved with all the planning that goes on. I went back to school and got my simulation certificate post-grad, and I think I've just continued to want to know more about it.” Even after years of doing simulation, Participant 6 expressed, “I would say more superficially engaged myself. So, I just do what I need to do if that makes any sense.” Participant 6 added, “I go in, and I do those simulations, and it's all set up when I get there, and I do what I need to do in that. But I'm not engaged beyond what I need to do for the course.” Thus, the subtheme, Superficially Engaged, emerged.

All participants demonstrated a positive attitude and belief in simulation’s pedagogy, motivating them to continue engaging in simulation. For example, Participant 4 expressed, “I was amazed by the effectiveness. It was apparent right away how effective simulation is in the students' learning and engagement with material and critical

thinking" (referring to how simulation impacts student learning positively). Participant 6 stated, "I loved the idea of students being able to get in and really play the role of the nurse, and to be able to see for themselves what they really have learned and what they still need to learn. And I think that if in it's a safe environment they're not going to harm anybody. So, I really liked that aspect of it." These participants' statements led to the subtheme, motivated by simulation's pedagogy framing the fourth final theme, Pedagogical Engagement. The above final themes and subthemes and were illustrated in Table 2 and Figure 1.

Table 3

Final Themes and Subthemes

Final themes	Subthemes
Evolving engagement	• From required to intentional involvement • From being inexperienced to becoming experienced • From awed to passion
Emotional response	• Felt negative and positive emotions
Varying levels of engagement	• Fully immersed in simulation practice • Superficially engaged
Pedagogical engagement	• Motivated by simulation's pedagogy

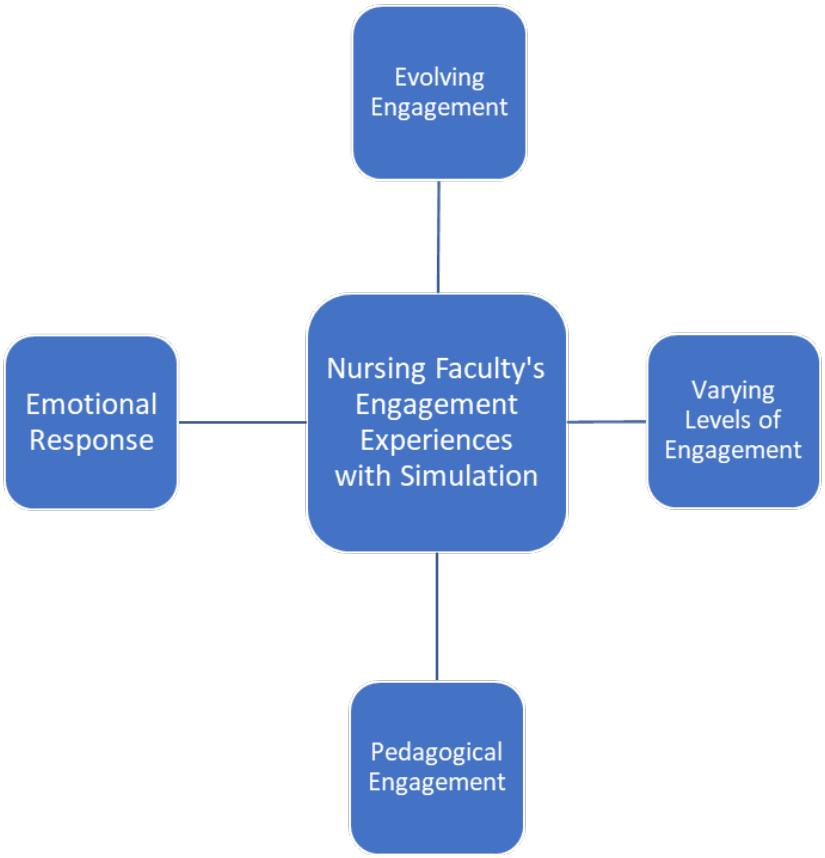

Figure 1. Four final themes.

Discrepant Cases

There were no discrepant cases because all the participants went through an initial prescreening survey that aimed to identify participants who meet the study's inclusion criteria. Some participants were interviewed through video calls, and others were phone interviewed, but the same interview protocol guide was used in interviewing all faculty who participated in the study.

Evidence of Trustworthiness

A study's evidence of trustworthiness is demonstrated in its credibility, transferability, dependability, and confirmability (Ravitch & Carl, 2016). In this study, measures were undertaken to ensure the study's credibility, transferability, dependability,

and confirmability. Thus, evidence of trustworthiness is established. This section provides a detailed discussion of the steps and strategies used to indicate evidence of this study's trustworthiness.

Credibility

Credibility in the constructivist approach refers to the confidence that data analysis and interpretation are traceable back to participants' original data (Billups, 2014; Kortsjens & Moser, 2018; Ravitch & Carl, 2016). Strategies to ensure credibility includes triangulation, member checking, and prolonged engagement (Kortsjens & Moser, 2018). In this study, steps to ensure credibility included member checking, persistent observation, and triangulation. I used member checking, where I asked participants to review and confirm the accuracy of their interview's verbatim transcript. In analyzing the data, I engaged in a reiterative reading process and re-reading each interview transcript before starting with the coding process. Then, I completed three coding cycles that involved the reiterative process of coding and labeling, then recoding and relabeling the meaning units from each interview transcript. I followed two categorization processes as I simplified categories while maintaining reflexivity by going back to the original data to ensure that the results accurately validated participants' lived experiences. This reiterative process of examining data characteristics, ensuring that the final theory provided reflected an in-depth insight into the data, is known as persistent observation (Kortsjens & Moser, 2018). I also used a triangulation strategy where I had a peer debriefer, and a methodologist reviewed my data analysis to ensure codes, categories, and themes were drawn from participants' actual experiences. My supervisory committee

members also reviewed my data analysis against interview transcripts and agreed that codes, categories, and themes represented participants' original data. This process is an investigator triangulation strategy that ensures data analysis and interpretation best represented the original data (Kortsjens & Moser, 2018).

Transferability

Transferability is another dimension to a study's trustworthiness, demonstrated in the thick and rich contextual descriptions of the participants' experiences. Thus, it gives readers the feeling that their experience overlaps with the story told in the research (Shenton, 2004; Tracy, 2010). Also, transferability allows the researcher to evaluate findings for comparable transferability to other contexts and respondents (Billups, 2014). In this study, transferability was enhanced by following measures of ascertaining rich and nuanced contextual information are obtained from participants who have firsthand experience with HFS. These measures included a purposive sampling method based on inclusion criteria and the use of instrumentation aligned with this study's research method. The planned purposive sampling based on the inclusion criteria was implemented by conducting a prescreening survey, identifying participants who met the inclusion criteria. Therefore, the nursing faculty interviewed were sources of full and rich contextual information on this study's phenomenon of interest. A responsive and iterative data collection process was done using an interview protocol guide composed of open-ended questions. Throughout the process, I maintained reflexivity, continually reminding myself of my role as a researcher, ensuring I do not introject my personal experiences as I read and analyze the participants' responses.

Dependability

Another element to a study's trustworthiness is its dependability. A study's dependability is reflected in the sufficiency of the study's procedural details (Billups, 2014; Kortsjens & Moser, 2018; Ravitch & Carl, 2016). In this study, dependability was demonstrated in the research design's description, data collection procedure, transparency in reporting steps and missteps, and ethical issues and challenges met throughout the study. Throughout the process, I ensured that the study is guided by the procedural details delineated in the study's proposal. I maintained transparent communication with this study's supervisory committee providing updates on the progress of the study. Potential ethical challenges and discrepant cases that may affect the procedural plans were also consulted with Walden University's IRB and the supervisory committee. I had the participants check the interviews' verbatim transcript and made the necessary adjustments based on the participant's feedback. Also, I used a peer debriefer who reviewed the interview protocol guide used for the interview. My supervisory committee and a qualitative research methodologist reviewed the codes and categories drawn from data analysis. I maintained audit trails of records, where I developed a spreadsheet recording the data collection processes' operational details. In the spreadsheet I developed for the coding process, I added a section that showed my reflective thoughts as I draw codes from the responses.

Confirmability

Confirmability is another element to trustworthiness where the level of confidence is established that study findings were drawn from the narratives of participants'

responses. Confirmability is ascertained when measures like audit trail and reflexivity (Kjortsens & Moser, 2018; Ravitch & Carl, 2016) are maintained throughout the study, ensuring participants' experiences and not the researcher's biases will shape the findings of the study. The study's confirmability was ensured through a reflexive process maintained throughout this study. The audit trails of records in the form of a spreadsheet that tracked the study's operational details of data collection processes also ascertained the study's confirmability. I followed the Epoche (Moustakas, 1994) process before and while collecting data. Throughout the study, I self-reflected and maintained awareness of my personal experiences on the simulation that may be introjected as I interview participants and analyze their responses. The notes added next to the first and second cycle spreadsheet recorded reflective appraisal of my thoughts and biases. This study's confirmability is strengthened with participants reviewing and confirming interview transcripts' accuracy and using a peer debriefer. I consulted a qualitative research methodologist to review my data analysis process and the emergent codes and categories. I discussed the data analysis results with my supervisory committee members, and both agreed with the study findings.

Results

The research question was, what was the nursing faculty's perceived level of engagement with their high-fidelity simulation experiences? Based on an in-depth review and analysis of the participants' lived experiences with high fidelity simulation, I arrived at four final themes answering this research study's question. The four final themes were:

Evolving Engagement, Emotional Response, Varying Levels of Engagement, and Pedagogical Engagement.

