

NURSE EDUCATORS' EXPERIENCE WITH ADJUSTING TO VIRTUAL SIMULATION: A
NARRATIVE ANALYSIS STUDY

A DISSERTATION

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

IN THE GRADUATE SCHOOL OF THE

TEXAS WOMAN'S UNIVERSITY

COLLEGE OF NURSING

BY

CARRIE FELSKE, B.S.N., M.S.N.

DENTON, TEXAS

MAY 2023

Copyright © 2023 by Carrie Felske

DEDICATION

For my husband, Brad Felske, and my children, Dylan, Austin and Jackson, thank-you for your continued support.

ACKNOWLEDGMENTS

I would like to acknowledge the many individuals who have contributed to this dissertation. The completion of this study could not have been possible without the expertise, guidance and support of my committee chair, Dr. Donna Scott Tilley. I would also like to thank Dr. Jo-Ann Stankus and Dr. Jorge Figueroa, who were valuable members of my committee. They provided valuable feedback and guidance through this journey. I am grateful for the opportunity to attend Texas Woman's University and be taught by amazing faculty, who challenged me in each course to think outside the box. I would also like to say thank-you to for the support from my classmate and friend Kimberly Stunkard; who I laughed with and cried with through this journey from the very beginning. Lastly, thank you to my husband and my children for their unwavering support and encouragement.

ABSTRACT

CARRIE FELSKE

NURSE EDUCATORS' EXPERIENCE WITH ADJUSTING TO VIRTUAL SIMULATION: A NARRATIVE ANALYSIS STUDY

MAY 2023

During the COVID-19 pandemic nursing faculty turned to virtual simulation as an alternative to clinical experiences. Literature exists on the use of virtual simulation in nursing, as well as faculty experiences transitioning to the online environment; however, few studies have been done considering the unique circumstances faced by faculty during the COVID-19 pandemic. This qualitative study aimed to understand nursing faculty's experiences transitioning from live simulation and face-to-face clinical to virtual simulation during the COVID-19 pandemic. Narratives of faculty transitions from live clinical learning experiences to virtual platforms during the COVID-19 pandemic were analyzed using Riesmann's approach to narrative analysis in relation to the concepts of the NLN/Jeffries Framework. Nine nursing faculty members shared their experiences transitioning to virtual clinicals and labs due to the pandemic. This study found that faculty could make adjustments and adapt to a new teaching platform. Participants found the experience stressful, and some struggled to conceptualize what these new clinicals would look like. This study also showed how participants were able to adjust their teaching pedagogies to maintain student clinical learning. Regardless of their stress level, this study showed how the priority and focus for faculty was the student. Findings from this study support the need for the availability of further professional development on virtual simulation pedagogies, with less of a focus on virtual technology use. Preparation for facilitating online simulations should start in programs preparing new nurse educators.

TABLE OF CONTENTS

DEDICATION	ii
ACKNOWLEDGMENTS	iii
ABSTRACT	iv
LIST OF TABLES	viii
LIST OF FIGURES	ix
I. INTRODUCTION	1
Focus of Inquiry	1
Impact of the COVID-19 Pandemic	4
Virtual Simulation.....	6
Statement of Purpose	9
Researcher’s Relationship to the Topic	9
Theoretical Framework.....	10
Significance to Nursing.....	13
Context of Study	13
Methodology	14
Summary	14
II. LITERATURE REVIEW.....	16
Literature Analysis.....	17
Literature Synthesis and Results.....	18
Summary	31
III. METHODOLOGY	33
Narrative Inquiry.....	33

Historical Overview	33
Central Concepts of Narrative Inquiry	34
Methodology Implementation Plan.....	35
Site and Setting	35
Participants.....	36
Researcher as an Instrument	37
Data Generation Strategies	38
Data Analysis	40
Summary	42
IV. RESULTS	43
Overview.....	43
Participants.....	43
Participant Demographics.....	43
Introduction of Participants.....	44
Thematic Analysis	53
How Nurse Faculty Moved From Live Clinical to VS Experiences	54
How Faculty Guided, Supported, and Evaluated Students During VS Learning	63
Challenges Educators Experienced When Changing to the VS Environment.....	70
Summary	82
V. RECOMMENDATIONS AND CONCLUSIONS	83
Overview.....	83
Discussion of Themes	84
Implications.....	93

Limitations and Future Research	97
Summary	98
REFERENCES	99
APPENDICES	
A. Participant Eligibility Screening Tool.....	114
B. Demographic Data Collection Form Interview Guide	115
C. Interview Guide.....	118

LIST OF TABLES

1. Demographics of Study Participants.....44

2. Study Aims and Themes of Faculty Transitions to Virtual Clinical Experiences.....53

LIST OF FIGURES

1. Study Framework: NLN/Jeffries Simulation Framework.....	11
--	----

CHAPTER I

INTRODUCTION

The COVID-19 pandemic caused nurse faculty to transition from a traditional clinical environment to an online virtual simulation (VS) platform to minimize disruption to students' clinical opportunities. VS provides students with exposure to events that may not frequently occur at the clinical site (Foronda et al., 2016; McGrath et al., 2017; Schaffer et al., 2016) and assists students in developing critical nursing skills such as critical thinking, decision making, skill development, and clinical reasoning (Foronda et al., 2018; Marei et al., 2018; Padilha et al., 2019; Sobocan & Klemenc-Ketis, 2017). The available literature supports the benefits of VS use in education; however, these studies evaluated the impact on student learning outcomes with VS as a supplement to enhance classroom and clinical learning (Agrawal et al., 2016; Coyne et al., 2021; Gunn et al., 2018; Keshavarzi et al., 2019). There is limited research on VS as a total replacement for clinical practice hours or the experiences of faculty transitioning from face-to-face clinical to VS.

Focus of Inquiry

Clinical learning opportunities and repeated practice help provide nursing students with the needed knowledge, critical thinking, and psychomotor skills that prepare them to transition to practice and make decisions about patient care in complex clinical situations (Al-Ghareeb & Cooper, 2016). Simulation has been a standard teaching method in nursing programs for many years. The number of approved practice hours that can be completed in simulation varies by state, with some states having approved up to 50% of clinical hours to be spent in simulation (Alexander et al., 2015). Simulation learning allows students to practice skills and acquire knowledge in an environment that replicates reality (Al-Ghareeb & Cooper, 2016; Kiernan,

2018; Oermann et al., 2016). While simulation has been a mainstay in nursing education, the COVID-19 pandemic has forced nursing faculty to transition from face-to-face simulation experiences to an online VS with increased time spent in VS to replace lost clinical opportunities. In response to the COVID-19 pandemic, the Texas Board of Nursing (2020) approved the use of simulation to exceed the traditional allotment of 50% of clinical hours for students in the final year of nursing school and provided programs with flexibility in their provision of clinical objectives for nursing students.

Since various digital technologies are available to provide students with VS experiences, it is essential to clarify the terminology for this study. Simulation is an interactive educational process, allowing the learner to engage with people, simulators, or computers to achieve specific learning outcomes (Cant et al., 2019). Three standard modes of simulation have been used in nursing programs: 1) standardized patients, 2) mannequin-based simulation, and 3) VS. Standardized patients incorporate individuals/families into scenarios and allow students to practice physical assessment and communication skills (Aebersold, 2018). Mannequin-based simulation has shown to be effective in nursing schools and incorporate mannequins or task trainers to play the role of the patient in a clinical scenario. Clinical VS involves the re-creation of a realistic situation portrayed on a computer screen that requires real people to operate the simulated system (Padilha et al., 2019).

Many of the available virtual platforms attempt to model real-life clinical experiences with a level of interactivity to allow the student to engage with the scenario, use critical thinking skills, and receive immediate feedback when finished (Cant et al., 2019). For this study, VS was defined as "a game that depicts a realistic healthcare situation on a computer screen, which can

be 2D or 3D and where the user plays a central role by exercising control of decision-making during the scenario” (Verkuyl et al., 2020, p. 538).

Nursing students traditionally spend time practicing in the lab and receiving immediate feedback to develop clinical competence (Kiernan, 2018). Evaluation of clinical competence should show that students can execute skills and apply knowledge to specific clinical changes (Arrigoni et al., 2017). Evaluating nursing competencies, including skills and critical thinking, is a complex process where faculty have traditionally facilitated learning experiences in the clinical environment providing direct observation to train and evaluate nursing students (Kiernan, 2018). A national study showed that clinical nursing instructors spent 69% of their clinical education time directly observing nursing students demonstrating clinical skills (Kiernan, 2018). In many of the VS platforms, the VS program provides observation and feedback through the program's metric reports, not nursing faculty, which was a significant pedagogical change for faculty to make during the transition to VS.

Clinical practice is crucial to undergraduate nursing students' learning by allowing students the opportunity to apply clinical knowledge acquired in the classroom to real-world situations (McKenna et al., 2019). In addition, nursing students acquire the necessary clinical skills and abilities such as the psychological and psychomotor skills needed for clinical practice (Jamshidi et al., 2016). Students have often reported that their clinical experiences had the most significant impact on their learning and offered learning opportunities that challenge their decision-making skills (Birks et al., 2017; Ramsbotham et al., 2019).

While the clinical practice environment is proven as the most effective method to teach clinical nursing skills, it is often plagued with competition for quality clinical placements, sharing clinical placements with other students, reducing student access to patients and skills,

uncooperative patients, a lack of clinical time, and limited ability to practice various nursing skills due to policies put in place by clinical facilities limiting nursing experiences ultimately decreasing the available opportunities for students (Anderson et al., 2019; Arkan et al., 2018; Bryant et al., 2015; De et al., 2016; McKenna et al., 2019). Faculty and preceptors' level of experience and the clinical location and setting have also shown to have an impact on the clinical learning experiences for the students (Anderson et al., 2019; Cobbett & Snelgrove-Clarke, 2016).

Many of these barriers, have negatively impacted new graduates; students may not have relevant and sufficient clinical experiences and acquire an understanding of the complex healthcare environment (Cobbett & Snelgrove-Clarke, 2016). In addition, they lack the competencies to provide safe and efficient patient care, including monitoring tasks, decision making, prioritization, accountability, responsibility, time management, and delegation (Foronda et al., 2018; Hezaveh et al., 2014; Peddle et al., 2016; Redmond et al., 2020).

The continued scarcity of clinical placements was magnified by the COVID-19 pandemic, with many hospitals across the country reducing or canceling on-site clinical opportunities. The lack of clinical placements forced nursing programs to devise or adapt new methods to provide nursing students with clinical learning opportunities and classroom knowledge. The COVID-19 pandemic forced nursing programs to rapidly transition from a traditional classroom and clinical environment to an online virtual classroom and adopt VS platforms to minimize the disruption to students' clinical opportunities.

Impact of the COVID-19 Pandemic

Throughout the COVID-19 pandemic, students desired more communication, accommodation, and support from their faculty (Ulenaers et al., 2021). Nurse educators were put in charge of helping their students transition from face-to-face learning, providing them with the

tools to develop more effective self-learning skills, and perform better in the virtual environment (Murphy et al., 2020; Ulenaers et al., 2021). Students also felt overwhelmed with the change in course work, feeling as if faculty were unaware of the work in other classes and felt like they needed more accommodation and flexibility from their faculty regarding assignment deadlines (Hassmiller et al., 2020; Murphy et al., 2020; Ulenaers et al., 2021).

Students who faced many uncertainties throughout the COVID-19 pandemic often turned to their faculty to discuss their anxiety, apprehensions, and fears (Carolan et al., 2020; Murphy et al., 2020; Ulenaers et al., 2021). Many fears and anxieties stemmed from concerns related to their education and personal lives, due to the pandemic's impact on their mental health (Carolan et al., 2020; Murphy et al., 2020, Ulenaers et al., 2021). Much of the student anxiety related to virtual learning was centered around technology use and perceived poor communication from the faculty (Murphy et al., 2020). Additional time spent by faculty on preparation, student support, often left faculty without sufficient time to prepare lectures (Junus et al., 2021).

In the spring of 2020, nursing faculty were challenged to transition from face-to-face clinical experiences to virtual clinical learning experiences (Fogg et al., 2020). This transition was made difficult by the increased uncertainties, anxiety, and stress felt by faculty and students. Along with little time to prepare new virtual clinical experiences, some institutions did not have the money available in their budget to purchase the digital resources needed to initiate VS experiences (Shea & Rovera, 2021). In addition, institutions with the budget to purchase VS platforms were delayed because VS vendors were overrun with requests (Shea & Rovera, 2021). Factors compounding this quick and challenging transition included knowledge and access to technology, increased support and development needed by faculty, and the additional support needed by students during this transition.

To make an effective transition to VS use, faculty need the opportunity to receive training and mentorship. Nurse faculty have different levels of exposure and experience with virtual clinical and would benefit from added development and training to effectively deliver learning experiences (Fogg et al., 2020; Murphy et al., 2020). Another area where training and development could assist faculty is providing ways for faculty to enhance student engagement and participation during virtual learning sessions (Bdair, 2021; Palancia Esposito & Sullivan, 2020; Junus et al., 2021; Murphy et al., 2020).