Theme 1: Evolving Engagement

Nine out of ten participants in this study shared their engagement with simulation as evolving experiences. Initially, participants participated in simulation because they were told to do so either by their immediate superiors or senior peers. Although their initial participation was not intrinsically motivated, this engagement paved the way for subsequent participation in simulation and other simulation-related activities resulting in where they are now in their engagement experiences in simulation. For example, as her story unfolded, Participant 2 stated,

> I was working in the learning resource center, or the lab and the dean had purchased a simulator and basically told us to figure out how to integrate into the curriculum. Soon after that, I went to one of the conferences. I'm constantly looking to go to conferences to learn more, to network, to see what new products are out there, meet with vendors. I've gotten very involved in INACSL.

Participant 9 shared a similar story where she spoke about her initial participation in simulation, leading her to where she is now in her role as a simulation educator. Participant 9 shared, “I really got thrown into it…So we were told we have to be on campus that day and do X, Y, Z.” Then, as Participant 9 story continued, she recalled:

> So, I was sold for it. That’s how I got interested in simulation. Then I became more involved. As the years go on, I became the simulation coordinator, and then

> I got really into it. I am very involved in committees. I do have a lot of experiences to make sure that the organization is moving better.

Based on the above statements and other participants' similar experiences, the sub-theme, from required to intentional involvement, came about. Thus, illuminating a common thread of evolving experiences for the nine participants where from initial participation that was extrinsically motivated, intentional involvement continued sustaining their engagement experience with simulation to this day.

Participants' role in simulation initially started with no experience, to becoming experienced in HFS is another common thread of experiences reflecting evolving engagement. This experience was shared by nine out of ten participants.

Participant 1 recalled:

> I didn't even know there was such a thing as a high-fidelity simulation at that point. So, I basically taught myself. So, it was a rudimentary running of simulation at that point. So again, to where it's evolved now to how we did it then is like apples and oranges.

As her story unfolded, Participant 1 continued,

> I got my certificate in a simulation where it really started to define what the simulation experience is all about. Especially after I came back with the certificate in a simulation, I became the expert in my small little community college.

Participant 2 shared a similar sentiment when she initially started in her role in simulation. She stated, "I felt lost…. It was like fly by the seat of your pants and figured

out what you were going to do…. I made a lot of mistakes." In her story, Participant 2 continued, "it continues just to grow and improve, and there's always change…. I've also mentored a lot more people in the last few years. Other people that are newer to simulation and have come to me for my expertise." The essence of these statements was captured in the subtheme, from inexperienced to becoming experienced. This illustrates how their engagement in simulation started with no experience or lack of knowledge to become knowledgeable and experienced simulation educators.

With their initial participation in simulation, all participants recalled feeling awed with what they saw in high-fidelity simulation. Such captivated feeling grew to passion as nine participants continued engaging in simulation. For example, Participant 9 shared, "So I was sold for it. That's how I got interested in simulation." As she told her story, Participant 9 recalled,

> I was excited. I mean, the whole concept kind of seemed intimidating to start with. I felt so passionate because I know what I'm doing. So, knowing what we've been putting out there and what the student can gain out of it, and being that I'm a part of the pioneers in this new teaching. I was really excited about it.

Participant 4 shared her initial experience as, "I was in awe because I watched the students transform from being kind of egotistical." Although she is just starting in her engagement experience in simulation, Participant 4 shared,

> I am passionate to learn about simulation but continue to be a little wary about ever being able to do it myself. So, my passion is still there…. I have continued

faith in the learning process. Continued commitment to critical thinking and deep learning.

Participant 1 shared a similar experience, stating, “it was like this whole new world of teaching was evolving before my eyes. Participant 1 continued, “I mean, literally, I was hooked…that's where I started doing research and started writing papers…The passion just continued.” Nine participants' evolving engagement started with feeling awed during their initial participation in high fidelity simulation. Such captivated feeling eventually evolved to passion, which is a much deeper and stronger feeling sustaining their continued engagement in simulation to this point.

From required to intentional involvement, from inexperienced to becoming experienced, and from awe to passion were the common thread of experiences illuminated from participants’ unfolding stories about their lived experience with simulation. Thus, Evolving Engagement was the overarching final theme used by translating participants’ shared experiences in simulation.

Theme 2: Emotional Response

Narratives from ten participants indicated that engagement in simulation inspired various feelings, both negative and positive. Many participants voiced frustrations during their earlier years in simulation, particularly during the first and second time engaging in simulation. Such a feeling of frustration and lack of confidence primarily stemmed from a “lack of training or support.” During the interview, negative emotions were particularly noted in Participant 3 and Participant 5 stories. Participant 3 shared, “I felt kind of lost because back then we didn't have very much in the way of training. It was kind of fly by

the seat of your pants and figured out what you were going to do." Participant 5 clearly recalled her experience stating,

> My first initial experience, I really had none. No experience whatsoever. So, it was pretty superficial. I had never touched a simulator before, high-tech or low fidelity, so I had never done a simulation before. I didn't know what debriefing was, pre-briefing, none of it. And they just throw me in there, and I didn't know.

Participant 5 continued,

> I was completely lost. I didn't know what to say to the students. The terminology and everything that they were using were a little bit too much. I felt very overwhelmed; at least the first day… the first one was a disaster. So, I told my dean that I needed to have at least some training at least to turn it on.

While other participants negative emotions were associated with a lack of training or no support, Participant 4's sentiment stemmed from her lack of knowledge and feeling overwhelmed with the amount of work involved in the simulation. Participant 4 shared,

> I got a little more intimidated just because, especially watching the facilitator do pre-brief and debrief…. So, I got a little intimidated with the amount of work and know-how that you really do have to be able to do high fidelity.

Participants noted that initial negative feelings associated with a lack of training or support, inexperience, and lack of knowledge gave way to positive emotions. Such positive emotions, which were characterized by "awe, captivation, excitement, fun, amazement, hooked, enamored, passionate," were associated with discovering simulation's entire pedagogical attributes. Participant 4 shared her feeling of awe as she

observed a colleague facilitate debriefing post-simulation. She stated, “I just was in awe of her ability to take what the students were experiencing and going through and then tying it together with learning objectives…” Participant 5 shared, “So I loved it…. I started feeling a little bit more confident. I did get excited… at that time we were doing a birth, so I was like, Oh wow!” Participant 2 recalled, “when I went to my first conference, I became truly excited about simulation. So, I've loved it.” I noted positive emotions from all participants during the interview. As Participant 3 explained,

> The first time I was enamored, and it just kind of grew, and I looked at the possibility of what we could actually do with high fidelity. So, I've been around about 12 years… loved it, thought it was the greatest thing ever. So, I fully was immersed and engaged totally from then until now.

Such a positive emotion was noted from Participant 1, stating, “…it was like this whole new world of teaching was evolving before my eyes. I mean, literally, I was hooked… that's where I started doing research and started writing papers.” A similar tone of voice indicating positive emotions was noted from Participant 9 when she stated, “So I was sold for it. That is how I got interested in simulation. I was excited. I mean, the whole concept kind of seemed intimidating to start with…” The above statements indicated that participants’ emotional responses ranged from negative to positive. These emotions also seemed to move from negative to positive as participants' engagement experience with simulation continued to evolve. Thus, it framed the final theme, Emotional Response.

Theme 3: Varying Levels of Engagement

Nine out of ten participants claimed that they are fully immersed in the simulation practice. Being fully immersed in simulation practice was characterized by being deeply involved, actively engaged, deeply immersed, and totally engaged. Also, fully immersed is associated with contributed to simulation practice, involved in simulation within the work organization, deeply connected with the simulation community, and values lifelong learning related to simulation. Participant 3 described her engagement experience with simulation as,

> I'm very involved in the conferences and teaching…. I mean, I'm engaged in simulation and interprofessional education…. I'm engaged in all of them, but primarily high fidelity. So, I teach conferences, I've been to Jamaica and taught a simulation class, and we use all high-fidelity mannequins.

Participant 9 shared a similar experience stating, "I'm fully engaged…meaningfully; they are intense. I was interested in it. It was something that had fascinated me, I loved it, and I want to know more. It's my passion. It's what I'm looking forward to."

Participant 10 associated her deep engagement with simulation with her involvement in simulation planning and pursuing educational advancement in simulation. Participant 10 stated,

> I would still say it was more towards deep now because I am involved with all the planning that goes on. I went back to school and got my simulation certificate post-grad, and I think I've just continued to want to know more about it.

Also, for these nine participants, fully immersed in simulation practice resulted from their evolving engagement in simulation. As being fully immersed in the role did not occur instantaneously but progressed over time. As it unfolded in Participant 3's story, she shared

> The first time I was enamored, and it just kind of grew, and I looked at the possibility of what we could actually do with high fidelity. So, I've been around for about 12 years. I loved it, thought it was the greatest thing ever. Um, so I fully was immersed and engaged totally from then until now…but I think it was a gradual progression over time.

A similar experience was shared by Participant 1, stating, "So as time has progressed, I've become more and more involved." Likewise, Participant 2 initially started as a learning resource center; then she became very involved in simulation, stating

> Soon after that, I went to one of the conferences. I am constantly looking to go to conferences to learn more, network, and see what new products are out there, and meet with vendors. I've gotten very involved in INACSL.

Although most of the participants indicated fully immersed in simulation practice, one participant did not feel the same way despite years of engaging in simulation. In Participant 6 story, she shared,

> I would say more superficially engaged myself. So, I just do what I need to do if that makes any sense. I go in, and I do those simulations, and it's all set up when I get there, and I do what I need to do in that. But I'm not engaged beyond what I need to do for the course.

Notably, superficial engagement in simulation did not mean that the participant has negative emotions or simulation attitudes. Participant 6 claimed, “Not because I don’t see it as being valuable or important. I have other interests and focus that I’m moving towards.” Thus, indicating that simulation is a valuable learning tool for this participant, but it is not her focus of interest. In the context of simulation, superficial engagement is associated with no desire to engage deeply with simulation as it was not the focus of interest for the participant.

The statements above were a common thread of experiences among nine faculty related to their engagement experience with simulation as fully immersed. Also, evolving engagement in simulation led to the experience of being fully immersed in the simulation. Although all participants shared the same positive attitudes and beliefs in simulation, not all participants were fully immersed in simulation practice. One participant was superficially engaged despite years of experience. Thus, the final theme, Varying Levels of Engagement, was used to capture these participants’ experiences.

Theme 4: Pedagogical Engagement

From the participants’ narratives, simulation’s whole pedagogy plays a role in motivating the nursing faculty to engage in simulation. It was also noted that HFS’ technological innovation was a significant factor in heightening participants’ positive experience with simulation. I sensed such a positive experience from the participants' tone of voice during the interview. Participant 5 vividly recalled, “With the high-fidelity simulator, they can breathe, they can open their eyes, you can see them turning blue, you can see the chest rising and falling, you can hear bowels.” Participant 8 shared, “And of

course when the medical mannequin was turned on and the bells and whistles, they can do all these things. Yeah, that was definitely wonderful." In addition to HFS' technological attributes, participants recognized that HFS is an innovative tool that heightened students' overall learning experience. Participants shared beliefs that simulation provides a multi-pedagogical approach; thus, it facilitates learning effectively. The following were participants' statements indicating a positive attitude and beliefs toward simulation:

> It's fun to see the light bulbs go off when they start to put all the pieces together from their different classes. I mean, that's what keeps anybody motivated. (Participant 3)
>
> I was amazed by the effectiveness. It was apparent right away to me how effective simulation is in the students' learning and engagement with material and critical thinking. (Participant 4)
>
> I loved the idea of students being able to get in and really play the role of the nurse and to be able to see for themselves what they really have learned and what they still need to learn. And I think that if in it's a safe environment they're not going to harm anybody. So, I really liked that aspect of it. (Participant 6)
>
> At the time, I was very impressed with the technology of it, but also the ability to like to demonstrate something to have the students react to it and think critically. (Participant 9)

The above statements indicated that positive emotions and positive experiences were related to simulation's technological attributes and multi-pedagogical approach.

Such experience also resulted in participants' positive attitudes and beliefs towards simulation, so they were motivated to continue engaging in simulation and to learn and explore more about it. Thus, leading them to where they are at now in their engagement experience in simulation. This finding indicated that the simulation's whole pedagogy played a central role in participants' evolving engagement in simulation. Hence, the final theme, Pedagogical Engagement, was drawn.

Summary

The research question that guided this study was, what are the nursing faculty's perceived level of engagement with their high-fidelity simulation experiences? Participants lived experiences of the phenomenon of interest led to four main final themes: (1) Evolving Engagement, (2) Emotional Response, (3) Varying Levels of Engagement, (4) Pedagogical Engagement. The first final theme, Evolving Engagement, was the overarching taxonomy that captured participants' evolution in the simulation experience. This theme translated these evolving experiences of, from required to intentional involvement, from inexperienced to becoming experienced, and from awe to passion at its simplest form that can be traced back to participants' original statement. The second final theme, Emotional Response, validated participants' range of emotions inspired while engaging in simulation. Participants initial engagement with simulation evoked negative feelings related to various reasons like lack of training or support, lack of knowledge or experience in simulation, lack of confidence to perform simulation, and feel intimidated with the amount of simulation work. However, such negative response moved to positive emotions as participants discovered and learned more about

simulation. The third final theme, Varying Levels of Engagement, translated the participants' position in their engagement experience in simulation. Nine participants were fully immersed in the simulation practice, while one participant was superficially engaged. However, all participants shared the same positive attitude and beliefs towards simulations value in student learning. The fourth final theme, Pedagogical Engagement, was used as simulation's whole pedagogy played a significant role in the participants' evolving engagement in simulation. Participants' initial response to HFS was positive, attributing this to its technological attributes and multi-pedagogical approach. Such initial response developed into positive attitudes and beliefs towards simulation that were pivotal in the participants' evolving simulation experience.

Chapter 5 presents the interpretation of this study's findings within the context of this study's conceptual framework, previous and existing literature in HFS, and related studies from other disciplines. I discussed in chapter 5 the limitations, recommendations, and implications of this study. Also, the next section commenced with the conclusion highlighting the essence of this study.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

This chapter includes the overview of this study's key findings, how the study results were confirmed, disconfirmed, how they extended the previous and current research findings related to the study, and the inferences drawn from the results to the current theory. This chapter also describes the study's limitations, recommendations for further research, and the implication for positive social change at the individual, organizational, and societal levels. Furthermore, a vital takeaway message was highlighted at the end of this chapter, capturing this study's essence.

This study was conducted to explore the nursing faculty's perceived level of engagement with their HFS experiences. The study used IPA to guide data collection methods, analysis, and interpretation of the nursing faculty's perceived level of engagement experience with HFS. The study focused on the meaningful gap identified in the literature on HFS, where the faculty's level of engagement with HFS experiences was unknown. The nursing faculty's level of engagement with HFS is a critical link to the adoption and successful integration of HFS in the nursing program. Thus, the study will help the readers examine this study's application of engagement in the context of HFS so that they can learn from it. It will also allow nursing education stakeholders to apply the principles and learned lessons to similar scenarios or situations. The study's findings led to transferability, where HFS scholars could transfer the knowledge learned from this study in developing faculty development initiatives that support the faculty's growth in their engagement with HFS.

A semistructured interview was conducted with 10 nursing faculty who met the inclusion criteria for this study. This study's key findings included four final themes, which illustrated the nursing faculty's lived experiences using HFS: Evolving Engagement, Emotional Responses, Varying Level of Engagement, and Pedagogical Engagement.

Interpretation of Findings

This phenomenological study, which used the conceptual model AMEL, literature from scholarly works on simulation, and related studies from other disciplines, led me to a more in-depth understanding of the 10 nursing faculty's lived experiences with HFS. Although engagement is a widely researched concept across many disciplines, there is a gap in the literature on nursing faculty's engagement level with their HFS experiences. This study's findings addressed that gap, confirmed, and extended existing knowledge found in the reviewed literature and related studies within the simulation discipline and from other disciplines.

In this study, participants initially participated in simulation because it was required or expected of their role that eventually led to intentional and deeper involvement in simulation. Such findings confirmed in AMEL's conceptual model that engagement starts at participation, which is a superficial type of engagement characterized by the behavior of going through the motions without meaningful participation (Whitton & Moseley, 2014). Also, this study findings confirmed that subsequent engagement in activities does not take place in the absence of initial action taken regardless of the reason for participating (Whitton & Moseley, 2014; Kahu, 2013;

Ryan & Deci, 2000). Thus, further action will not occur without taking the initial action of participation. Whitton and Moseley (2014) claim that engagement in learning starts with extrinsically motivated participation, leading to a deeper level of engagement is extended in this study.

Participants' feeling of awe the first time they experienced HFS because of its technological innovations confirmed Whitton and Moseley's (2014) assumption relating to captivation as a dimension of engagement. This feeling of awe also confirmed that attributes to technological engagement are critical to creating a captivating and immersive experience (Csikszentmihalyi, 1992; O'Brien & Toms, 2008; Whitton, 2011). Such evolving experience of awe leading to passionate involvement with simulation confirmed AMEL's premise that captivation is extended across series of temporal events when the person develops strong emotions towards the activity (Whitton & Moseley, 2014). This participants' evolving experience of awe to passion confirmed that more profound engagement results from emotion's intensity attached to learning, feeling of belongingness, and or immediate enjoyment and interest in the tasks (Kahu, 2013). The knowledge that the person's initial engagement eventually progresses to sustained engagement as influenced by factors that heighten the participants' experience facilitating their progression within the continuum (Csikszentmihalyi, 1992; O'Brien & Toms, 2008) is extended in this study.

In this study, participants evolved from inexperienced to experienced simulation educators foregrounded their positive attitude and beliefs towards HFS' technological innovations and pedagogical approaches. This finding confirmed that deeper engagement

is facilitated when the person's thoughts, feelings, intentions, and senses are aligned with the activity's goals (Csikszentmihalyi, 1992; Harper & Quaye, 2009; Kahu, 2013). Knowledge from earlier studies that deep engagement encompassed psychological commitment (Kahn,1990) characterized by immersion, absorption, passion, affiliation, and incorporation of self to one's role within the organization (Bryson, 2016; Graffigna, 2017; Kahu, 2013; O'Brien & Toms, 2008; Maguire, Egan, Hyland, Maguire, 2017; Whitton & Moseley, 2014) is extended in this study. This knowledge is confirmed in the participants' desire to deepen and expand their knowledge and simulation skills, leading them to become experienced and even experts in simulation.

Nursing faculty's lived experiences with simulation as evolving that started from required participation to intentional involvement, from feeling awed to becoming passionate about simulation, and from inexperienced to experienced framed this study's final theme Evolving Engagement. This Evolving Engagement theme confirmed that engagement is a multidimensional construct suggesting hierarchy from superficial to deep engagement (Whitton & Moseley, 2014), and occurs in a continuum (Carman et al., 2013; Csikzentmihalyi, 1992; O'Brien, 2016; Graffigna, 2017). This finding confirmed that engagement at various contexts: learning, technology, organization, and personal, is a complex construct that is a multicomponential because it involved cognitive (Corno & Mandinach, 1983; Graffigna, 2017); and behavioral, emotional or affective, and psychological (Appleton et al., 2006; Barnacle & Dall'Alba, 2017; Graffighna, 2017; Kahn, 1990) elements. Also, the knowledge that engagement is a process (O'Brien &

Toms, 2008), and as an outcome (Whitton & Moseley, 2014) because it is a self-transformative (Graffigna, 2017) is extended in this study.