The use of technology in nursing education is not a new pedagogy, and simulations are a proven pedagogy in nursing education; however, the speed at which faculty transitioned to online clinical experiences was unprecedented (Palancia Esposito & Sullivan, 2020; Mintz et al., 2020). The sudden transition left faculty with many challenges including a shortage of time to prepare new lectures and experiences, lack of time to adapt to new technology, and the time to spend with students helping them with the quick transition.

Virtual Simulation

Many of the available virtual platforms attempt to model real-life clinical experiences, with a level of interactivity to allow the student to engage with the scenario, use critical thinking skills, and receive immediate feedback when finished (Bryant et al., 2015; Cant et al., 2019). Many VS platforms recreate a realistic environment like the scenarios provided in Second Life. Others focus on procedures, like Heart Code ACLS, a self-paced timed program educating the user on the current Advanced Cardiovascular Life Support (ACLS) standards (Cant & Cooper, 2014; Coyne et al., 2021). VS products that provide realistic clinical scenarios include The Neighborhood, Virtual Clinical Excursions, Micro Sim, and the Virtual Clinical Practicum (Foronda et al., 2013). VS products that are available to nursing faculty include CliniSpace,

Digital Clinical Experience created by Shadow Health, and vSim for Nursing created by the collaboration between Laerdal, Wolters Kluwer Health, and the National League for Nursing (NLN; Coyne et al., 2021; Foronda et al., 2017). The variety of available virtual platforms allow educators and institutions to pick the platform that best suits their organization. However, with each platform providing different features and methods of student feedback, there remain inconsistencies in virtual platform use in nursing education.

In each of these VS products, the central feature is the patient, portrayed by videos, patients, actors, or computer-generated patients (Cant et al., 2019). VS provides a varying level of fidelity, with the high-fidelity scenarios being more realistic when compared to lower fidelity scenarios (Cant et al., 2019). Another common feature of VS includes interactivity, allowing students to take a trial-and-error approach to patient care and get immediate feedback (Cant & Cooper, 2014; McGrath et al., 2017). Some VS products used in healthcare education can also provide students with additional “hands-on” training like administering intravenous (IV) medications, programming IV pumps, and IV initiation, surgical practice, and other medical procedures (Cant et al., 2013; Coyne et al., 2021; Gunn et al., 2018).

Other disciplines have been using VS as an educational tool for many years, including aviation, education, military training, dental education, and surgical training (Bracq, Michinov, et al., 2019; Bryant et al., 2015; Dubovi et al., 2017). Medical students have had access to VS platforms for nearly 30 years, with VS initially used to train surgeons in a variety of different procedures (Javaid & Haleem, 2020). There has been a dramatic increase in VS in the medical field since 2005 (Rim & Shin, 2021). VS has the ability to engage and immerse the student in the learning experience (Madathil et al., 2017), and it has been shown to enhance student confidence, knowledge, clinical performance, and critical thinking for students in many healthcare

disciplines (Bogossian et al., 2015; Coyne et al., 2021; Foronda & Bauman, 2014; Pottle, 2019; Tobase et al., 2017). The literature clearly indicates that VS is an effective tool in health care education, and usage will likely continue to grow in nursing education.

VS enables nurse educators to ensure that students get adequate exposure to essential clinical nursing experiences, allowing for repetitive use, and to reinforce skill development and a more negligible impact on resources (Bracq, Michinov, et al., 2019; Liaw et al., 2014; Redmond et al., 2020; Sobocan & Klemenc-Ketis, 2017; Verkuyl et al., 2020). In addition, VS helps faculty provide an interactive pedagogical style to increase student engagement, bridge gaps in clinical learning (Anthony et al., 2019), and increase student motivation because VS has a game-like feel making learning more exciting and fun (Keshavarzi et al., 2019; McGrath et al., 2017; Verkuyl et al., 2020).

VS products provide a student-centered learning environment, allowing students to be fully immersed in the virtual experience (Dankbaar et al., 2016; Pottle, 2019). VS provides clinical learning opportunities with various clinical scenarios to students individually or by working together in a lab setting and the classroom (Padiha et al., 2019). VS enables students to develop critical nursing skills such as critical thinking, decision making, skill development, and clinical reasoning (Foronda et al., 2018; Marei et al., 2018; Padilha et al., 2019; Sobocan & Klemenc-Ketis, 2017). VS can also provide students with exposure to events that may not frequently occur at the clinical site, such as care of a complex patient (Schaffer et al., 2016), or disaster training and mass casualty events (Foronda et al., 2016; McGrath et al., 2017). Although there is substantial literature supporting the benefits of use in education, these studies evaluated the impact on student learning outcomes with VS as a supplement or tool to enhance classroom and clinical learning (Agrawal et al., 2016; Coyne et al., 2021; Gunn et al., 2018; Keshavarzi et

al., 2019). Limited research is available on the use of VS as a total replacement for clinical practice hours or faculty experiences with their rapid transition to VS due to the COVID-19 pandemic.

Statement of Purpose

The purpose of this qualitative study was to gain an understanding of nursing faculty experiences transitioning from live simulation and face-to-face clinical to VS during the COVID-19 pandemic. The central question for this proposed study was: What are the storied experiences of nurse faculty transitioning from live simulation and face-to-face clinical to VS during the COVID-19 pandemic? The aims of this study are: (a) to elicit stories about how nurse faculty moved from live clinical to VS experiences, (b) to learn through their stories how faculty-guided, supported, and evaluated students during VS learning, and (c) to identify challenges that nurse educators experienced when changing from face-to-face clinical to the VS environment.

Researcher's Relationship to the Topic

For this study, I felt that it was essential to share my experiences and how I became interested in my research topic. While in nursing school, I was not exposed to simulation. We did not use mannequins, human patients, or VS; we practiced assessment skills on each other, learned how to give an intermuscular injection using an orange, and relied on clinical experiences to learn all other aspects of nursing care. When I started my journey in academia, I was a clinical instructor, facilitating student learning experiences in the hospital. My first encounter with simulation was a high-fidelity mannequin I had to operate by myself after only a brief orientation. I felt lost, and during the semester, I felt like I did a disservice to my students because I was learning along with them, not educating them about pediatric patients and their families.

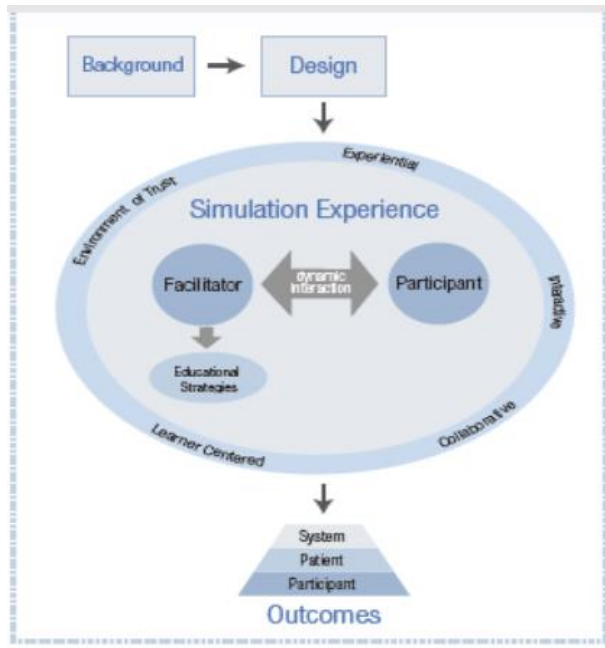
As I muddled through the semester, I became very frustrated, and I could not understand how the students were learning anything during these simulations. At the time, I believed the simulation was an ineffective learning tool, and that the students were better off in the clinical setting. At the end of the semester during the final simulation I had the opportunity to work with another faculty member. She facilitated the learning experience, allowing me to observe her; this collaboration showed me the value of the simulation experience. I was shown how to use the sim pad, and how to follow the scenario script. I was also shown how to lead a pre-brief, as well as the post conference. Having the opportunity to watch simulation being facilitated by an experienced educator revealed the importance of using simulation as a learning tool.

Theoretical Framework

Nurse educators have utilized the NLN/Jeffries Simulation Framework to support simulation practice. The NLN/Jeffries framework was created in response to the need for a consistent model to design and implement simulations (Jeffries, 2005). The Jeffries framework has been recommended to be used to "guide the design, implementation, and evaluation of teaching effectiveness" for nursing faculty teaching simulations by the International Nursing Association for Clinical Simulation and Learning (INACSL; Zhu & Wu, 2016, p. 131). Concepts and constructs from the Jeffries framework were used to create the interview questions, guide data analysis, and provide context for the finding of the proposed study.

Figure 1

Study Framework: NLN/Jeffries Simulation Framework



Note. Adapted from Jeffries, 2016 *NLN/ Jeffries Simulation Framework*. Wolters Kluwer.

The main concepts in the NLN/ Jeffries simulation theory include context, background, design, simulation experience, facilitator and educational strategies, participant, and outcomes (Jeffries et al., 2015). According to Jeffries (2016), the context of the simulation experience includes the circumstance and setting of the simulation and are often the starting point for designing the scenario. Context also includes where the simulation will occur and whether the simulation is for evaluation or a learning opportunity (Jeffries, 2016).

The *background* focuses on the goal's expectations or benchmarks of the simulation and can impact the design of each simulation scenario (Jeffries et al., 2015). The concept of background includes resources needed for simulation experiences and how the simulation fits into the overall course or program curriculum (Jefferies, 2016). The simulation background will

ultimately drive both the design and the implementation of the simulation scenario (Jeffries, 2016). Resources include time and equipment needed to implement the simulation (Jeffries, 2016).

The *design* of each simulation is composed of the objectives of the scenario, its activities, and its complexity, along with the student and faculty roles (Jeffries et al., 2015). In addition, simulation design includes the physical aspect of the design, including any needed equipment and conceptual fidelity, including how faculty respond to student interventions (Jeffries, 2016).

The *simulation experience* involves an environment that is "experiential, interactive, collaborative, and learner-centered," which requires trust between faculty and student (Jeffries et al., 2015 p. 292). In the VS environment, the faculty member, as a facilitator, guides and provides support for the student (Jeffries, 2005).

Facilitator and educational strategies include facilitator attributes such as skills, educational techniques, level of preparation, and an ability to adjust the simulation experience to adapt to the needs of the students (Jeffries et al., 2015). This concept acknowledges the interaction between the facilitator and the participant and the impact that these characteristics can have on the simulation experience (Jeffries, 2016). This concept also explores how the facilitator responds to the participant's needs, adjusts, or provides cues and feedback when needed, and follows up the simulation experience with further feedback and debriefing (Jeffries, 2016). Jeffries' theory has been utilized in research to establish, evaluate, or modify simulation education programs. Therefore, the Jeffries theory structured and supported the methodology, interview questions, and data analysis of this study.

Significance to Nursing

VS is an effective tool for use in nursing education. During the COVID-19 pandemic nursing faculty turned to VS as an alternative to clinical experiences (MacRae et al., 2021). Given the likelihood that VS will remain a permanent fixture in nursing education, important lessons may be learned about how to effectively deliver simulation experiences virtually. Appropriate teaching pedagogies in VS are needed to ensure students' learning opportunities for crucial clinical knowledge, skills, and competencies in the clinical environment.

VS continues to be a necessary component of nursing education. Therefore, it is essential to understand how nursing faculty guided, provided feedback, and how educators evaluated student learning outcomes. In most VS platforms, students received immediate feedback on their actions and progress (Canhoto & Murphy, 2016; McGrath et al., 2017). Having a better understanding of how educators are guiding, supporting, and evaluating students will play an important role in the potential development of evidence-based standards related to VS.

Context of Study

The purpose of this narrative analysis study was to gain understanding and insight into the nursing faculty's storied experiences about quickly switching from live, clinical-based training to VS experiences during the COVID-19 pandemic. The central question for this study was: What are the storied experiences of nurse faculty transitioning from live simulation and face-to-face clinical to VS during the COVID-19 pandemic? The aims of this study were: (a) to elicit stories about how nurse faculty moved from live clinical to VS experiences, (b) to learn through their stories how faculty-guided, supported and evaluated students during VS learning, and (c) to identify challenges that nurse educators experienced when changing from face-to-face clinical to the VS environment.

Methodology

This study employed narrative inquiry using Riessman's framework (2008). The narrative analysis approach allowed the researcher to frame questions that elicit stories describing the participants' experiences (Clandinin & Connelly, 2000; Creswell & Creswell, 2018). Detailed information allows the researcher an in-depth understanding of nurse educators' experience (Riessman, 2008). The emphasis on faculty experiences evaluating student learning in VS was appropriate for a qualitative approach. The stories told by participants helped to provide insight into how educators transitioned to using VS and how they used existing knowledge and evaluation tools in new ways, along with challenges they encountered with evaluation in a VS learning environment.