Participants' engagement experience in simulation inspired a range of negative and positive emotions and extended the existing literature and related studies in simulation and engagement. For instance, factors that negatively influence attitude towards simulation and are barriers to intention to adopt HFS includes lack of faculty support and training (Doolen et al., 2016) and lack of knowledge (Beroz, 2017; Fey & Jenkins, 2015; Jeffries et al., 2013; Jeffries et al., 2015). This knowledge is confirmed in this study's finding where at the beginning of their engagement experience with simulation, most participants felt frustrated because they were "thrown in a simulation" with no training and lack of support. This knowledge is also confirmed in participants' negative emotions associated with feeling intimidated and lack of confidence related to inexperience and lack of knowledge.

However, these negative emotions paved the way for positive emotions as HFS' technological attributes captivated the participants' attention. This negative attitude eventually led participants to develop positive attitudes and beliefs as they experienced simulation's positive impact on students' learning. This finding confirmed and acknowledged that there are factors that make engagement experiences enjoyable, engaging, and immersive (Csikszentmihalyi, 1992; O'Brien & Toms, 2008; Whitton & Moseley, 2014), and such experience is heightened if more of these elements are present (O'Brien & Toms, 2008). Also, O'Brien and Toms' (2008) claimed that user-engagement with technology occurs as a process demonstrated by "desirable and essential human

response to computer-mediated activities" (p. 938) is extended in this study. Participants' emotions moved from negative to positive as participants' continued engagement experience with simulation led to the discovery of simulations' multiple possibilities to positively impact students' learning. Thus, a positive attitude and strong beliefs towards simulation developed and is further cemented by their desire to deepen and expand their knowledge in simulation. This finding extended in this study the idea that positive topic-related emotions, interest, and enthusiasm from life-integrated learning are linked to enhanced student engagement (Kahu et al., 2015). Also, complex cognitive engagement (Corno & Mandinach, 1983; Kahu, 2013; Pitterson et al., 2016; Maguire et al., 2017) driven by intrinsic motivators (Malone, 1980) and other factors influencing positive attitudes towards HFS (Craswell et al., 2016; O'Brien & Toms, 2018; Whitton, 2011) is extended in this study.

In this study, participants' motivation to continue engaging in simulation is significantly influenced by the simulation's technological and pedagogical attributes that positively impact students' learning. Participants shared that the first time they experienced HFS, they were awed by its technological innovations. However, these technological attributes alone will not sustain engagement as some participants shared that their continued engagement with simulation was because of its multi-pedagogical benefits. Thus, this finding confirmed this study's conceptual model and extended in this study its theoretical underpinnings that captivation is a temporary feeling of enthrallment and immersion as it is contingent on the presence of technological attributes (Whitton & Moseley, 2014). Elements like the participant's curiosity, beliefs, positive attitude

towards the activity, and perceived benefits (Craswell et al., 2016; Csikzentmihalyi,1992; O'Brien & Toms, 2008; Whitton, 2011) are critical factors to engagement were also extended in this study. This finding on participants' engagement related to HFS's technological attributes confirmed O'Brien and Toms' (2008) assumption that aesthetic, sensory appeal, variety or novelty, and interactivity are critical attributes to technological engagement with learning. Also, participants' engagement related to simulation's pedagogical benefits extended in this study Craswell et al. (2016) claim that individuals engage in activities because of its perceived benefits. Thus, optimizing the benefits of simulation overcome the barriers to engagement. Participants' pedagogical values aligned with simulations' pedagogical underpinnings motivated their continued engagement in simulation. Thus, the assumption that for engagement to occur, a connection must exist between the activity and the participant's core values and beliefs (Draper, 1999) is extended in this study. Such pedagogical engagement was pivotal to participants' adoption of HFS and in sustaining its use to present. Thus, complex cognitive engagement (Corno & Mandinach, 1983; Kahu, 2013; Pitterson et al., 2016; Maguire et al., 2017) driven by intrinsic motivators (Malone, 1980) and other factors influencing and sustaining engagement (Craswell et al., 2016; O'Brien & Toms, 2018; Whitton, 2011) is extended in this study.

In this study's findings, participants have varying levels of engagement experiences with simulations where nine participants felt that they are fully immersed in simulation practice while one participant felt superficially engaged in its simulation role. Thus, extended in this study, its conceptual model's premise that there are dimensions:

superficial and deep to engagement where one is at a dimension or level of engagement that is more profound or deeper than others (Whitton & Moseley, 2014). In this study, fully immersed in simulation practice is characterized by meaningful and sustained engagement indicated by lifelong learning about simulation, joining and contributing to simulation organizations nationally and internationally, obtaining simulation certification, and advancing education in the simulation discipline. Also, investing time and resources in simulation-related activities, assuming a leadership role in simulation, sharing expertise and acting as faculty champion, and involvement in simulation's scholarly works were attributed to being fully immersed in simulation role and practice. Although some participants were not actively engaged in simulation beyond their work organization, they believed that they are fully immersed in their role because of active involvement in planning and developing simulation scenarios and are experienced in delivering simulation instruction. The stated characteristics attributed to fully immersed in the simulation role and practice extended in this study AMEL's premise that there are various dimensions to deep engagement in learning as characterized by different elements associated with it (Whitton & Moseley, 2014). Whitton and Moseley's (2014) assumption that deep engagement at the dimension of incorporation, the learner sees oneself as an integral part of the activity, confirmed this study's concept of fully immersed in the simulation role and practice. Also, factors like contributing to simulation organization and sharing expertise attributed to being fully immersed in the role are aligned with the knowledge that there is an epistemic engagement indicated by the development of activities and practices within the community of discipline (Whitton & Moseley, 2014).

In this study, the overarching factors indicating immersed fully in the role is aligned with the construct belonging (Whitton & Moseley, 2014) as it was characterized by collaborative decision-making and ownership of the process and outcome, which is partnership far from the spectrum of participation and involvement (Bryson, 2016).

Further, one participant felt superficially engaged and attributed this experience with various factors. Examples of these factors are: the focus of interest is not on a simulation, technology use is not intuitive for her, not engaged beyond what is required of the assigned course she teaches, and not connected with the simulation community. However, this participant believes and values simulation's pedagogical impact on learning. The superficial engagement in this study's context mirrored other discipline's definition of superficial engagement experience as indicated by behaviors of participating and attending at a cognitive level that is task-based and could be motivated extrinsically (Appleton et al., 2006; Libbey, 2004; Whitton & Moseley, 2014). Also, participants' positive attitude and belief towards simulation confirmed superficial engagement at a dimension of attention characterized by a positive attitude and attention to the activity at the cognitive level (Whitton & Moseley, 2014). However, the reason why this participant continued engaging in the simulation was not established in this study.

The participants' unique experiences lent varying perceptions in their engagement experiences in simulation. Thus, it indicated that engagement at a deep and meaningful engagement level is a complex construct known only to the person experiencing it. This finding extended in this study the knowledge that the meaning of deep engagement is

created by the person who experiences it and is understood only within the context in it occurs (Creswell, 2016; Creswell & Creswell, 2018; Ravitch & Carl, 2016; Patton, 2015).

Limitations of the Study

As discussed in Chapter 1, there were no previous studies on the nursing faculty's perceived level of engagement experience with HFS located during the literature review. Thus, literature and scholarly works from other disciplines related to the construct engagement were used to frame and guide this study. Another limitation identified in Chapter 1 was potential biases that may influence the analysis and interpretation of this study's findings stemming from my professional background in simulation and relationship with the participants. To avoid threats to the study's transferability and dependability, reflexivity, and transparency using the audit trails, journals, and personal notes were maintained in this study. These documents were made available to my dissertation supervisory committee chair and member for review. Also, participants were asked to review their verbatim interview transcripts to confirm content accuracy. I used a peer debriefer to review my codes during the coding process. I also shared with my supervisory committee members and a qualitative methodologist at Walden University this study's data analysis. Thus, professional viewpoints were provided, ensuring that this study's analysis and findings were traceable back to participants' statements. However, I should have conducted a pilot study as conducting one would force me to refine the interview guide to delve deeper into concepts that were not established in this study.

Recommendations

The recommendations made were drawn from my study's findings, conceptual model, and knowledge discovered from reviewed literature and related studies in Chapter 2. As simulation's pedagogical attributes played a central role in participants' engagement in simulation, future studies are recommended to determine how the absence or lack of simulation's technological elements impact nursing faculty's evolving experience in simulation(Csikszentmihalyi, 1992; Kearsley & Schneiderman, 1998; O'Brien & Toms, 2008; Whitton, 2011). A follow-up descriptive quantitative research study focusing on attributes associated with the concept fully assimilated in simulation roles and factors facilitating full assimilation in simulation practice is recommended. Informed by my study's findings, simulation experts and scholars should revisit and revise current simulation training programs to include initiatives that promote and sustain nursing faculty role assimilation in simulation practice.

The nursing practice's recommendations are to use knowledge derived from this study's findings to attract nursing faculty in simulation educators' roles. For example, orienting new nursing faculty includes simulation orientation that allows immersive role and full experience of HFS' technological and pedagogical values at initial participation. The findings of this study also facilitate nursing faculty's evolving experience at a deep level, characterized by role assimilation through connectedness with the simulation community within and outside work organization. Further, nursing school leaders should promote and sustain the nursing faculty's role assimilation in simulation practice by

supporting lifelong learning and simulation-related activities like contributing to broader simulation organizations and simulation scholarly community.