Summary

The COVID-19 pandemic drove nurse educators to transition from face-to-face clinical and simulations to virtual clinical experiences. This chapter presented an introduction to the problem, and the purpose of the study. This chapter also introduced the context, framework, and methodology. Literature does exist on the use of VS in nursing, as well as faculty experiences transitioning to the online environment; however, few studies have been done considering the unique circumstances faced by faculty during the COVID-19 pandemic. To gain a better understanding and insight into the nurse faculty's storied experiences about quickly transitioning from live, clinical-based training to VS experiences, the NLN/Jeffries theoretical model was utilized to create the interview guide, which was used to assist in the interview process. Through completion of this study, it is hoped to: (a) elicit stories about how nurse faculty moved from live clinical to VS experiences, (b) learn through their stories how faculty guided, supported, and

evaluated students during VS learning, and (c) to identify challenges that nurse educators experienced when changing from face-to-face to VS.

CHAPTER II

LITERATURE REVIEW

Nursing education has continued to evolve to prepare new nurses to meet the challenges of a complex healthcare system. In the past, nursing education has relied heavily on face-to-face clinical, in-hospital, or community settings and simulation experiences in the laboratories of nursing schools to provide relevant and clinically based learning experiences. In recent years, evolving technology has made it possible for VS to be incorporated in some nursing programs as another learning tool in nursing education. However, in the spring of 2020, the COVID-19 pandemic required nursing faculty to change abruptly, transitioning from face-to-face clinical and simulation to almost exclusively virtual learning.

Understanding the experiences of nurse educators during this transition is crucial because it is unclear how this abrupt change may have influenced faculty, their teaching and learning priorities and practices, and student experiences with learning. Unfortunately, while literature does exist on faculty experiences as they transition to the use of a new learning management system or online learning platform, no research has been published on the experiences of faculty making this rapid transition to online virtual clinical experiences during the COVID-19 pandemic.

Chapter 2 reviews and synthesizes qualitative and quantitative research on the transition and implementation of new technology in nursing programs. This literature review focused on technologies such as VS, online learning, and video scenarios. Although this study focused on the storied experiences of nursing faculty as they transitioned to VS and clinical during the COVID-19 pandemic, much of the available literature on VS and virtual clinical experiences

focuses on student perceptions and student learning outcomes. Thus, this study looks at the impact of transitions and implementations of new technology on the nursing curriculum.

This integrative review attempted to identify gaps in the current literature that supported the need of this study and provide direction for future research. A systematic literature search was conducted using Cumulative Index of Nursing and Allied Health Literature (CINAHL), Education Resources Information Center (ERIC), Academic Search Complete, and PubMed. In addition, Scopus and Google Scholar were utilized to locate other works. Keywords used to search databases include *simulations, computer simulation, computerized clinical simulation testing, virtual simulation, undergraduate education faculty, instructor, professor, college teacher, online education, distance education, self-efficacy*. Articles were limited to the last 10 years, and English language research articles in peer-reviewed journals generated a total of 424 articles. After removing duplicates and screening titles and abstracts, 24 articles met the inclusion criteria and applied to the study topic of faculty transitions to online learning platforms.

Literature Analysis

Of the 24 articles selected through the literature search, 12 represented qualitative studies (Al-Freih, 2021; Chiasson et al., 2015; Gazza, 2017; Jokinen & Mikkonen, 2013; Kowalczyk, 2014; Porter et al., 2020; Richter & Schussler, 2019; Simes et al., 2018; Sinacori, 2020; Stephens & Coryell, 2020; Verkuyl et al., 2020; Wands et al., 2020), 11 provided quantitative data (Cherry & Flora, 2017; Dolighan & Owen, 2021; Hampton et al., 2020; Horvitz et al., 2015; Howe et al., 2018; Martin, Wang et al., 2019; Onalan & Kurt, 2020; Prottas et al., 2016; Richter & Idleman, 2017; Roney et al., 2017; Walters et al., 2017), and one was a mixed-method study (Wright, 2014). Richter and Schuessler (2019) used the same interview data from a previous study to present a deeper analysis of the previous interview data. The Simes et al. (2018) study focused

on faculty learning how to use simulation technology. This article was included because it discussed the challenges faculty face during a transition to a new teaching style and applied to the current study. Articles were analyzed topically, looking at the purpose and findings of each study. The topics represent concepts that impact faculty transition from face-to-face instruction to online and include relationships with students, learning new pedagogy, faculty support, time, and self-efficacy. The following represents a summary of the current state of the science focusing on faculty transitions to an online or virtual environment.

Literature Synthesis and Results

Relationships With Students

Transitioning to an online format is often complex, requires a transition of roles, and changes in pedagogical thinking and teaching practices (Al-Freih, 2021). In addition, this shift to online will often impact the relationship between students and faculty due to a change in pedagogical thinking, including the transition from “teacher-centered to more student-centered” (Al-Freih, 2021, p. 11).

Student Engagement. One of the challenges faced by faculty moving from face-to-face to online instruction was how to ensure that students remained engaged in their class content, with their peers, and their learning materials (Al-Freih, 2021). When the transition to online occurs, faculty would often transfer their face-to-face content to their online course (Al-Freih, 2021). After experiencing the transition to online, faculty often realized that the delivery of face-to-face content was not a fit to the unique online environment, which caused students to become disengaged and forced faculty to change their approach, so students have an incentive to participate in their class (Al-Freih, 2021). Maintaining engagement in the online environment

required both student and teacher to be present and for the teacher to think of creative ways, such as learning activities and instructional methods, to engage the student (Gazza, 2017).

Similar results were found on faculty views on student engagement in the online environment. Each of these studies analyzed interview data to explore transition experiences of faculty, with similar findings by other studies in which faculty express their concern on maintaining student engagement (Al-Freih, 2021; Gazza, 2017; Porter et al., 2020; Sinacori, 2020). Findings revealed that the idea of student engagement is managed online in a different manner than that in the classroom environment. The differences between online and classroom were emphasized in Gazza (2017) by one interviewee who compared teaching online to home health, and the classroom was similar to hospital nursing, where the teacher is “in control” of their classroom (p. 347). Kowalczyk's (2014) study on the perceived barriers to online course delivery presented slightly different findings. In this study, most faculty (60%) were concerned with maintaining the integrity of their class activities and testing policies, and fewer (35%) were concerned with keeping students engaged online.

Three studies utilized survey tools to evaluate faculty self-efficacy towards teaching online. Two of the studies (Hampton et al., 2020; Richter & Idleman, 2017) used the Michigan Nurse Educator's Sense of Efficacy for Online Teaching Scale and both found that engaging students in online courses were their lowest area of efficacy. Horvitz et al. (2015) used the Teachers' Sense of Efficacy Scale and found similar results. While faculty felt comfortable using online teaching strategies and managing their class, their lowest area of efficacy was in their ability to foster student engagement (Horvitz et al., 2015). Finally, Walters et al. (2017) used a self-created online survey to explore faculty perceptions of factors related to online teaching. This study also revealed that faculty were less satisfied in their ability to maintain student

engagement (Walters et al., 2017). In comparing efficacy scores, faculty who completed additional training in online education or participated in a seminar reported higher efficacy scores in their ability to maintain student engagement (Richter & Idleman, 2017).

Two qualitative studies (Stephens & Coryell, 2020; Wands et al., 2020) reported slightly different findings. Faculty in both studies reported feeling students were engaged in higher-level critical thinking skills (Stephens & Coryell, 2020) and were prepared for each of their online sessions (Wands et al., 2020). In both studies, however, faculty reported that they struggled and had difficulty determining how to ensure their students were engaged with faculty and other students in the online environment (Stephens & Coryell, 2020; Wands et al., 2020).

Student Learning. Much of the literature presented data regarding faculty thoughts on the impact and their concerns regarding student learning. Al-Freih (2021) reported that faculty expressed concern and difficulty trying to gauge how much information the students understood, and the pedagogical changes needed to enhance and support student learning. Al-Freih (2021) did not report what factors triggered these feelings. However, Jokinen and Mikkonen (2013) reported similar findings in their focus groups that revealed the faculty's challenge when impacting student learning when they are not "continuously present" with their students (p. 528). One reason why faculty had difficulty gauging how much students understood could be related to students' lack of responses when faculty would ask if there were any questions (Al-Freih, 2021). Another struggle presented in the literature was how to best evaluate student learning. According to Jokinen and Mikkonen (2013), faculty had to implement different methods to confirm the acquisition of competencies, including exams, skills tests, group exams, and self-assessments, which are also used in a face-to-face class.

Faculty indicated that it was necessary to provide students with more detailed descriptions of their assignments and due dates to help increase student understanding of course material and assignments (Chiasson et al., 2015). Providing more detailed instructions to students made it easier for students to understand the class content (Chiasson et al., 2015). While making changes to student learning delivery methods may have been a challenge, some faculty felt comfortable in their ability to manage the students (54%) and making the necessary adjustments to their teaching methods to meet the different learning needs of their students (Richter & Idleman, 2017). Faculty who could reach their online students and believed that students were learning became more confident and comfortable teaching in that environment (Horvitz et al., 2015). Some faculty felt that students learned in online simulation experiences better because it felt more natural to the students, by allowing them to make clinical decisions on patients (Verkuyl et al., 2020).

When faculty were teaching exclusively online, they reported feeling more comfortable with student learning than faculty who taught primarily face-to-face or in a blended program (Walters et al., 2017). However, most of these faculty also reported the least amount of confidence in their ability to provide prompt feedback to the students (Walters et al., 2017).

Student Connections. An effective student-faculty relationship is a key to online learning and face-to-face learning (Richter & Idleman, 2017). Differences between online and face-to-face teaching, discussed by Richter and Schussler (2019), included discussion on how technologies could contribute to miscommunications and how the online environment did not feel as fulfilling as face-to-face (Richter & Schussler, 2019). The difference between teaching online and face-to-face was also discussed by Stephens and Coryell (2020). Even though faculty became more satisfied with their student interactions online, they felt that interactions and

communication with students in online classes were different from the traditional classroom setting (Stephens & Coryell, 2020). Teachers became more satisfied with their ability to interact with students as the number of online classes taught increased (Cherry & Flora, 2017). Faculty found that they spent more time communicating with students (Chiasson et al., 2015) and ultimately felt that the loss of “social and emotional connections” was a reason not to continue teaching online or to use a blended approach to teaching (Al-Freih, 2021, p. 18).

Learning a New Pedagogy

Learning to teach online requires faculty to plan and prepare, often requiring faculty to change the way they taught and how they thought about student learning (Chiasson et al., 2015).

Use of Face-to-Face Content. When transitioning to online teaching, faculty would use the content used in their face-to-face courses and place them in their online classes (Al-Freih, 2021; Chiasson et al., 2015). Factors associated with online teaching that made it challenging to use face-to-face content included the learning environment, different methods needed to engage and interact with students (Al-Freih, 2021), and length of time to complete activities of learning activities (Chiasson et al., 2015). According to Chiasson et al. (2015), 80% of participants indicated that they used course objectives, content, and components from their face-to-face courses; however, they realized that adjustments were often needed and transferring face-to-face content was unrealistic. During the implementation of online courses, faculty noted that it was challenging to transfer course materials from face-to-face to online (Stephens & Coryell, 2020) due to the need to provide more detail to students (Chiasson et al., 2015) and the need to plan different learning activities (Al-Freih, 2021; Jokinen & Mikkonen, 2013).

Learning the Technology. Learning online teaching technology took time (Chiasson et al., 2015). Barriers to learning the technology included: frequent technology changes, technology

that did not work, working with platforms that did not meet the needs of students (Richter & Schussler, 2019), unreliable technology, and inaccessible technology (Walters et al., 2017). In addition, faculty indicated a feeling of concern when preparing to teach online that they lacked knowledge about the technology they were about to use (Sinacori, 2020). The opposite finding was identified by Onalan and Kurt (2020), who indicated faculty felt comfortable (95%) and excited (90%) with computer use, and faculty (71%) reported being able to manage the technical issues as they arose. The faculty studied by Onalan and Kurt (2020) also indicated that all participating faculty completed at least two computer courses as part of their undergraduate education, and 75.5% received courses related to technology and material development to provide faculty with skills and knowledge of various technologies needed to design instructional material. Completing these courses could play a role in the number of faculty who reported feeling comfortable and excited about computer use in education, compared to faculty in the other studies.

Professional Development. When engaging in a new teaching style or environment, faculty will often teach themselves, often learning from “trial and error” (Gazza, 2017 p. 346). Some faculty would turn to formal training or additional courses to prepare (Gazza, 2017). In some instances, faculty asked for additional training (Sinacori, 2020, Walters et al., 2017) and would often state the lack of training was a barrier to transitioning to online teaching and the cause of an increase in faculty anxiety and fear over making a mistake (Simes et al., 2018). In contrast to the studies that reported faculty’s desire for training, one study reported that even though training sessions were provided, there were limited opportunities to participate in these sessions, and few faculty attended (Roney et al., 2017).

Personal Growth. When faculty transitioned from traditional teaching to online, they must change teaching strategies and implement new techniques (Chiasson et al., 2015; Gazza, 2017) and the unique circumstances presented by the COVID-19 pandemic may have served as the mechanism for future changes in higher education. For example, faculty explained how during the transition while learning new technology they had to troubleshoot issues independently, which resulted in a new awareness of learning technologies and a new sense of confidence in their abilities (Al-Freih, 2021). Gazza (2017) reported similar findings, as faculty reported how they were able to learn new tools, technologies, and teaching strategies over time. The ability to learn new teaching strategies, skills, and technology was also reported in two other studies (Chiasson et al., 2015; Stephens & Coryell, 2020). Faculty indicated in these studies that by teaching online, they became more organized (Chiasson et al., 2015), developed new skills for teaching, and pushed them to be more focused on the needs of their students (Stephens & Coryell, 2020).

In each of these studies, the skills learned and the changes made to their teaching approach were all deemed as contributing factors to a more student-centered approach to teaching (Al-Freih, 2021; Chiasson et al., 2015; Gazza, 2017; Stephens & Coryell, 2020). In Gazza's (2017) qualitative study, faculty did not explain in their interviews what prompted the change to their teaching style, but Al-Freih (2021) and Stephens and Coryell (2020) both reported that faculty made changes to or learned new teaching strategies to encourage and support student engagement and peer interactions online. According to Chiasson et al. (2015), faculty made changes to support students building knowledge. The findings presented in these studies show that even though barriers existed, and the transition may have been difficult, faculty could adapt and continue developing new teaching strategies.

Faculty Support

Providing time and support to faculty can be instrumental to their transition to online, providing them with the opportunity to learn the technology, develop course material, or learn the components of the technological program (Verkuyl et al., 2020). The support and services provided to faculty, who are charged with redesigning their courses traditionally taught face-to-face, varied depending on the institution (Chiasson et al., 2015), and availability of quality resources and support were directly correlated to online teaching efficacy (Richter & Idleman, 2017; Wands et al., 2020).

Institution Support. Institutional support can impact faculty satisfaction with online teaching (Cherry & Flora, 2017; Walters et al., 2017). Demographic information such as the number of years teaching online was not related to faculty's satisfaction with support provided by their institution (Cherry & Flora, 2017). Perceived level of support can be seen as a barrier to adoption when faculty feel there was not enough support from their institution (Kowalczyk, 2014). Onalan and Kurt (2020) reported similar findings as their study discovered that faculty had a robust support system between colleagues, with 80% of study participants indicating that they exchanged ideas with other faculty, yet believed they received minimal support from their administration, and 50% were unsure of what support they received regarding computer use in their classes. Four studies discussed a perceived lack of understanding from the institution on the challenges faced by faculty. Porter et al. (2020), Richter and Idleman (2017), and Simes et al. (2018) indicated that faculty felt their institution did not understand the time commitment required for online teaching course creation, learning technology, and class management. Howe et al. (2018) mirrored this finding, but in this study, faculty also recommended their institution

should have communicated with faculty who had already taught online to better understand the needs of transitioning faculty.

Technology Support. Technology use in education continues to grow and change constantly, yet many faculty still struggle with technology use in teaching, often reporting the need for additional training (Roney et al., 2017). This could explain the results presented by Roney et al. (2017) where faculty responses on using technology to teach reported that only 50% of faculty met with a technology support person to integrate technology into their class; however, this was not a consistent finding in the remaining studies. Many of the participants in this study reported learning independently; 86% reported they did not attend in-person or online training sessions (Roney et al., 2017). Kowalczyk (2014) study of online education in radiology programs found that faculty did not feel they had confidence using information technology (IT); 58% claimed they did not receive enough training; 43% did not receive enough technical support, and 50% did not have IT support for troubleshooting (Kowalczyk, 2014). Technology support was also provided in the form of an instructional designer, who assisted faculty in identifying appropriate tools or guidance in creating their course (Chiasson et al., 2015). The faculty represented in Onalan and Kurt's (2020) study all taught in their university's education department and worked with a technology support person.

Faculty often desired access to technological support when making the transition from face-to-face teaching (Kowalczyk, 2014; Porter et al., 2020, Sinacori, 2020), and faculty found this support to be significant (Richter & Schussler, 2019). Online support can help alleviate faculty frustrations caused when technology did not work as it was intended, the learning platforms did not support the needs of the students (Richter & Schussler, 2019), or when faculty experienced difficulties managing multiple devices (Wands et al., 2020). Verkuyl et al. (2020)

reported that technology was considered a barrier to adoption. Wright (2014) found opposite findings as faculty reported feeling comfortable with their ability to learn technical skills and seek out needed support. However, Wright's (2014) study had a large sample size, demographic information on the program's faculty taught in, or previous knowledge of technology was not indicated.

Access to technological support increased faculty satisfaction when transitioning to online education (Howe et al., 2018; Walters et al., 2017), with faculty showing lower satisfaction when technology support, in the form of support for software, hardware and learning management systems, mentoring and release time were not provided (Hampton et al., 2020), or when the technology was not reliable (Kowalczyk, 2014). Richter and Idleman (2017) found similar findings, which showed no significant difference between faculty who received instructional design support and those who did not (Richter & Idleman, 2017). The provision of technological support allows faculty to focus less time learning new technologies and more time developing student-centered pedagogies in the online environment (Kowalczyk, 2014).

Peer Support. Faculty would often turn to colleagues or peers when transitioning from face-to-face teaching. For example, when preparing for an online class, some faculty experimented independently or used an instructional designer to develop their course (Chiasson et al., 2015; Gazza, 2017; Richter & Idleman, 2017). In addition, often, faculty turned to colleagues who have already transitioned to online teaching to provide pedagogical support (Chiasson et al., 2015) or receive guidance on changing their teaching methods or using the technology (Gazza, 2017). Findings from these two qualitative studies show that to assist faculty in the transition to online teaching and encourage continued use of online learning, peer support should be considered.

Collaborative planning was also used as faculty transitioned to online and was seen to exchange ideas or learn from other faculty (Jokinen & Mikkonen, 2013). Eighty percent of faculty reported that they exchanged ideas with their peers, which helped create a positive culture among colleagues (Onalan & Kurt, 2020). Similar findings were discovered during an exploration of faculty needs during the transition when faculty reported their desire to have mentors to work with during the transition to online (Simes et al., 2018). Mentors were seen as vital in four studies (Hampton et al., 2020; Howe et al., 2018; Simes et al., 2018; Sinacori, 2020). In each of these studies faculty indicated mentoring increased faculty satisfaction with the transition (Hampton et al., 2020; Howe et al., 2018) and was desired by faculty during the transition (Simes et al., 2018; Sinacori, 2020). Hampton et al. (2020) and Howe et al. (2018) both attributed mentoring support to faculty satisfaction with their transition to online learning. Simes et al. (2018) and Sinacori (2020) did not link mentorship to satisfaction; however, the lack of mentoring support was viewed as a barrier to faculty acceptance of online teaching, and as a recommendation to alleviate the barriers associated with online teaching. One study reported the opposite outcome, showing that faculty who received mentoring had reported no difference in their level of efficacy than those who did not receive support (Richter & Idleman, 2017).

Time

Time was critical to faculty success transitioning to online teaching (Hampton et al., 2020). Concerns related to time were often a common topic in the literature during the discussion of the implementation and development of online courses (Chiasson et al., 2015). Teaching online was found to be more time consuming and more work than teaching face-to-face (Chiasson et al., 2015; Gazza, 2017; Wright, 2014), and faculty reported feeling the need to be accessible to their students every day of the week (Gazza, 2017; Wright, 2014). In addition, time

was needed to develop a sense of comfort in their new environment (Verkuyl et al., 2020), and they reported that planning with other colleagues supported the development of expertise and learning but was also time-consuming (Jokinen & Mikkonen, 2013). The time needed to transition to online teaching was often viewed as a barrier (Richter & Schussler, 2019; Simes et al., 2018; Wright, 2014) which, in some cases, the administration did not understand the time needed to transition online successfully (Porter et al., 2020).

Preparation. Most of the time was often spent planning and preparing to teach an online course when preparing to transition from face-to-face teaching (Chiasson et al., 2015; Howe et al., 2018; Porter et al., 2020; Richter & Idleman, 2017; Stephens & Coryell, 2020). The development of an online course is viewed as time-consuming, with time being needed for some faculty to learn the technology, and faculty stated that they did not feel they had the expertise to transition to online (Chiasson et al., 2015; Porter et al., 2020; Richter & Idleman, 2017). Provision of time to prepare can increase faculty self-efficacy (Richter & Idleman, 2017) and increased faculty satisfaction (Howe et al., 2018). Porter et al. (2020) indicated that faculty also saw lack of time to prepare to be a barrier to successful implementation; however, the impact of the lack of preparation time was not discussed other than the establishment of course quality. Kowalczyk (2014) reported that faculty saw lack of support and the culture within their organization as a barrier to online learning; they viewed the time needed to prepare for online teaching was not a barrier.

Release Time. The development of an online course was more time-intensive than developing a face-to-face course (Chiasson et al., 2015). Some of the reasons reported for the increase in time needed to develop an online course were often spent learning the technology and placing the new content into the online course (Chiasson et al., 2015). Some faculty felt that

while time to prepare an online class was intensive, all the participants in Chiasson et al. (2015) study indicated that they did not receive release time. This study did not identify if release time was desired by the faculty, only that it was not provided. The need for release time for online course preparation was a common theme in the literature. Faculty showed higher levels of efficacy in their ability to engage students, adjust online teaching methods, manage the classroom, and use the technology if release time was provided (Richter & Idleman, 2017). While release time may have been desired by the faculty and was considered necessary, often the institution did not acknowledge the need for course release time (Richter & Idleman, 2017; Richter & Schussler, 2019). Richter and Schussler's (2019) analysis of faculty experiences and perceptions primarily indicated that the lack of release time was desired by faculty but not viewed as acknowledged by administration but receiving release time was attributed to higher perceptions of success during the transition (Richter & Idleman, 2017).

Self-Efficacy

Transitioning from traditional teaching to online teaching can challenge faculty regardless of their level of experience. Faculty ability to use the computer or technology and student motivation often rated as their highest area of efficacy (Richter & Idleman, 2017; Roney et al., 2017), and their lowest areas of efficacy were their ability to motivate and engage students (Richter & Idleman, 2017). In Richter and Idleman's (2017) study, only 27% of faculty reported a high level of efficacy to motivate their students in the online course. One predictor of self-efficacy in faculty was how they perceive student learning. Perceptions of student learning are a significant predictor of instructional strategies, classroom management, and student engagement (Horvitz et al., 2015). Therefore, it is not surprising that if a teacher feels their teaching strategies

in the online class were effective and produced student learning, they would be more confident engaging students online (Horvitz et al., 2015).

The findings in the literature regarding the demographic impact on self-efficacy are mixed. For example, professional development and support were noted in two of the studies (Dolighan & Owen, 2021, Richter & Idleman, 2017). Dolighan and Owen (2021) and Richter and Idleman (2017) found no significant correlation between additional training, mentoring, and design support and reported self-efficacy, but these variables correlated to an increase in faculty satisfaction. Richter and Idleman (2017) went further to report that faculty who took part in a “seminar in teaching online” reported increased faculty self-efficacy in student engagement, teaching strategies, and overall efficacy (p. 5). Age or amount of experience showed no significant difference in self-efficacy (Richter & Idleman, 2017); however, higher self-efficacy levels were found in faculty who taught only online and were more comfortable teaching online (Walters et al., 2017).

Summary

As evidenced in the literature, several factors can impact faculty transition from face-to-face to online education. These factors include faculty relationships with students, learning a new pedagogy, faculty support, time, and self-efficacy. Both time and self-efficacy were discussed in many studies and were linked to faculty perceptions of the transition. For example, many faculty reported that preparing for online teaching was more time-consuming than face-to-face (Chiasson et al., 2015; Gazza, 2017; Wright, 2014). Much of this time was spent preparing and planning (Chiasson et al., 2015; Howe et al., 2018; Porter et al., 2020; Richter & Idleman, 2017), and many faculty felt that the provision of release time would make the transition smoother (Chiasson et al., 2015; Richter & Idleman, 2017). Faculty also reported their desire for support

from their institution, technology team, and colleagues (Cherry & Flora, 2017; Kowalczyk, 2014; Porter et al., 2020; Sinacori, 2020; Walters et al., 2017).

Transitioning to online education causes many faculty to modify their teaching strategies to maintain student engagement (Al-Freih, 2021; Gazza, 2017). Faculty frequently discussed having difficulty engaging students (Stephens & Coryell, 2020; Wands et al., 2020) and would often struggle with gauging how much information students were learning since students provided limited responses to faculty questions (Al-Freih, 2021; Jokinen & Mikkonen, 2013). Faculty also reported feelings of disconnect with students, with technology contributing to miscommunications (Richter & Schussler, 2019), compounded by the online classroom setting (Stephens & Coryell, 2020).

In the literature, not all experiences during the transition to online teaching were negative. Some faculty reported that the transition to the online environment allowed them to gain more confidence with online tools, technologies, and teaching strategies (Al-Freih, 2021; Gazza, 2017; Chiasson et al., 2015; Stephens & Coryell, 2020). These new skills were deemed by faculty as contributing factors to a more student-centered approach to teaching (Al-Freih, 2021; Chiasson et al., 2015; Gazza, 2017; Stephens & Coryell, 2020). There is much to be learned by exploring faculty experiences of transitioning from face-to-face clinical and simulation to online. Literature is beginning to surface regarding faculty experiences during the COVID-19 pandemic, yet a clear gap remains regarding the transition of nursing clinical practice to the online environment.