Applying my study's findings, conceptual model, and theoretical underpinnings in expanding simulation use in nursing education programs are recommended for higher education. Recommendations include creating a mentoring and coaching program between schools with fully integrated simulation programs and new schools starting a simulation. In this program, nursing faculty experts in simulation practice are provided with opportunities to share their knowledge and expertise with other nursing faculty new to their simulation role. Also, expand simulation-based education to other HPE with nursing faculty who are deeply engaged in simulation as conduits. Consequently, optimizing the value of simulation in higher education.

My study findings indicated an interplay of various factors influencing participants' evolution in their simulation engagement experiences. They all initially started inexperienced and lacked knowledge in simulation to become faculty champions and experts in this field. For instance, training and support were critical factors as lack of absence resulted in participants' negative simulation experience. Also, simulations' pedagogical values elicited participants' positive response to simulation at initial participation that eventually led to their positive attitude, strong beliefs, and passion for simulation. Thus, it played a central role in forming and defining participants' evolution in their simulation experiences. Considering these findings, simulation stakeholders, scholars, and faculty champions must come together in forging standards of best practices for orienting, training, and assimilating new faculty in simulation practice. Pivotal to

these best practices is continual support to all simulation educators from multiple levels of the organization's leadership. At a departmental level, establish a one to one mentoring where the new and seasoned faculty engages in a partnered relationship of navigating challenges inherent to simulation practices from inception, transition, and full assimilation in the role. From the nursing program and organization leaders' level, the significance of simulation educators' role in the organization is recognized by investing in simulation educators' growth and advancement in their simulation practice. Provide the nursing faculty with resources to attend a series of simulation training and not limit them to vendors' free training.

Implications

Positive Social Change

Walden University's (2020) mission of providing a diverse community of career professionals with the opportunity to transform themselves as scholar-practitioners to effect positive social change, guided this study to have a positive social impact on multiple levels. Thus, this study's findings would affect positive social change at the student level, at the nursing and healthcare communities, at the nursing discipline level, and at the patient level. The implications for positive social change include a better understanding of the nursing faculty's engagement experiences with HFS. Nursing faculty who are fully assimilated in simulation practice are more confident and effective in adopting and optimizing HFS' technological and pedagogical attributes within their simulation organization and beyond. This study's findings suggest that simulation training

programs must be revisited with potential revisions to include initiatives that support the nursing faculty's full assimilation in their role as simulation educators.

At the individual level. At the student level, learning is positively influenced by fully assimilated nursing faculty in simulation as they are confident and effective in optimizing technological and pedagogical advantages of HFS in the classes they teach. Students who graduated from a nursing program where simulation-based learning practices are effectively implemented will develop confidence in enacting safe and quality care to their patients in clinical settings. Students will have enhanced clinical experiences as HFS provides the learning opportunity not witnessed in the actual practice setting or where learning experiences are limited, like administering medications, starting an intravenous therapy, administering blood transfusion, and other critical skills.

At the organizational level. At the nursing school level, the institution that contributes to higher education standards because of effectively delivered simulation education integrated within the nursing curriculum will earn a reputation in its field. Nursing schools will earn recognition for supplying the healthcare workforce with nursing graduates equipped and confident to face a complex healthcare system's challenge. Nursing schools will also establish reputations among their clinical partners as nursing students placed in the units for clinical practice are more prepared and actively engaged in the patient care process as the training received during simulation mirrors the actual practice settings. Further, healthcare organizations and nursing schools would benefit from this study as increasing the use of HFS in nursing programs help resolves issues on limited clinical placements for students. The clinical sites are not overwhelmed

with the number of students whose education training programs request clinical space for their students as clinical hours could be replaced with simulation hours.

At the societal level. Patient safety is not compromised at the patient level because HFS creates a realistic but non-threatening learning environment where students develop nursing skills without practicing on real patients, avoiding potential patient care errors. Also, patients would receive care from new nurses who are more confident in enacting basic care processes focusing on the patient as an individual rather than the care process. At the community level, the nursing workforce is supplied with nursing graduates ready to enter the nursing practice with a better understanding of the unit's actual care processes. An expertly delivered simulation education would benefit nursing and healthcare communities because new nurses are better prepared and equipped for providing care through their ability to enact care processes.

Methodological Implications

Selecting a qualitative research methodology using the IPA is necessary as the focus of the study nursing faculty's perceived level of engagement with HFS experiences involved the construct engagement, mainly deep engagement. Unlike superficial engagement that could be measured quantitatively (Whitton & Moseley, 2014), measuring deep engagement has been problematic because it is an internal experience known to the person experiencing it (Kahn, 1990; Graffigna, 2017; Whitton & Moseley, 2014). With this, deep engagement is a complex construct where its meaning is created by the one who experienced it and understood only within the context it occurs (Creswell, 2016; Creswell & Creswell, 2018; Ravitch & Carl, 2016; Patton, 2015). Thus, individual

interview using interview protocol is necessary and supported IPA as my study aimed at how participants make sense of their lived experiences with their simulation engagement. With IPA as a methodology, human experiences and perceptions must be described, explicated, and interpreted fully (Creswell, 2016; Patton, 2015; Sloan & Bowe, 2014). Thus, this methodology allowed my study to collect a detailed and thick description of the phenomenon's participants' experience. Thus, it clarified participants' experience engaging in simulation and captured this experience's essence for the participants.

Theoretical Implications

The AMEL model and its theoretical underpinnings guided this study in formulating a research question to find answers to the problem identified. It represented a model describing different levels of engagement, starting from superficial to a deep level. The interview guide was framed from this conceptual model and was used as one of the bases for interpreting this study's findings. AMEL's assumption that there are dimensions to engagement is supported in this study, where participants' perceived level of engagement experience with HFS varies. Also, AMEL's theoretical underpinnings that deep engagement experience is a complex construct demonstrated in this study's findings, where the interplay of various factors that influenced participants' evolving engagement experience led to their full assimilation in their simulation role and practice. Participants' evolving engagement experience in simulation and varying perception in their engagement level supported the knowledge from the education discipline relating to the consolidated perspective of the dimensions of engagement and its hierarchical nature.

Implications to Practice

The findings of my study will serve as a springboard for simulation scholars to develop simulation training programs that will focus on supporting the nursing faculty's growth in their engagement with HFS. For example, a training program for nursing faculty new to simulation should include the active role and immersive activities, allowing the full experience of HFS' technological and psychological attributes. Facilitate growth by promoting connectedness with the simulation community within and outside the work organization. Finally, support lifelong learning to expand knowledge and role beyond work organization.

Conclusion

In conclusion, this study has answered what was unknown about the nursing faculty's perceived level of engagement experiences with HFS. This study yielded essential data as it clarified and captured the essence of participants' engagement experiences with HFS; thus, contributing to the existing body of knowledge on simulation. My study showed that participants' engagement experience with simulation evolved, elicited various emotional responses, motivated by simulation's pedagogical attributes, and varied in level. Currently, all participants are knowledgeable, skilled, and experienced in using HFS compared to when they started engaging in simulation. All participants indicated a positive attitude and strong beliefs towards simulation, and their continued engagement in simulation is motivated by simulation's pedagogical values. Nine participants are passionately involved and fully assimilated in simulation practice and their role as simulation educators. One participant is superficially engaged in its

simulation role, but the reason for continued engagement in the simulation was not clarified in this study. This finding suggested that behind the nursing program's successful integration and adoption of the simulation are nursing faculty who are full invested in their role as simulation educators. Thus, simulation organizations, experts, and scholars need to revisit and revise existing simulation training programs. Recommended revisions to include are training initiatives that will support, facilitate, and sustain the nursing faculty's growth in their role with HFS and other innovative simulation-based pedagogies. Recommendations put forth by this study findings should be considered in framing these training initiatives.

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Appendix A: Email Invitation to Participate in the Study

Email to the Program Director

Dear _____

My name is Filipina Hernandez, and I am a Ph.D. student specializing in Nursing Education at Walden University. I am conducting a research study for my dissertation relating to the nursing faculty's perceived level of engagement with their high-fidelity simulation experiences. The title of the study is: Exploring Nursing Faculty's Perceived Level of Engagement with High-Fidelity Simulation Experiences.

I am sending this email requesting if you could kindly forward the attached invitation letter to your nursing faculty, who may be interested in participating in the study.

The inclusion criteria to participate in the study are the nursing faculty who: (1) have at least a year of experience teaching in any pre-licensure nursing program; (2) use high-fidelity simulation in the assigned nursing courses; (3) teach in nursing school that has high-fidelity simulators; and (4) know the process of simulation including pre-simulation, simulation, and debriefing.

Any nursing faculty who are interested in participating in the study will be asked to complete the survey and participate in an interview if inclusion criteria are met.

The online survey should take no more than 10 minutes to complete and is conducted to determine if the inclusion criteria for the study are met.

If the inclusion criteria are met, the nursing faculty will be asked to participate in a 45 to 60-minute individual interview. The interview is either a phone call, or face-to-face via video call (i.e., Skype, Face Time, or Messenger) at the time and date of their choosing.

The interview will be conducted in a location that is private, comfortable, and safe for the participant and the researcher.

As a way of thanking the participant, a $10 e- gift card from Starbucks will be emailed after the interview.

Should any of your nursing faculty who is interested have questions about the study, kindly contact the primary investigator:

Filipina Hernandez, MSE, MSN-ED, RN

Student, Ph.D. of Nursing

Walden University

Cel. No. 305-213-7589

Filipina.hernandez@waldenu.edu

Walden University's approval number for this study is 01-08-20-0642436, and it expires on January 7th, 2021.

Kindly share this email with your staff, or someone you know who may be interested in participating in the study.

Below is the link that takes you to the consent page and the survey.

https://www.surveymonkey.com/r/85BZ6QG

Thank you for your time!

Filipina Hernandez, MSE, MSN-ED, RN

Email to the Nursing Faculty

Dear Nursing Faculty,

My name is Filipina Hernandez, and I am a Ph.D. student specializing in Nursing Education at Walden University. I am conducting a research study for my dissertation relating to the nursing faculty's perceived level of engagement with their high-fidelity simulation experiences. The title of the study is: Exploring Nursing Faculty's Perceived Level of Engagement with High-Fidelity Simulation Experiences.

I am sending this email to you as I am looking for nursing faculty who may be interested in participating in the study.

The inclusion criteria to participate in the study are the nursing faculty who: (1) have at least a year of teaching experience in any pre-licensure nursing program; (2) use high-fidelity simulation in the assigned nursing courses; (3) teach in nursing school that has high-fidelity simulators; and (4) know the process of simulation including pre-simulation, simulation, and debriefing.

If you are interested in participating, you will be asked to complete the survey and participate in an interview if inclusion criteria are met.

The online survey should take no more than 10 minutes to complete and is conducted to determine if the inclusion criteria for the study are met.

If the inclusion criteria are met, you will be asked to participate in a 45 to 60-minute individual interview. The interview is either a phone call, or face-to-face via video call (i.e., Skype, Face Time, or Messenger) at the time and date of their choosing. The interview will be conducted in a location that is private, comfortable, and safe for you and the researcher.

As a way of my appreciation to the participant, a $10 e- gift card from Starbucks will be emailed after the interview.

If you have any questions about the study, you can contact the primary investigator:

Filipina Hernandez, MSE, MSN-ED, RN

Student, Ph.D. of Nursing

Walden University

Cel. No. 305-213-7589

Filipina.hernandez@waldenu.edu

If you want to talk privately about your rights as a participant, you can call the Research Participant Advocate at my university at 612-312-1210.

Walden University's approval number for this study is 01-08-20-0642436, and it expires on January 7th, 2021.

Below is the link that takes you to the consent page and the survey.

https://www.surveymonkey.com/r/85BZ6QG

If you understand the study well enough to participate, you may continue completing the online survey.

Kindly share this email to someone you know who may be interested in participating in the study.

Thank you for your time!

Filipina Hernandez

Student, Ph.D. of Nursing

Walden University

Email to the Simulation Organization's Research Coordinator

Dear _____

My name is Filipina Hernandez, and I am a Ph.D. student specializing in Nursing Education at Walden University. I am conducting a research study for my dissertation relating to the nursing faculty's perceived level of engagement with their high-fidelity simulation experiences. The title of the study is: Exploring Nursing Faculty's Perceived Level of Engagement with High-Fidelity Simulation Experiences.

I am sending this email requesting if you could kindly forward the invitation letter to the organization's membership, who may be interested in participating in the study.

The inclusion criteria to participate in the study are the nursing faculty who: (1) have teaching experience in any pre-licensure nursing program for at least a year; (2) use high-fidelity simulation in teaching the assigned courses; (3) teach in nursing school that has high-fidelity simulators; and (4) know the process of simulation including pre-simulation, simulation, and debriefing.

Any nursing faculty who are interested in participating in the study will be asked to complete the survey and participate in an interview if inclusion criteria are met.

The online survey should take no more than 10 minutes to complete and is conducted to determine if the inclusion criteria for the study are met.

If the inclusion criteria are met, the nursing faculty will be asked to participate in a 45 to 60-minute individual interview. The interview is either a phone call, or face-to-face via video call (i.e., Skype, Face Time, or Messenger) at the time and date of their choosing.

The interview will be conducted in a location that is private, comfortable, and safe for the participant and the researcher.

As a way of thanking the participant, a $10 e- gift card from Starbucks will be emailed after the interview.

Should anyone interested have questions about the study, kindly contact the primary investigator:

Filipina Hernandez

Student, Ph.D. of Nursing

Walden University

Cel. No. 305-213-7589

Filipina.hernandez@waldenu.edu

Walden University's approval number for this study is 01-08-20-0642436 and it expires on January 7th, 2021.

Below is the link that takes you to the consent page and the survey.

https://www.surveymonkey.com/r/85BZ6QG

Kindly share this email to someone you know who may be interested in participating in the study.

Thank you for your time!

Filipina Hernandez

Student, Ph.D. of Nursing

Walden University

Appendix B: Prescreening Survey Questions

(Completed through SurveyMonkey)

1. I am 18 years old and older: Yes _____ NO _____

2. Which of the following best describes your current primary occupation?

   - Full-time nurse educator in an academic institution
   - Part-time nurse educator in an academic institution and part-time in a clinical setting
   - Adjunct in an academic institution

3. What are your total years of experience working as a nursing faculty?

   - <1 year
   - 1 to 3 years
   - 3 to 5 years
   - >5years

4. What nursing program do you teach as a nursing faculty? (Select all that apply)

   - LPN
   - RN
   - BSN
   - RN to BSN
   - Graduate Program: Please specify _____

5. To what extent is simulation integrated with your primary nursing course?

- **Well integrated:** simulation is used in tandem with the course work (for example, students undertake simulations based on what they learned in the classroom, and learnings from the simulation are discussed in the classroom)
- **Somewhat integrated:** there is some relationship between coursework and simulation, or employed independently of the class work
- **Not integrated:** simulation use in the coursework is optional, or is up to the nursing faculty

6. Does your nursing school have a simulation lab?
   - Yes, we have a simulation lab that delivers low-fidelity, high-fidelity, and screen-based simulation
   - Yes, we have simulation lab, but we do not have high-fidelity simulators
   - No, we don't have a simulation lab
7. What is the primary nursing course you teach where simulation-based education (SBE) is incorporated? (Please choose only one, if you teach multiple courses, please choose the one where you use SBE the most)

   Assesment

   Capstone
   - Community Health
   - Critical Care
   - Ethics
   - Fundamentals of Nursing
   - Gerontology Nursing

- Informatics
- Issues & Trends in Nursing
- Leadership & Management
- Maternal-Newborn/Women's Health Nursing
- Medical-Surgical Nursing
- Nursing Research
- Nutrition
- Pathophysiology
- Pediatric/Child Health Nursing
- Pharmacology
- Psychiatric/Mental Health Nursing
- Clinical Skills
- Nursing Theories
- Transcultural Nursing
- Transitions in Professional Nursing
- I do not teach

8. What type/s of simulation modalities do you use to deliver simulation? (Select all that apply)

Type of Simulation Modalities	Check all that apply	Number of years used	
		< 1 yr	>1 yr
Low-Technology (e.g., *task trainers, low-fidelity models, or mannequins*)			
Screen-Based or PC-Based Simulation (e.g., *web-*			

based software, virtual patients, virtual worlds, screen-based haptic trainers)			
Human Patient Simulation: (*e.g. computer-based complex task trainers and mannequins, realistic patient simulators*) used in high-fidelity replication of complex and high-risk clinical conditions.			
Standardized Patients (e.g. *actors trained to play patients*)			

9. How involved are you in the simulation process? (Select all that apply)
    - Scenario design and development
    - Implementation and facilitation
    - Participant evaluation
    - Debriefing
10. If you have met the inclusion criteria, how do you want to be interviewed?
    - I prefer face-to-face via video call

      Please indicate the method preferred for video calling (e.g., Face Time, Messenger, or Skype)
    - I prefer the phone call
    - I am not interested

Please enter your email address so you will be contacted if you met or did not meet the inclusion criteria for the study. (*This information will NOT be used for other purposes other than for contacting you related to this study*).

Email address: _____

Thank you for your time in completing this survey.

Appendix C: Email to Set-Up an Interview

Dear _____

My name is Filipina Hernandez, and I am a Ph.D. student specializing in Nursing Education at Walden University. I am conducting a research study for my dissertation relating to the nursing faculty's perceived level of engagement with their high-fidelity simulation experiences. The title of the study is: Exploring Nursing Faculty's Perceived Level of Engagement with High-Fidelity Simulation Experiences.

I am emailing you to set-up an interview as you have met the inclusion criteria based on the survey you completed for this study.

The interview is about 45 to 60 minutes that is either a phone call or face-to-face via video call (i.e. Skype, Face Time, Messenger) at the date and time you preferred.

Kindly indicate below the dates and times you want to be interviewed, and the manner you want to be contacted.

Date	**Time (in Eastern Time)**	**Order of preference**	**Indicate how you want to be contacted (*phone call or video call via Skype, face time, Messenger*) and your contact number, Skype ID, or messenger ID.**
Thurs, Feb 6	2:30 – 3:30 PM		
Mon, Feb 10	2:00 PM – 3:00 PM		
	3:30 PM – 4:30 PM		
Tues, Feb 11	11:00 – 12:00 PM		
	2:00 PM – 3:00 PM		
	3:30 PM – 4:30 PM		

Other dates:			

Your interview will be scheduled based on your first preferred date. If this date is not available, you will be scheduled on the next preferred date.

I will send you an email confirming the date and time, and the contact information.

Should you have any questions, do not hesitate to contact me at 305-213-7589.

Sincerely,

Filipina Hernandez

Student, Ph.D. of Nursing

Walden University

Appendix D: Interview Guide and Protocol

Operational Definition of the Central Phenomenon: Nursing Faculty's Level of Engagement with High Fidelity Simulation

The central concept, level of engagement, is defined operationally as the nursing faculty's perceived position within the dimensions of engagement relating to his or her experience with high fidelity simulation. The dimensions of engagement are ascribed as superficial or deep, as perceived by the nursing faculty.