CHAPTER III

METHODOLOGY

This study employed narrative inquiry using Riessman's framework (2008). The narrative analysis approach allowed the researcher to frame questions that elicit stories describing the participants' experiences (Clandinin & Connelly, 2000; Creswell & Creswell, 2018). Detailed information allows the researcher an in-depth understanding of nurse educators' experience (Riessman, 2008). The emphasis on faculty experiences transitioning from face-to-face clinical to VS experiences was appropriate for a qualitative approach. The stories told by participants helped to provide insight into how educators transitioned to using VS and how they used existing knowledge and evaluation tools in new ways, along with challenges they encountered with evaluation in a VS learning environment.

Narrative Inquiry

Historical Overview

Narrative research has become more frequently used as a methodology in qualitative research and has been used in multiple disciplines (Holloway & Freshwater, 2007). However, the roots of narrative research can be traced back to the Chicago School of Anthropology, the feminist work of the 1960s, and the sociolinguistic work of the 1970s (Butler-Kisber, 2010). Narrative research is a research method that recognizes that the narrative or story presented by an individual is an effective method to look through the window at the complexity of the lived experiences. This qualitative research method considers the *how*, *why*, and *what* behind everyone's story and was not focused simply on the presentation (Riessman, 2008).

Riessman (2008) combines postmodern and constructionist thought, believing that the story that people create and share of their past experiences reflects who they are and how they

want their experiences to be known. A narrative approach focuses on the story as the primary way to make meaning and understanding from each experience. It is the best approach for researchers who want to reveal the truth and meaning behind the story (Riessman, 2008).

Central Concepts of Narrative Inquiry

Many qualitative researchers have implemented narrative analysis in their studies and have contributed to the understanding of narrative analysis; therefore, multiple definitions and assumptions exist in the field of narrative analysis. This study drew on the works of Catherine Riessman. The fundamental concepts in Riessman's (2008) interpretation of narrative analysis are: (1) narrative is an opportunity to see into the lived experiences of the individual, (2) meaning is created from the narrative, and (3) narrative acts as both the method to do research and the object of the study.

Narration is an essential means for individuals to share their experiences and communicate with one another, essentially acting as a window to each individual (Riessman, 2008). The primary method used by individuals to share, and make sense of their experiences, is to recreate the event in narrative form (Riessman, 2008). The individual describes their events, determines what they will exclude, describes the sequence of events and the people involved in the experience. The narrative represents how the storyteller wants to be viewed by their audience by sharing their thoughts and actions.

In narrative analysis, it is assumed that meaning was constructed from each personal narrative. Through their narrative, the storyteller will summarize and explain their event to their listener. During the storytelling, the teller will project the story to represent how they want to be viewed. Another way to derive meaning from the narrative is through the teller's facial expressions, pauses, and breaks, the changes in the tone of their voice. The narrative also goes

beyond the simple regurgitation of events from the teller's point of view. The narrative reveals intentions, thoughts, emotions, and actions, allowing the events to become more meaningful. According to Riessman (2008), the narrative provides the canvas showing how the teller's intentions, thoughts, emotions, and actions are connected.

An essential characteristic of Riessman's (2008) narrative analysis is how the narrative is both an approach and an object, with the story being both the technique for conducting the study and the focus of the study. Each narrative provides the teller with the opportunity to share their story, but the narrative can also provide valuable insight and data. To effectively analyze the data from the narrative, Riessman (2008) believes that it is essential to systematically evaluate the narrative as a distinct unit and not divide the story into simple themes.

Every experience disclosed offers an understanding of the lives of the storyteller. Each story shared by nursing faculty will provide insight into their opinions and experiences transitioning from face-to-face clinical and simulation experiences to virtual environments during the COVID-19 pandemic. By hearing the storied experiences of the faculty, it is hoped that important information was discovered about how faculty felt during this time, offer insight on the use of VS, and important lessons may be learned about how to effectively deliver simulation experiences virtually.

Methodology Implementation Plan

Site and Setting

Faculty participants were recruited from universities and colleges with a pre-licensure nursing program within Texas. The recruitment sites for this research were universities offering four-year baccalaureate nursing programs, including both private and public universities. The interviews took place at a quiet and private location mutually agreed upon by the participant and

researcher and the participant's privacy and confidentiality was protected. This may include face-to-face interviews, telephone interviews, or video conferencing platforms such as Zoom or Microsoft Teams. The option to conduct a second interview was available to accommodate for interruptions or necessary follow-up. All interviews were audio recorded.

Participants

Since clinical nursing education is primarily conducted in a hospital community or clinic setting, supervised by clinical nurse faculty, nurse educators who teach in a 4-year pre-licensure nursing program was the focus of this study. Purposeful sampling involves identifying and selecting participants who are considered knowledgeable or have experience in the subject of interest (Palinkas et al., 2015). Nurse educators with personal experience teaching students in the clinical setting and a VS platform was recruited to participate. Potential participants were invited to participate in the study if they meet the established criteria: (1) nurse faculty in a pre-licensure program, (2) instructed students in a clinical environment, and (3) transitioned to VS to replace either face-to-face simulation or clinical experience.

Potential participants for this study were recruited through email. These emails were sent to nurse educators teaching in pre-licensure nursing programs and emails were collected from the institution public web pages. The researcher attempted to recruit a diverse group of participants in terms of the number of years' experience and institutions. Recruitment for this study was focused on institutions that offer a baccalaureate nursing program within the state of Texas. Recruitment for this study remained open until data saturation was reached, and no new information was likely to be obtained (Patten & Newhart, 2018).

Researcher as an Instrument

The role of the researcher in the narrative analysis is to write a narrative or "structured retelling" to lead to a better understanding of the participants' experiences (Durkin et al., 2020). According to Durkin et al. (2020), to ensure the authenticity of the data, the researcher must further explore participants' responses, including moments of silence, ultimately allowing the participant to direct the interview and allowing the participant to share their story in their way (Riessman, 2008). The researcher acts as a collaborator in the interviews while the participants share their stories, allowing for corroboration in constructing the narrative and its meaning (Riessman, 2008). It is imperative for the researcher to establish rapport with each participant to establish an authentic, trusting environment needed to encourage storytelling (Patton, 2015; Riessman, 2008).

The researcher initially established rapport with the participant, allowing the respondent to be comfortable and willing to share their stories (Polit & Beck, 2017). Being a former nursing faculty member in Texas, and a student from a Texas university assisted in gathering of names and contact information for potential participants. Building rapport is a key to success in qualitative inquiry, and can be established by finding common ground, and developing a bond. The researcher was also nursing faculty who made the transition from face-to-face clinical and simulation to VS during the COVID-19 pandemic, therefore sharing a common bond with the participants.

This study used a semi-structured interview to allow for two-way conversation and provided the ability to create questions ahead of time. This interview was conducted using a guide of open-ended questions, written using the NLN/Jeffries Simulation Framework. Appropriate follow-up questions and probing were used to obtain greater depth of detail and

understanding. The semi-structured interview is suited to studies that seek to explore attitudes and experiences, encourage participant participation (Barriball & While, 1994), and generate a more detailed account of the participant's experiences (Riessman, 2008).

During the interviews, each participant was asked the same questions to allow for comparison of the data (Barriball & While, 1994) while allowing the participant to have input into the direction of the interview (Durkin et al., 2020). The researcher also had the opportunity to validate and clarify confusing words and phrases (Barriball & While, 1994) and reword research questions that may have seemed confusing to the participant (Patten & Newhart, 2018). Questions were asked to allow the participant to further explain their responses (Patten & Newhart, 2018). It was vital that interruptions and comments are avoided through the interview, other than “non-verbal signals of attentive listening” (Jovchelovitch & Bauer, 2000). Probing with additional questions to explore unexpected but relevant findings was done using phrases such as “What happened next?” or “Can you tell me more?” To stay true to narrative analysis, the interviews focused on the stories during each conversation. Participants were given the freedom to decide on the direction of the conversation (Riessman, 2008). According to Riessman (2008), good narrative interviewing follows the participant’s story; therefore, redirection of off-topic conversations were held to a minimum to allow for exploration of "associations and meanings that might connect several stories" (p. 24).

Data Generation Strategies

Data for this study was gathered from in-depth, semi-structured, recorded interviews. These interviews were conducted using Zoom. Eligibility was determined using an eligibility form (see Appendix A). Once participant eligibility was determined, an interview time was arranged. Before the interview started, informed consent was obtained, and any questions or

concerns were acknowledged or addressed. The concepts of the Jeffries model were used to create the interview questions. By asking the steps taken to transition to VS, the challenges faced, and the methods faculty used to guide, support, and evaluate students can help to address many of the components of the Jeffries model. The nature of the interview was explained to the participant, and permission was requested to record the interview (Jovchelovitch & Bauer, 2020).

Demographic data collected in this study included age, gender, level of education, current academic position, appointment type, years of clinical experience, years of experience as an educator, and teaching method. In addition, other demographic information that was collected included data to assist in determining simulation support available to nursing faculty, including if each faculty member's institution had a simulation lab or a simulation coordinator/director. The demographic form is located in Appendix B.

In preparation for each interview, an interview guide was created (see Appendix C), and it was the researcher's judgment how close the interview guide was followed (Riessman, 2008). A conversational interview was more likely to achieve an in-depth narrative than a structured interview; therefore, the interview guide was available during each interview but may not have been strictly adhered to. The interview guide was created using questions aimed to facilitate information specific to this study while encouraging a relaxed conversation between researcher and participant. By using the Jeffries model (Jeffries, 2016) to develop the questions, each element of the model can be addressed.

After the interview was completed, the recording was saved. The associated documentation, the screening form, demographic information, and consent was also saved in a computer file or a binder. In addition, a journal was maintained throughout data collection to document field notes, perceptions, thoughts, or decisions made during the interviews. These field

notes also served as a detailed account of the interview environment and observations made by the researcher during the interview. The field notes and the binder were kept in a locked cabinet. All computer files and recordings were kept on a password-protected computer.

Data Analysis

Data from this study was analyzed using Riessman's framework for narrative analysis and was focused on (1) telling about the experience, (2) transcribing the experience, and (3) analyzing the experience. Data analysis should start at the beginning of each story, and observations and interpretations are made continuously during each interview. To ensure that the participant can speak freely, questions were used to clarify information or meanings. The talking and listening lead to the production of the narrative (Riessman, 2008).

Transcribing the experience is often incomplete and subjective, with details overlooked with whatever form of recording was used, making transcribing discourse interpretive (Riessman, 2008). Interpretation of data can vary and is dependent on the researcher's "theoretical perspective, methodological orientation, and substantive interest" (Riessman, 2008, p. 29). Each audio recording was transcribed verbatim and included pauses and false starts (Polit & Beck, 2017). Any identifying information such as names and places were excluded to maintain confidentiality. During the transcription process, the researcher listened to the interview, and according to Riessman's (2008) recommendation, the researcher performed the data transcription. Completed transcripts were reviewed for accuracy.

The third component of narrative analysis was the analysis of the data. Following this methodological approach, data analysis occurs by paying close attention to each recounted story. Three methods of analysis were followed in this study: thematic, structural, and performance.

Thematic Method of Qualitative Analysis

In thematic analysis, the content, *what* is said, written, or shown, is the focus (Riessman, 2008). Some forms of qualitative inquiry focus on searching for "theoretical insights" or selected segments within the data; Riessman's approach to thematic analysis strives to keep each "story" together as the unit of analysis (2008, p. 74). One interview was analyzed at a time, "isolating and ordering relevant episodes" into a chronological account. The researcher focused on identifying assumptions and the meaning of what was said (Riessman, 2008, p. 57). Initially, each interview was read for a general impression. Then, a second reading took place to determine essential themes or ideas that can be found in the participant's story.

Structural Method of Qualitative Analysis

Further analysis of the data was conducted using structural analysis to identify how the story was assembled and how the narrative was being told, bringing the focus to the added insights to the story that may be overlooked (Riessman, 2008). Structural analysis transitions focus from the experiences of the narrator to the narrative (Riessman, 2008). A complete narrative may contain six different elements: (1) the main point or summary of the story, (2) the orientation to characters, time, and place, (3) the plot or turning point in the story (4) the evaluation (5) the outcome of the story, and (6) the coda or "ending the story and bringing the action back to the present" (Riessman, 2008, p. 84). Each narration may contain some or all these elements, and these elements may not be in the same order each time. Thus, structural analysis compliments thematic analysis in that structural analysis can assist in clarifying vague thoughts, further illuminate missed insights, and assist with determining a relationship between meaning and action.