The following are the assumptions of this study:

1. The nursing faculty's meaningful and deep engagement with HFS is critical to its adoption and sustained use in the nursing program.
2. There is a hierarchy in the nursing faculty's position in their engagement experience with HFS, where one is at the dimension or level of engagement more profound than others.
3. A dependence exists in the dimensions of engagement, allowing the nursing faculty to grow in their degree of engagement from superficial to deep engagement with their HFS experience.
4. The change in the nursing faculty's position in their level of engagement experience with HFS is influenced by elements interwoven in each level or dimension of engagement.
5. Optimizing the presence of the elements facilitate the nursing faculty's level of engagement experience from superficial to deep engagement; thus, allowing upward movement within the hierarchy.

6. The absence of the elements hinders the nursing faculty's growth within the continuum of the engagement experience or even result in disengagement.
7. The nursing faculty's position with their engagement experience with HFS is subjective and can be seen from multiple perspectives.

Central Question:

What is the nursing faculty's perceived level of engagement with their HFS experiences?

Interview Questions

Introduction

I want to thank you for taking the time to meet with me today. My name is Filipina Hernandez; I am the principal investigator for this study. Before we start, I would like to review the consent form with you.

Review of Consent

You are invited to take part in a research study about the nursing faculty's perceived level of engagement with their high-fidelity simulation experiences.

This study is being conducted by a researcher named Filipina Hernandez, a Ph.D. student specializing in Nursing Education at Walden University.

The inclusion criteria to participate in the study are the nursing faculty who: (1) have at least a year of teaching experience in any pre-licensure nursing program; (2) use high-fidelity simulation in the assigned nursing courses; (3) teach in nursing school that has high-fidelity simulators; and (4) know the process of simulation, including pre-simulation, simulation, and debriefing.

Background Information:

The purpose of this study is to explore the nursing faculty's perceived level of engagement with their high-fidelity simulation (HFS) experiences.

Procedures:

If you agree to be in this study, you will be asked to:

- Complete a 10-minute online survey to determine if you meet the inclusion criteria for the study.
    - Here are some sample questions in the survey:
        - What nursing program do you teach as a nursing faculty? (Select all that apply)
        - What are your total years of experience working as a nursing faculty?
- Participate in a 45 to 60-minute individual interview if inclusion criteria were met
    - The interview could be a phone call or face-to-face via video call (i.e., Skype, Face Time, or Messenger) at a time and date of your choosing.
    - The interview will be a place that is private, comfortable, and safe for you and the researcher.
- Answer questions during the individual interview, which will be audio-recorded, and observations noted in the field notes.
    - Here are some sample questions:
        - As a nursing faculty, tell me about your experience with your initial participation to a high -fidelity simulation
        - In your experience, what are the elements you ascribe to deep and meaningful engagement with HFS?

  - In your experience, what are the factors that allowed you to grow with your engagement experience with HFS?

- Review a copy of the interview transcript and confirm the accuracy of the information.
  - You will be contacted via email by the researcher to review the interview transcript and confirm its accuracy.
  - The review of the transcript will take about 30 minutes.
  - The researcher's contact with you will end after you have confirmed the accuracy of the transcript.

Voluntary Nature of the Study:

This study is voluntary. You are free to accept or turn down the invitation. No one at your professional organization, school, or network will treat you differently if you decide not to be in the study. If you decide to be in the study now, you can still change your mind later. You may stop at any time.

Please note that not everyone who completes the survey will be asked to be interviewed.

Risks:

Being in this type of study involves some risk of minor discomforts that can be encountered in daily life. For instance, an inconvenience of allotting your time may become upset, stress, or fatigue during your participation in the study. Being in this study would not pose a risk to your safety or wellbeing.

Benefits of Being in the Study:

Your participation will contribute to high-fidelity simulation's body of knowledge that will inform future best practices in simulation-based education in nursing programs. The nursing programs that are effectively delivered through innovative teaching practices like high-fidelity simulation support the clinical experiences of the nursing students. Thus, the larger community will benefit as the nursing graduates entering the nursing workforce are well-equipped in their role in providing competent, safe, and quality patient care.

Payment:

As a way of thanking you for participation, a $10 e- gift card from Starbucks will be emailed to you after the interview.

Privacy:

Reports coming out of this study will not share the identities of individual participants, their organization, and the workplace. The researcher will not use your personal information for any purpose outside of this research project. Any information that may identify you as the individual participant and your organization will be redacted in this study. The data process will maintain the privacy and confidentiality of your identity and professional organization by using codes in place of names. Data will be kept secure by keeping hard copies of notes in a safe and locked storage accessible only to the researcher. All e-copies are kept in a cloud and portable drive that are protected with an encrypted password. Data will be kept for at least five years, as required by the university.

Contacts and Questions:

If you have questions about the study, you may contact the researcher's email address at Filipina.hernandez@waldenu.edu or 305-213-7589.

If you want to talk privately about your rights as a participant, you can call the Research Participant Advocate at my university at 612-312-1210.

Walden University's approval number for this study is **01-08-20-0642436,** and it expires on **January 7th, 2021.**

Please print or save this consent form for your records.

Obtaining Your Consent

If you understand the study well enough to participate, you may continue completing the survey. Continuing with the survey indicates consenting to participate in this study.

During the interview, I will be recording the session to capture your responses accurately. Also, I will be taking some notes during the session. All responses will be kept confidential, which means that your interview responses will only be shared with my dissertation chair and member. I will ensure that any information I include in the report does not identify you as the respondent. Remember, you do not have to talk about anything you don't want to, and you may end the interview at any time. You will be provided a copy of the interview's verbatim transcript to review information for content accuracy. Also, the audio recording is available for you to review upon request. Are there any questions about what I have just explained? Are you willing to participate in this interview?

Again, I want to thank you for taking the time to meet with me today. I want to talk to you about your experiences engaging in high-fidelity simulation use in teaching nursing courses. The purpose of the study is to explore the nursing faculty's perceived level of engagement with their HFS experiences. The level of engagement refers to superficial or deep dimensions of engagement with HFS as perceived by the nursing faculty.

Questions (Boyce & Neale, 2006; Creswell, 2016; Jacob & Furgeson, 2012; O'Brien & Toms, 2008; Patton, 2015, Rubin & Rubin, 2012; Walden University, n.d.)

1. As a nursing faculty, tell me about your experience with your initial participation in a high -fidelity simulation (HFS)? (Main Question)

    1.1. What motivated you to participate in the first place? (Follow-up question)

        1.1.1. Can you tell me more about this? (Probe question)

    1.2. What were your thoughts after your initial experience with HFS? (Follow-up Question)

2. Tell me about your experience with your second participation with HFS? (Main Question)

    2.1. What motivated you to participate in HFS this time? (Follow-up question)

        2.1.1. Can you give me a specific example? (Probe question)

    2.2. How do you describe this experience from your initial participation in HFS? (Follow-up question)

        2.2.1. Can you give specific examples in what ways they differ or similar? (Probe question).

2.2.2. Do you consider your second HFS experience more engaged than your first one? Please elaborate (Probe question).

3. At what point where you feel awed by your HFS experience? Please describe your experience (Main Question)

3.1. In your experience, what are the factors that contributed to this feeling of awe? (Follow-up question)

3.2. Was there a point where this feeling of awe changed, and what had happened that you felt this way? (Follow-up question)

3.2.1. What contributed to this experience? Please be specific. (Probe question)

3. 2.2. In your perspective, what will sustain this feeling of being awed with HFS experience? (Probe question).

4. At what point in your HFS experience, you felt so passionate about your engagement with HFS? Please tell me about this experience. (Main Question).

4.1. What makes this feeling of passion different from feeling of awe with your HFS experience? (Follow-up question).

4.2. Was there a change in your experience of passion now from what you experienced then? Please elaborate. (Follow-up question).

4.3. What are the factors that led you to this feeling of passion with HFS? (Follow-up question).

5. At this point of your engagement experience with HFS, can you say that you are deeply connected and see yourself as part of the HFS community? Please explain why yes or not? (Main Question).

5.1. If yes, in what ways this feeling of deep connection differs from your previous experience with HFS? (Follow-up question).

5.2. Did your previous engagement experience with HFS led you to a deep connection with the HFS community? In what ways? (Follow-up question).

6. At this point in your engagement experience with HFS, can you say that you are fully assimilated into your role in the HFS scholarly community? Please elaborate (Main Question)

6.1. If yes, what was your experience relating to this role? (Follow-up question)

6. 2. What makes this experience of being fully assimilated differs from your previous HFS experience? (Follow-up question)

6.3. Was there a relationship between your previous HFS experience to the feeling of being fully assimilated with HFS? Please describe (Follow-up question).

7. At this point, what is your position in your engagement experience with HFS at this point? (Main question)

7.1. In your experience, what are the elements you ascribe to superficial engagement? (Follow-up question)

7.1.1. At that time where you perceived that your engagement with HFS is still superficial, did you see yourself deepening your engagement experience with HFS? In what ways? (Probe question)

7.2. In your experience, what are the elements you ascribe to deep and meaningful engagement with HFS? (Follow-up question)

7.3. In your experience, what are the factors that allowed you to grow with your engagement experience with HFS? (Follow-up Question)

7.3.1. In what ways these factors deepened your engagement experience with HFS? (Probe question)

7.3.2. Is there a point in time that you felt your engagement experience is not as profound as before? Please elaborate. (Probe question)

7.3.2.1. Are you suggesting that these factors must be consistently present to deepen your engagement experience with HFS? (Probe question)

8. In your perspective, what will make you consider your engagement experience with HFS be at its deepest and most meaningful level? (Main question)

8.1. What are the elements you ascribe to this level of deep engagement that makes it more profound from your previous engagement experience with HFS? (Follow-up question).