Performance Method of Qualitative Analysis

The last level of analysis was performance analysis and was used to focus on whom the story is intended for and what purpose the narrative has. During each narrative, an individual will often project in their story how they want to be seen by the listener (Riessman, 2008). The primary assumption in performance analysis is centered on the presumption that as the participant shares their story, they become the performers of their narrative. Following Riessman's performance analysis method, for each interview, speech, how the participant used language to present their story, including the use of expressive sounds and other linguistic devices, were analyzed.

Summary

Chapter 3 presented information on the methodological procedures that were used to analyze the collected data. Narratives of faculty transitions from live clinical learning experiences to virtual platforms during the COVID-19 pandemic were analyzed using Riessman's approach to narrative analysis in relation to the concepts of the NLN/Jeffries framework. Various components of the narrative analysis methodology implementation plan were also presented including site and setting, study participants, researcher as an instrument, data generation strategies, and data analysis.

CHAPTER IV

RESULTS

Overview

This qualitative study aimed to understand nursing faculty's experiences transitioning from live simulation and face-to-face clinical to VS during the COVID-19 pandemic. The central question for this study was: What are the storied experiences of nurse faculty transitioning from live simulation and face-to-face clinical to VS during the COVID-19 pandemic? The aims of this study were to: (a) elicit stories about how nurse faculty moved from live clinical to VS experiences, (b) learn through their stories about how faculty guided, supported, and evaluated students during VS learning, and (c) identify challenges that nurse educators experienced when changing from face-to-face clinical to the VS environment.

Data for this study were gathered through semi-structured, Zoom interviews transcribed verbatim. The data in this study was organized and then analyzed using Riessman's (2008) three levels for narrative analysis. The following chapter will illustrate findings of the study, including a description of participants, a brief introduction to each participant and stories they told, with names changed for anonymity, along with themes that emerged from stories of faculty from universities and colleges with a pre-licensure nursing program in Texas.

Participants

Participant Demographics

Nine nursing faculty, who teach in a prelicensure nursing program in Texas, took part in the study (see Table 1). All nine participants were female between 42 and 65 years of age ($M = 54$ years) at the time of the interview. All participants taught in a BSN program, with two teaching in other nursing programs. Three participants held an MSN degree, while the remaining

six held either a DNP ($n = 3$) or Ph.D. ($n = 3$). Participants held a variety of positions within their institution, including associate professor ($n = 2$), associate dean ($n = 1$), full professor ($n = 1$), assistant professor ($n = 2$), and clinical professor/adjunct ($n = 3$). One participant described herself as a campus director, site coordinator, and clinical instructor.

The amount of clinical experience varied among participants and ranged from 4-38 years, with the majority having more than 20 years of clinical experience ($n = 7$). Years as an educator ranged from 4-28 years, with over half of the participants with less than 10 years of experience as an educator. All study participants taught in a clinical setting. Participants in this study also taught in lecture ($n = 8$), asynchronous classes ($n = 5$), synchronous online ($n = 4$), blended or hybrid classes ($n = 5$), lab ($n = 4$), and simulation ($n = 6$).

All participants indicated that their institution has a simulation lab, and eight reported that their simulation lab had a simulation coordinator. Four participants had used VS prior to having to transition to VS during COVID-19. Five participants reported only having used VS since COVID-19. Over half of participants ($n = 5$) said they were provided training before using VS in their clinical experiences. Training provided to participants included observing a demonstration, NLN training, and other training sessions provided by either the institution or simulation coordinator.

Introduction of Participants

This section presents a brief biographical profile of each participant and their interaction with the primary investigator (PI). The names of each participant were changed to maintain participant anonymity. The rapport that developed between the PI and each participant helped shape the narrative to be presented. In this chapter, each participant is described, including their background and experiences, from in-person clinical experiences to virtual ones during the

COVID-19 pandemic. These descriptions are followed by vignettes detailing each participant's virtual clinical experiences. These stories encompass each participant's journey as they rapidly transitioned their clinical and lab groups and will include significant events during this transition.

Table 1

Demographics of Study Participants

Name	Age	Degree	Years clinical experience	Years teaching experience	Type of program teaching in
Amanda	49	PhD	23	13	BSN
Beena	54	PhD	32	28	BSN, MSN, PhD
Christina	51	DNP	22	5	BSN
Dina	64	DNP	38	6	BSN
Haley	65	MSN	25	5	BSN
Heidi	50	MSN	Not Provided	5	BSN
Leanne	65	PhD	35	18	BSN, MSN
Jenna	42	DNP	Not Provided	4	BSN
Marlena	49	MSN	22	4	BSN

Amanda

Amanda was the first participant to be interviewed. After a few brief emails, Amanda agreed to participate in the interview. She holds the position of associate professor at her current place of employment. Amanda has used a variety of teaching methodologies, including lecture, asynchronous and synchronous online classes, blended classes, lab, clinical, and simulation. Her institution also has a simulation lab run by a simulation coordinator. During her years as an educator, Amanda had not worked with VS prior to the COVID-19 pandemic. During this

transition, she reported that she did not receive any additional training. Her only exposure to VS before spring of 2022 was a demonstration on how to implement VS into the classroom for supplemental instruction.

During the interview, Amanda expressed feeling uncertain and rushed throughout the transition. Amanda also commented she struggled with her new role at home and finding balance between her role as an educator and her new role as a first-grade teacher to her son, who was now also at home. Amanda often referred to her didactic and clinical classes interchangeably during the interview. In addition, Amanda frequently would make comments about her concerns about wanting to appear proficient in front of the students during virtual experiences:

Having the added pressure of running new scenarios plus the technical component (laughing), it's really that idea of wanting to have the student feel as though you are prepared and that you know what you are talking about, and this...can be a positive experience and true learning experience and have value while navigating all of those behind the scenes that you know you don't want the front of the house to see all the stuff that happens at the back of the house so trying to you know have an authentic experience in the front of the house while managing everything that happens on the back end.

Beena

Beena teaches using a variety of modalities, including lecture, asynchronous and synchronous online classes, blended classes, lab, clinical, and simulation. Before transitioning to virtual clinical, Beena indicated that she had some experience with VS but did not report receiving any training.

In much of the conversation with Beena, she discussed how she felt rushed during the transition and how much of her time was spent calming and reassuring students. Stories were

shared that mirrored Amanda's concerns, where she indicated a desire to appear proficient when trying to provide meaningful virtual experiences. Another concern that was mentioned during this interview was even though Beena wanted to take time to reassure her students, she also indicated this transition led to feelings of needing to be available to her students and faculty at all hours, leading her to the re-establishment of new boundaries:

The only other challenge for me was just the increase in, umm, work time...like suddenly we were literally working 24/7, and not only that; suddenly we were having meetings like it was like all of a sudden because now could be available on Zoom virtually okay well now we're going to have meetings all day long now that you can be accessible you're going to be accessible all the time so.

Christina

Christina teaches in an evening and weekend BSN program, and in that program, she has taught using lectures, asynchronous and synchronous online classes, blended classes, lab, clinical, and simulation. In addition, her institution uses a simulation lab managed by its simulation lab coordinator. Prior to COVID-19, Christina had not used VS and indicated she had been given a small amount of training before starting her virtual clinical. Some of the provided training included modules in an online training platform and various ATI training modules.

Prior to the initiation of the recording, Christina informed me that she was former military. During the interview, Christina revealed that just weeks prior to the lockdown and switch to virtual clinical, she had lost her husband after a long battle with cancer. For Christina, the quick transition gave her something to focus on during her grieving process. However, Christina also stressed how many of her struggles during the transition focused on her ability and

desire to maintain the expected level of professionalism in the virtual setting as she did during her clinical experiences:

Enforcing like attendance, umm, you know just the basic policies, you know professional behavior, clinical behavior, you know the way you will the clinical appearance...I was like, okay, we're in the clinical setting, so your hair needs to be appropriate; you know somebody is laying in the bed, you have to so the layin in the bed is not appropriate; remember this is still a professional you know environment...then I also show it, you know, I'm going to put on, I don't just put on a sweatshirt, I put on, you know, like at least a blouse if I am in the classroom or in clinical I put on my scrub top, and I have like my white lab coat on...you have to let them know we have the same expectations whether we were virtual or in person.

Dina

Dina is an associate professor with her DNP and is currently teaching in a BSN program. In her BSN program, Dina has used lectures, synchronous online, clinical skills lab, and simulation for her teaching modalities and has access to a simulation lab. In addition, before spring of 2020, Dina used some VS, along with some training that included NLN sim training at her previous place of employment.

During our conversation, Dina mentioned similar stories as other participants. Some stories and experiences Dina communicated included feeling like she was "always available," the need to set boundaries, and how to manage her virtual clinical while finding ways to reach her students in the new platform. In addition, Dina recounted an experience that she had with a colleague where after the spring 2020 semester, her colleague, who was an adjunct faculty, made a choice not to return for the following semester:

When that email came out, I remember already thinking something has to give here, you know. I can't do this. I do know a couple of my friends who were working adjunct at the university that I had recruited, umm who, after that semester, they did not come back, you know, there were just pool faculty, and they worked in the hospital, and they were like hmmm I cannot be available 24/7 to students like this, and I was like you don't have to, you can set those boundaries, you can do it, and they were like "Nah, nope, I don't think I am going to teach."

Haley

Haley facilitates students' clinical experiences as a BSN program's visiting professor. Like other participants, Haley had yet to use VS before being required to use this platform to facilitate clinical. The interview with Haley took much work to keep on track. Haley enjoyed sharing her stories and experiences during her transition to virtual clinical and before the transition occurred. Haley mentioned during her interview that she did enjoy not having to commute to and from the clinical site but was disappointed with VS experiences. She found supplemental resources to make the experiences more meaningful for the students. Even with these supplemental resources, Haley was frustrated with her virtual experiences:

I can't watch my students do nursing anymore. Usually, I could walk into a room and be there five minutes and tell if that student was understanding how to be a nurse, how did they interact with that patient? Were they smooth? Where they systematic with the assessment, and that's one of the things that I'm looking at all the time is assessment, how do they communicate, I mean that's one of the things you just almost can't teach, you just have to feel it...I felt like these students are not gaining confidence by doing this online

virtual stuff; they're frustrated because they're all hands-on learners, most nursing students are, and the stuff that you're learning in clinical are hands-on skills.

Heidi

Heidi's teaching experience also includes methodologies such as lectures, blended courses, clinical, lab, and simulation. At the time of the transition from in-person to virtual clinical, Heidi had no experience with VS. She also indicated she did not receive any training before using it for her clinical experiences.

Heidi spent much of the interview sharing stories of her concerns over trying to appear proficient, specifically in the beginning. She told her stories in a way that always focused on student's needs and how she made sure that students had meaningful clinical experiences. For example, in one of the stories that Heidi mentioned, she referred to feeling as if "life bled into school, and school bled into life" and how there did not seem to be an "off switch":

We live in a rural community, and internet is questionable on a good day, so not only was I dealing with potential internet issues, along with three teenagers who are taking college classes in my same household needing bandwidth, but then my students were experiencing the same thing and because we are rural we do typically have a lot more non-traditional students...what we really felt it and I know my students felt it too was life bled into school, and you know you would be on zoom and your six-year-old needed food, or the baby would start crying...we had to get creative and schedule her later in the evening which they caused the school to bleed into life because you were never off duty.

Leanne

While teaching, Leanne uses a variety of modalities, including lecture, online, blended, clinical, lab, and simulation. Leanne also had some experience and training in VS before

transitioning to her clinical in the spring of 2020. During our conversation, Leanne explained that she found the transition very rapid and that it was difficult to plan because of constant and continuous changes. Leanne also explained her thoughts about how she was concerned about not appearing proficient in front of her students and a need to establish boundaries in the online environment. Because of these changes, she felt like she was continuously having to “figure it out” as she went through the semester while striving to give her students meaningful experiences:

We were very limited on what we could do for the students...it was kind of sad because we can see no matter what we did, the students weren't getting what they needed. They weren't getting what they should have got, and so it was very disheartening to know that we were sending these students out basically ill prepared umm to walk into practice...we knew, and I knew especially from the hospital, that the hospitals weren't going to treat them any differently, they weren't going to give them any extra time, they were going to shove them into the COVID units...we knew what they're walking into, we knew it was a battlefield, and we weren't preparing them for that.

Jenna

In her 4 years of experience, Jenna has used lecture, asynchronous, hybrid, and clinical teaching methods. Before transitioning her clinical to virtual, Jenna had some experience with VS. She had used it to supplement her class activities for approximately 2 years, and she indicated that she received some training before using VS.

The interview with this participant was interesting simply because of how she presented her stories. Regardless of the question, Jenna presented her experiences and memories like a list of steps she or her institution took during this transition, less like an actual story. Many of the

points made by this participant included learning how to teach in this new environment, engaging students, and the need for additional resources. One central idea in many of Jenna's stories focused on the desire to provide meaningful experiences to the students:

When you are virtual, they [students] can't see what you are doing, and so you have to have a lot more resources at your fingertips...I think the students originally thought, hey, this is fun, it's different, but then they realize, you know, that it's frustrating and hard and challenging. It's really not like taking care of a real patient, so you know, we had to constantly kind of revamp and figure out how we can make it more life-like and real, so they get the most out of it.