Closing

That concludes our interview, is there anything else you would like to add or further share with me? I will be analyzing the information you gave me, and I will provide you a copy of the interview's verbatim transcript to review information for content accuracy. Also, the audio recording is available for you to review upon request. Finally, I would like to know if I can contact you again if necessary, to verify the

accuracy of the interview. I will keep in touch once the study is completed. Thank you so much for your time.

Appendix E: Confidentiality Agreement

Name of Signer:

During the course of my activity in collecting data for this research: "Exploring Nursing Faculty's Perceived Level of Engagement with High-Fidelity Simulation Experiences," I will have access to information, which is confidential and should not be disclosed. I acknowledge that the information must remain confidential, and that improper disclosure of confidential information can be damaging to the participant.

By signing this Confidentiality Agreement, I acknowledge and agree that:

1. I will not disclose or discuss any confidential information with others, including friends or family.
2. I will not in any way divulge, copy, release, sell, loan, alter, or destroy any confidential information except as properly authorized.
3. I will not discuss confidential information where others can overhear the conversation. I understand that it is not acceptable to discuss confidential information, even if the participant's name is not used.
4. I will not make any unauthorized transmissions, inquiries, modification, or purging of confidential information.
5. I agree that my obligations under this agreement will continue after the termination of the job that I will perform.
6. I understand that violation of this agreement will have legal implications.

7. I will only access or use systems or devices I am officially authorized to access, and I will not demonstrate the operation or function of systems or devices to unauthorized individuals.

Signing this document, I acknowledge that I have read the agreement, and I agree to comply with all the terms and conditions stated above.

Signature: **Date:**

Appendix F: Organization's Guidelines for Posting Information about Research Studies and Study Participant Recruitment

Individuals who would like to utilize the organization's membership list via LinkedIn or Facebook need to follow the guidelines listed below and get approval *before* any postings. Approval for these requests should be sent to

Requests must include the following:

1. Full name and job title (where applicable):

   _____

2. The email address to which any responses should be sent:

   _____

3. IRB approval must be obtained *before* request for posting has been made:

   IRB approval from: _____

   IRB approval date: _____

   IRB approval number: _____

4. Please submit a complete description of what you plan to post on either Facebook or LinkedIn:

   _____

   _____

   _____

   _____

Appendix G: Social Media Post

Dear Nursing Faculty,

My name is Filipina Hernandez, and I am a Ph.D. student specializing in Nursing Education at Walden University.

I am inviting nursing faculty who are interested in participating in the research study entitled: Exploring Nursing Faculty's Perceived Level of Engagement with High-Fidelity Simulation Experiences.

The inclusion criteria to participate in the study are the nursing faculty who: (1) have at least a year of teaching experience in any pre-licensure nursing program; (2) use high-fidelity simulation in the assigned nursing courses; (3) teach in nursing school that has high-fidelity simulators; and (4) know the process of simulation including pre-simulation, simulation, and debriefing.

If you are interested in participating, you will be asked to complete the survey and participate in an interview if inclusion criteria are met.

The online survey should take no more than 10 minutes to complete and is conducted to determine if the participants meet the inclusion criteria.

If the inclusion criteria are met, the participant will be asked to participate in a 45 to a 60-minute individual interview. The interview is either a phone call, or face-to-face via video call (i.e., Skype, Face Time, or Messenger) at the time and date of their choosing.

As a way of my appreciation to the participant, a $10 e- gift card from Starbucks will be emailed after the interview.

Should you have questions about the study, you can contact me at

Filipina.hernandez@waldenu.edu

Kindly share this post with someone you know who may be interested in participating.

Here is the link detailing the consent information and the online survey:

https://www.surveymonkey.com/r/85BZ6QG

Thank You,

Filipina Hernandez

Student, Ph.D. of Nursing

Walden University

Appendix H: Walden University's Application for Participant Pool

To be emailed to participantpool@mail.waldenu.edu

APPLICATION TO USE
WALDEN PARTICIPANT POOL

To post a study on the Walden Participant Pool, a researcher needs to have approval from both the Walden IRB and the Institutional Approver. The purpose of this form is for researchers to identify at an early stage of research whether the proposed study is eligible for placement on the Walden Participant Pool website.

Please note the following stipulations and conditions:

- While the Walden University participant pool has been established to assist students in their research, it should only be used if it is appropriate to the study. It should not merely be used because it is convenient but should be appropriate for the research question(s), instrument, and methodology.
- The Institutional Approver may ask for more information, not approve the study and ask for it to be resubmitted with changes, or not approve the study for inclusion in the participant pool based on the appropriateness of the study for the participant pool.
- Approval from the Institutional Approver does **NOT** constitute IRB approval. It is merely letting the researcher know that the proposed research study may be placed on the participant pool website upon receiving all other necessary approvals.
- Upon receiving notification that your study is eligible for placement on the participant pool website, you will need to submit the IRB application and

supporting documents to irb@mail.waldenu.edu at the appropriate time. Include a copy of the notification that your study is eligible for placement on the participant pool website with your IRB materials.

- For students in a doctoral-level program, this form may be submitted before proposal approval. However, any documents submitted will still be subject to review by the University Research Reviewer (URR) and the IRB.
- If changes are made to the study, methodology, and instrument(s), the IRB will coordinate with the Institutional Approver to ensure these changes are still acceptable for placement in the participant pool.

For researchers interested in using the Walden Participant Pool, please submit this completed form to participantpool@mail.waldenu.edu.

1. Researcher's Name	Filipina Hernandez
2. Researcher's e-mail address	Filipina.hernandez@waldenu.edu
3. Project Title	Exploring Nursing Faculty's Perceived Level of Engagement with High-fidelity simulation Experience
4. Researcher's program affiliation at Walden (e.g., Ed. D; Ph.D. in Clinical Psychology, etc.)	Ph.D. in Nursing specializing in Nursing Education
5. Research collaborators and roles If the researcher is a student, please provide the name of the committee chair or other faculty member supervising this research.	Walden doctoral student Supervisory Committee Members: Chair – Dr. Donna Bailey 2nd Member – Dr. Anna Valdez
6. E-mail address(es) of the supervising faculty member and any other co-researcher collaborators	Chair – Dr. Donna Bailey donna.bailey@mail.waldenu.edu 2nd Member – Dr. Anna Valdez anna.valdez@mail.waldenu.edu
7. Type of research (place an X in the appropriate section):	

	Dissertation X
	Doctoral Study
	Master's Thesis
	Pilot Study
	Faculty Research
	Research for a Course (specify course number, course end date, and instructor name):
	Other (specify):
8. Please check what type of data collection method you intend to use through the participant pool (check all that apply). ****Please attach the proposed data collection tools to this application for review****	
	Survey X
	Interview (recruit participants only) X
	Other (specify):
9. Using lay terms, please provide a brief description of your proposed study	The study aims to explore the nursing faculty's perceived level of engagement with its high-fidelity simulation experience. The premise of the study assumes that nursing faculty's deep and meaningful engagement is critical to the adoption of HFS and sustaining its use in the nursing program. However, the nursing faculty's level of engagement with their HFS experience is a phenomenon that is unknown in the field of HFS. Thus, it will be the focus of this study.
10. Please list the research question(s) of the study	What is the nursing faculty's perceived level of engagement with their HFS experience?
11. <u>Quantitative Researchers:</u> Please list each variable of interest (identifying each, if applicable, as independent, dependent, or covariate) and briefly describe how they will be measured. <u>Qualitative Researchers:</u> Please describe the phenomenon of interest and how it will be recorded.	The central phenomenon of the study is the nursing faculty's level of engagement. The level of engagement refers to the dimensions of engagement: superficial or deep; the nursing faculty ascribe to their HFS experience. The study will conduct an individual interview of the nursing faculty who met the inclusion criteria

	for the study. The interview will be audio-recorded, while observations will be recorded in the field notes.

12. Provide the target number of participants, including numbers per group, if the study involves multiple groups.

A prescreening survey will be conducted to identify participants who will meet the inclusion criteria for the study. There will be ten final participants who will be selected from the pool of participants who met the inclusion criteria.

Provide a brief rationale for this sample size:

Several 10 sample participants who are selected using purposive sampling is enough as the study aims to understand the phenomenon of interest, and not to make a generalization. Thus, a thick and detailed description of the POI must be obtained from the nursing faculty who experienced the phenomenon to answer this study's research question.

13. Describe the criteria for inclusion and exclusion of participants in this study (such as relevant experiences, age, gender, health conditions, etc.). Your inclusion criteria should define all critical characteristics of your sample. Once you've defined inclusion criteria, if you have no further limitations on who can participate, indicate "none" under exclusion criteria.

Inclusion criteria: Final participants must be nursing faculty, which uses high-fidelity simulation for at least a year in teaching nursing courses. The nursing faculty must be teaching in a nursing program that has high-fidelity simulators.

Exclusion criteria: Nursing faculty who used to or never used HFS regardless of the number of years teaching a nursing program.

14. Describe how the data collected will be used to answer your research questions (what type of analyses you will do; how do the questions in the instrument/interview relate to your research questions):

The data will be collected using an individual interview via phone call or video call. Data will be analyzed using an interpretative phenomenological approach. The instrument is a researcher-developed interview question guide encompassing open-ended questions that were framed from the research question.

15. Please explain why you are interested in using the participant pool to recruit participants for your study:

I believe that Walden University's participant pool is an appropriate site to access potential participants because Walden U has a master's and doctoral program in nursing specializing in nursing education. During my residencies, I have networked with many colleagues who teach in nursing schools, nationally and globally.