Marlena

Marlena is an adjunct clinical faculty member who usually teaches in clinical or lab setting but indicated she has previously taught some didactic. The institution she works with has a simulation lab and coordinator; however, she did not have any exposure to VS before transitioning to virtual clinical and did not receive any formal training before facilitating her virtual clinical.

The conversation with Marlena flowed very smoothly, much like a conversation between friends. Many concerns and stories mentioned by Marlena were very similar to previous participants, including feelings of stress over the rapid transition and engaging students in meaningful experiences while trying to appear proficient. However, what stood out in this interview was how in previous conversations, participants felt they had to be available to their students consistently, at all hours; however, Marlena felt that this helped to strengthen the bond between her and her clinical students:

I think also just being available to them [students], I think you know, we opened up our, you know, our days a little bit more to the students that were having struggles that they could always have one on ones, that we probably did not have when we were having in person classes...I liked it, actually. I mean, it didn't bother me. I mean, we had a lot of downtime at home, so I liked it. It really kind of gave me an insight of what the student was feeling and maybe their own challenges...I thought it was a really cool opportunity. I felt like I was really close to those students that we did virtual because we experienced it together.

Thematic Analysis

After completing a narrative analysis of each participant's detailed stories, five shared themes were discovered. The emerging themes provided a more in-depth meaning and understanding of the faculty's experience during the transition from in-person clinical to virtual clinicals due to the COVID-19 pandemic. In addition, these themes helped to discover more about how faculty moved from live clinical to VS, how faculty guided, supported, and evaluated students during VS learning, and challenges faculty experienced during this transition. An overview of these themes is presented in Table 2.

Table 2

Study Aims and Themes of Faculty Transitions to Virtual Clinical Experiences

Study Aims	Themes
Elicit stories about how nurse faculty moved from live clinical to VS experiences	<ul style="list-style-type: none">• We got an email• I was really stressed out
Learn through their stories how faculty guided, supported, and evaluated students during VS learning	<ul style="list-style-type: none">• Everything can be a learning experience
Identify challenges faculty experienced when changing from face-to-face clinical to the VS environment.	<ul style="list-style-type: none">• I can't be available 24/7• Magically amazing virtual clinical

How Nurse Faculty Moved From Live Clinical to VS Experiences

Theme 1: I Was Really Stressed Out

The theme *I was really stressed out* is related to feelings many participants experienced during the initial transition. All participants reported the transition was challenging along with feelings of stress, anxiety, and being rushed. Beena captured this theme when she said, "[the transition] it was very quick...we felt very rushed, but then we got frustrated...so it was chaotic, it was very rushed, it was very hectic, it was very frustrating."

Three participants also reported feelings of stress that they related to the quick, rushed feeling during the transition. Amanda described how the transition to this new teaching format occurred in what felt like overnight when she stated it happened "essentially overnight, in like

three days having to make the leap really quickly to a different format, umm, it was interesting." Amanda continued to describe how this transition was stressful, saying, "it was a bit, well, it was a lot stressful." Marlana shared, "I was really stressed out because, of course, my role at the hospital, my full-time job was changing as well, and I organized education at the hospital too, so I know that but...I was really, really stressed, I'm not gonna lie." Leanne added:

[we are] all top-level educators, but a week is not enough time to turn clinical into, umm, VS. So we didn't have the tools that we needed, umm, we didn't have access to a lot of resources. I mean, they kind of threw v sim in there, and I'm not saying it's the university's fault because this was kind of like out of the blue, frustrated and umm scared, so a lot of emotions that went on during that time kind of hampered the teaching process.

For some, feelings during that time were attributed to the rapid change in the teaching format.

Amanda shared:

There was a lot of anxiety with that cause it was really a switch, and how you did things, and so I remember the students being on camera, just looking, you know, like super terrified. I'm sure we all looked a bit terrified by that point...and really having high-level stress about you know how am I going to learn this when I can't do it...and so thinking about you know what that was going to be like how long is it going to be this way for a long time, and at that point, we had no idea that it was going to be two years out (laughing). Umm so you know and I remember thinking we don't know how long it's going to be, but I'm sure we'll figure it out as we go hopefully it won't be that long, but it was that idea I think that experience was umm was stressful both on the faculty side.

Leanne's statement mirrored the stress experienced during the format change:

So we did a little bit of everything to replace the end of that clinical mm, which was very hard umm, so it was very haphazard, it was very just disorganized, and that was not because of the people we were working with; it was the time factor that we had we had a week...but a week is not enough.

Despite feelings of stress presented in the narratives, two participants explained how they did not experience the same stress level. Haley explained how in her role as a clinical instructor, she was not responsible for decisions regarding her student's virtual clinical. She stated:

I do basically what they tell me to do and stay in my lane, but I do have a lot of autonomy with my job. I don't make the decisions about it like that, so I didn't have any stress about making decisions because I knew I wasn't going to be making those decisions.

Christina revealed that prior to the COVID-19 pandemic, she had lost her husband to cancer. She explained:

So it [the transition] was actually an outlet for me because my husband was here on hospice when he passed away, and so the office, I had never really utilized the office, but you know how maybe once in a while, so I was like okay, I get to use my office, and so I got to go in and decorate and fix it up, and kind of make it like my own space so when I'm here working I can work and so it helped, block out everything because now I remember I'm stuck at home so I can't go anywhere to get away at the house from everything that was going on so it actually became my sanctuary because I can eliminate the commute and so I was like, this is a good thing, I like this, I like this, but I think it was probably more positive for me at the time.

Some emotions expressed in participants' narratives included uncertainty surrounding the initial transition. Much of the feelings of uncertainty were centered around two questions: 1) How is this going to work? and 2) How long is this going to last? Four participants shared stories of uncertainty with how long their students would complete their clinicals in a virtual environment. For example, Dina stated, "well, you know, at first, you know, I think in those first few weeks and your thinking, oh, this can't last all that long, like this is just going to be a blip." Amanda mentioned how the feeling of uncertainty was one of the things she remembered from the first 2 weeks of the transition:

At that point, we had no idea it was going to be two years out (laughing), umm, so you know, and I remember thinking we don't know how long it's going to be, but I'm sure we'll figure it out as we go. Hopefully, it won't be that long, which kind of seems laughable now, so that whole idea of the uncertainty, I think, is what was what I remember from that first experience.

For Beena, she remembered how many conversations at the time focused on how "this" wasn't going to last very long:

Umm, there was so much talk that we know we're going to shut down for two weeks, and then everything will reopen, and you know, that was kind of the urge for a few weeks. It won't be, you know, the conversation at the time wasn't that it was going to be super long shutdown or I don't know that, I don't think that we were prepared for that.

Even with some uncertainty, some participants and their students felt fun and excited about this new clinical learning platform. However, those feelings were quickly replaced, and the "new" began to wear off. Dina stated:

Some initially, I think most students seemed maybe a little bit of a level of excitement with it too. There was some angst, but it was; I felt most of my students initially did not seem to have problems when it went to like week three and four, then that was when the anxiety was out like students went, “oh my gosh, like how long is this going to last.”

Much of the uncertainty was also centered around participants' attempts to visualize this new clinical format, essentially questioning in the narratives, "how is this going to work." Three participants conveyed their concerns of how to conceptualize their virtual clinical experiences.

Haley stated:

It was week three of eight when we went virtual, and so I have no idea how are we going to go virtual with clinical. Clinicals, by definition, are hands-on stuff. They came up with some different things for us...on the other hand, I thought, I don't know how this is going to work because how, I'm not going to, I mean, I'm aware of how to meet online do face-to-face like this I've done it individually, or with numbers before, but I have never tried to teach a class online.

Amanda shared how she not only had to conceptualize how to do a meaningful virtual clinical, but she had to facilitate these experiences while having her young child at home:

In all honesty, having a young child certainly played into, umm, I need to get home and figure out what this is going to look like for that as well, and so you know how to entertain him while I'm doing these magically amazing virtual clinical that I have absolutely no idea how to do (laughing) just yet and how am I going to teach class with him running around and what's he gonna be doing you know while I'm doing that, so it was umm it was really just the sense of I need to just get some stuff and then I will figure it out when I get home.

Beena stated:

I mean, you know, just figuring out what we were doing cuz, at the time, none of us were super proficient with Zoom. At the time, it was kind of all new for all of us umm, so figuring out how that worked, you know, just playing with them, just figuring out what the best way of implementing all of the different things, how are we going to convert they're doing an activity in class as a group activity, how do you make it work on Zoom, you know so having to be creative with the different activities.

Theme 2: We Got An Email

The second theme, *We got an email*, relates to the increased level of communication and support during the initial stages of the transition. Common words/phrases that all participants spoke was the phrase "a lot." Participants spoke of an increased volume of everything during the first weeks of the transition. Participants articulated in their narratives how they experienced "a lot" of meetings, emails, training, and phone calls. Even with an increased volume of communication and work, many participants still felt there needed to be more training, understanding, tools, and time. Many participants voiced it was difficult to keep up with constant changes that were happening. Beena shared:

It was a lot of emails (said with emphasis), umm, I think probably too many because things were constantly changing daily. I was not the course manager, so I think I didn't deal with it as much as you know she did cuz I think she even had, you know, lots of phone calls and lots of, you know, even more emails than I did, but I think there was a lot...a lot of emails.

Much of the training and support participants received was focused on technology. Two participants felt training was provided. Christina referred to having training modules she was

required to complete in the beginning. Amanda explained that while she did receive training, she found the transition to be stressful:

There was a lot of learning, umm, and training that went into it, you know, training how to use the system, training how do you know training on how to use the iHuman and training on how to use this case study...new case studies that we have never seen before...not just learning how to click on the buttons on a computer program...how do I transition the virtual patient from this state to that state...it was certainly the technical know-how to do like that there was definitely a lot of training...it was really stressful...and it is one thing to do a training, and it is another thing when you're sitting down with people staring at you you're having to do it under pressure.

Two other participants verbalized having different experiences; for Jenna and Haley, they felt they did not receive much training, leaving them feeling like they had to figure things out on their own as they went along. Jenna stated:

Not getting any training or really understanding what it looks like we need to do or how we can engage, umm, you know, just really jumping in and running, I guess, and then realizing, oh, this isn't going to work, or you're going to have to create new styles of teaching, new styles of learning without really knowing what you're going to do I think this really just was the meat of it.

Haley added, "they didn't really give us a lot of training on it, but they showed us how to do the iHuman, they showed us in training, they had a guy from National do that."

All participants reported in their narratives the amount of planning involved in making this transition. Seven participants mentioned how the time they spent planning was focused on

conceptualizing how their virtual clinical experiences would work. In addition, Beena shared how, as a group, they had planning meetings:

So we met and quickly decided we're going to take our stuff virtual, so we just quickly converted all of our stuff to online "So we just quickly converted all of our stuff to an online virtual format... so we sat down and took our lessons plans for our classroom team-based learning and converted it to a virtual format so here's how we're going to meet, here's how we're going to break up our groups, and facilitate our group learning... We had simulations already planned for the lab, so we started immediately constructing here's how we're going to do this lab virtually, and we started creating the VS... Normally we walk around the room and do this activity like that, so how do you do that in a virtual environment but was trying to be or think through how to make that happen virtually, so I think that was really the biggest obstacle.

For Haley, Christina, and Amanda, much of the planning was spent setting up and organizing a personal workspace at home. Christina stated:

We, umm, well arranged with Steven, our IT guy, we arranged with him to come down and get all of our equipment out of the office... I got a new router to update, you know, make sure my internet speed was going to be able to handle it, and then I had, you know, just get the equipment quickly when I got here. I had to have my son come over and get me connected. Steven showed me he was like, plug this in, plug this up. I'm not an IT person, so my son is, so I called him over, and hey, I need to get my work computer all plugged up.

Amanda described how the amount of uncertainty surrounding the transition made it difficult to determine what supplies to take home from her office:

Oh, I can take my docking station, how great, okay I have an extra monitor at home so I can have that, so I don't need to take that; you know the technical components, and fortunately, the IT person was available until that was really helpful, but there was very much, a lot of uncertainty, you know how long is this going to last and what else should I have taken.

Haley said she felt she had the equipment to facilitate her virtual clinical but needed time to become comfortable with the online platform:

I already had a nice laptop that I already knew how to make video calls. I didn't use WebEx, but I downloaded it because I figured it's very similar to other forms of video calls. I had a neutral background. I had, you know, some materials that I could set up for just kind of practice set up.

Marlena indicated that she spent time prior to taking her clinical group online, she spent the time observing coworker's online clinical days. "I think it was watching another clinical be facilitated and because, in my mind, honestly, I did not know how that was going to work."

Three participants spoke about how it was easier or necessary to use materials and content from their in-person clinical initially. For example, Jenna stated:

What you have to do to make your own stuff work it was kind of taxing, you know because not everybody gets it at the same pace, not everybody understands or completed the modules, so, in the end, it's been a lot more work.

Leanne worked with her clinical students the same in the virtual environment as she did in person:

It would be the same as I did in clinical I mean, currently, when I'm in clinical, I spend 30 minutes with each student assessing their knowledge assess their clinical reasoning, and

if I find a student failing or falling behind, then I would spend an additional time with them addressing what they are weak in.

Heidi indicated how her team transferred simulations that were already planned and transitioned the scenario virtual:

We took the basic scenario, which we always give them a pre-brief of, and then as we moved along when normally we would have made adjustments in heart rate and blood pressure, different vital signs, or you know lung sounds and things we would just verbally say okay here's the update this is what's happening now, and that was pretty much all we did in the beginning with those first very rough scenarios.

How Faculty Guided, Supported, and Evaluated Students During VS Learning

Theme 1: Everything Can Be a Learning Experience

The theme *Everything can be a learning experience* relates to how faculty guide and support students. All narratives included a desire to provide additional support to the students. Some participants explained how they provided additional time at the beginning or end of their virtual experiences to allow students to voice concerns. Beena shared:

We spent a lot of time in class just on, "calm down, it's fine, it's cool" we just spent a lot of time of early class time, "just don't worry, we'll get you through it. It's going to be fine" like don't just, calming nerves and just saying 'we're all going to figure this out, it'll all be fine. If it's late don't worry about it, we're going to deal with it' and you know like just like doing damage control I feel like. So we spent a lot of our team's, a lot of time doing that.

In response to the increased level of concerns expressed by their students, Dina felt it necessary to be more available for her students:

So I think just being available talking to them, having, you know, open Zoom hours like I had my computer open to zoom while I was working and told them if they needed they could log in, and I would be there.

Jenna allowed for a time after her virtual clinical for conversations with her students:

Afterwards, just letting them you know, express frustration umm discussed any other frustrations with the application component, like you know this was hard, or this was frustrating, or this was confusing and then really helping guide them through the process of okay what did you learn and what did you get to see and experience?

For Jenna, she used this time for students to talk through their concerns, and show them how they can continue to learn even though they are not in a face-to-face clinical anymore.

In the narratives, most participants also revealed how they had felt it necessary to revisit and reinforce clinical professionalism and expectations. For example, Dina described, "Then making it very clear in kind of rules of engagement, we had our little netiquette like how to behave online and making sure that people were respectful of other people's opinions." To continue with the reinforcement of clinical professionalism, participation, and engagement, Heidi added:

I usually start out; I would start out the virtual simulation with, 'we will be here as long as it takes that I am confident you have made all the connections that you need to, and I'm not uncomfortable with silence, so if you don't participate, we could be here a really long time, but the more you participate, the more I'm going to be able to see where I can help you.' I did a lot more personal meetings over Zoom, and it probably was something if we had been face-to-face that might not have been needed a meeting because I was unsure

and erred on the side of caution and especially there at the beginning a lot was just meet and ask questions and answers.

Another common desire among participants was to provide students with meaningful experiences. For many participants, this involved finding and implementing supplemental resources to help replicate in hospital clinical experiences, rethinking their teaching methodologies to teach in this new platform, and maintaining student engagement. All participants shared in their narratives how they added additional resources to their virtual clinical. Supplemental resources included using other videos, using resources to replicate the hospital environment, and having to think creatively to keep students engaged in their clinical days. Amanda referred to how she spent time searching for videos and activities to assist her in replicating the hospital environment for her students. She found this difficult, specifically when working with her students who had minimal exposure to the hospital environment:

I remember going back and spending what felt like a ton of time like watching, like looking for images online so I could hold it up and say k here is what this is going to look like, and watching videos, you know, so I would have extra kind of materials for students or extra maybe not materials that might not even be the right word extra supplemental activities... you know, set up images from the internet and have them watch a video on a scenario like what it would look like in real life if we were in the hospital room. Some of the students really had was really one clinical day in the hospital before we went remote. I mean, that's not a lot of time to get familiar with what it looks like in a hospital, what it smells like, and how it is set up... so trying to find those you do find those good visuals, I found it very challenging.

Use of videos to supplement and enhance virtual clinical was a common thread throughout each interview. Participants often used YouTube and nurse content creators as their main source of supplemental information. Jenna described:

It took a while, but figuring out I can pull up pictures online using a lot more videos like YouTube, videos from different nurse creators, and showing them like this is what this looks, like this is what it looks like when your palpating an abdomen, (pause) trying to really describe it or giving them more of real-life scenarios.

Haley indicated she also incorporated many YouTube-type videos into her clinical experiences in an attempt to create a well-rounded clinical experience for her students:

I prepared by looking through those sites as far as trying to make it more realistic, to kind of grab their interest... I went on YouTube, and I found some lung sounds of a person dying of COVID-19 ... you could listen to the struggles of this person breathing. It was kind of frightening to listen to, but I wanted my students to be able to hear what it sounded like when someone was struggling to breathe... I showed a YouTube of this doctor doing the actual procedure of someone who was having a hip replacement. I would look at pictures, information, animations, or something to show the different types of hip replacement, what actually happens during that, where you might see the incision, or I'd look up a video of the physical therapy afterwards of what kinds of positions you can get in which ones to avoid to all kinds of offshoots from it I...I tried to provide also for some thinking and asking questions.

Participants also used other online simulations in correlation with their videos. Heidi explained:

Some of them, we actually went as a group, so we would be on Zoom, and I would play my video, and we would see it, and then we stopped and discussed and answered

questions and progressed through. There are some of the other courses; we also used what we had access to Laerdal simulation.

Even though supplemental videos and images assisted participants in enhancing their virtual clinical, and using these resources was easier to implement in the virtual setting, execution was sometimes difficult, as Amanda explained, “it is one thing to do a training and it is another thing when you're sitting down with people staring at you and you're having to do it under pressure.”

Through the transition to virtual clinicals, the ultimate goal presented in participant interviews was making their virtual clinical meaningful and valuable to students; for some, making their virtual clinical more meaningful involved learning how to teach in the virtual environment. Participants expressed how they had to learn to teach using different supplies or no supplies and learned how to replicate clinical in a virtual setting. Amanda explained some of the ways that she tried to replicate the hospital environment, as well as some difficulties:

Taking time to give additional examples...trying to come up with the wording and images from the internet sounds kind of lame now, but this is what it looked like. Coming up with images and trying to really stimulate all of that learning, coming up with creative ways to simulate that kind of tactile component...so looking at a virtual clinical day, some of the students had experience and worked in the hospital, so coming up with that visual image for them was a bit easier. For some of the students that have never really been in the hospital, I'm trying to explain to them what the environment looks like, having to try, you know, set up images from the internet and have them watch a video on a scenario, like what it would look like in real life if we were in a hospital room. Some of these students really had one clinical day before we went remote. I mean, that's not a lot

of time to get familiar with what it looks like in a hospital, what it smells like, and how it is set up.

Amanda continued to explain her difficulties during some of her first virtual experiences:

Having to go in and think about how to, umm, you know, how to walk students through something without having a mannequin or with having equipment, being able to provide that kind of immersive experience...it was almost like prepping for something you've never taught before, even though you've taught it, you know like you know this information, but it was really trying to prep and think about how to make it meaningful.

Dina found that it was important to be purposeful in her selection of resources she used and sent to her students to ensure the resources used were meaningful and valuable to students:

I think it was just really having to look at materials to make sure that they made sense when they were being sent to students, and then we were going to discuss them in an online format versus an in-person format...I'm being careful not to flood them with resources and saying, "oh, here's a reference," like here's all these references, and expecting that they were going to, you know, be able to look all of those up on their own.

All participants struggled to create meaningful clinical experiences. The two main factors that contributed to this struggle were keeping students engaged and involved in virtual clinical and feeling as if virtual clinical experiences differed from in-person clinical that they and students were accustomed to. Many participants discussed having difficulty keeping students engaged in the online environment, where students would have their cameras off or not be as actively involved in conversations as they would after a hospital clinical day. Amanda, Christina, and Haley found it difficult to keep students engaged because they were in their homes rather than a hospital environment. Amanda recounted:

It certainly doesn't feel like clinical lab because they have kids climbing over them, and dogs barking, and you know, all of the distractions that are definitely not part of the normal clinical experience or lab experience...then to piggyback that with, you know not having necessarily the equipment at home.

Christina mentioned how she reminded students that they were in the clinical setting in hope of maintaining engagement "I was, 'okay, we're in the clinical setting, so your hair needs to be appropriate' you know someone is laying in the bed, is not appropriate setting." However, Haley felt students were difficult to engage as well and attributed the lack of engagement to distractions at home:

I've tried very hard to get everyone to participate and talk, and a lot of people were nervous about talking on zoom in the beginning, or sometimes they were distracted because they were stuck at home with their kids, their kids didn't have anywhere to go...I know good and well that those people that weren't doing anything were texting each other, probably looking at Facebook, or who knows what else because they were muted...you could do that in a classroom also, but it is harder to do that when you're on a unit when you are actually in a hospital.

Marlena also shared her experiences engaging students in the online environment:

When you're doing virtual, you have your ones that volunteer information, and there's some that will just stay quiet and some that would fall asleep or whatever and, honestly, I call them out...and I would actually make them do power points to make a power point and then bring it back to the class, so everyone had to be kind of held accountable...and keeping them engaged, I mean we would have some that 'oh my camera doesn't work

there, I can't turn my camera on' and 'I'm having Wi-Fi issues'...so I can't stop the class...so that was always a challenge.

Heidi found she had to change how she facilitated her virtual experiences to keep students engaged. At the same time, lack of student engagement made it difficult for her to evaluate student understanding of concepts. She described:

The real struggle we found was not being able to assess a simulation mannequin...because we just didn't feel like the students connected with what they needed to...you know, half the time again, cameras would be off because of poor internet connection, and then everything so there was no feedback, and so then you're afraid that maybe you haven't explained enough, and so you over-explain, or you think while they are quiet, surely they must have gotten it, and you find out, no, they didn't.

Challenges Educators Experienced When Changing to the VS Environment

Theme 1: I Can't Be Available 24/7

Many challenges participants mentioned in their stories reinforced statements they had already mentioned. These statements included moments of frustration, technology issues, trying to keep up with appearances, developing boundaries while working from home, and often with their own family. The theme *I can't be available 24/7* relates to comments and stories shared by participants about how work and home seemed to become one entity. Many stated how they had extended their work hours to accommodate planning, extra time with students, and work commitments while working from home. Dina summarized it best when she stated:

[I was] getting a lot of texts and emails and phone calls and thinking how many hours today have I been at it. I think it was just that realization that this was really a lot of time, and again, during the week, it didn't faze me too much; it was just the weekends and the

times, like getting texts and emails and phone calls at 11 o'clock at night.

Dina continued to describe how her Dean recognized the potential problem arising in this new clinical environment, but she also reported how it was still too much for some of her coworkers:

I think she [Dean] realized that maybe more quickly than some of us did that this is a potential problem, and I think I was beginning to feel it...I remember already thinking something has to give here; you know I can't do this 24/7. I do know a couple of my friends who were working adjunct at the university that I had recruited umm who, after that semester they, did not come back; you know, they were just pool faculty, and they worked in the hospital, and they were like hmmm I I cannot be available 24/7 to students like this, and I was like you don't have to you can set these boundaries you can do it, and they were like nah nope I think I'm not going to teach.

There were reasons provided in participants' stories as to why there was a lack of boundaries between work and home during this transition. Some reasons included a need to be supportive of the students during a stressful time, being flexible to accommodate the needs of students who also had children at home during these clinical experiences, and inconsistencies between faculty. For example, Dina described how before COVID-19, she would have specific office hours, but with the added stress of COVID-19, she felt it necessary to be more available:

The challenge...was the availability being available to the students. I felt like, you know, pre-COVID-19 , you know, I had hours and things that were listed; umm, students seemed to be, you know, very kind of respectful on staying within those boundaries of what was listed but covid I think they were just stressed, and we tried to be kind of like you need to be more open to our students we need to be available to them, and so I think

myself as with many colleagues did is we just basically looked like for a semester we were 24/7.

Dina continued to add how inconsistencies between faculty also caused issues with the creation of blurring of boundaries: “[they] were like, 'Oh! Whatever you need, you come to me, kind of whenever'...I figured it out pretty quickly; it's not sustainable, you know, you cannot just be a 24/7 resource.” Heidi also explained how, to be supportive of her students, she had to be flexible with her time to accommodate the special needs of her students:

Because we are rural, we do typically have a lot more of the non-traditional students, and so what we really... I felt it, and I know my students felt it too, was life bled into school, and you know you would be on zoom, and your six-year-old needed food, or the baby would start crying you know I had one mom whose husband worked away from the house for long periods of time, and she had a toddler and an infant, and she's like I can't test when they are awake, and so we had to get creative and schedule her later in the evening which then caused school to bleed into life because there was never you were never off duty you know you were you had to always be available, and it really felt, and it could have just been the perception, but I have a feeling at least some of it was justified that it took twice as much effort to accomplish the same thing as when you're face-to-face.

Working with family at home was a struggle for participants as well during this time and contributed to stress and the blurring of boundaries between work and home. Amanda shared how being a single parent to an elementary school-aged child contributed to her stress:

I should have brought my mouse from work, umm, because my old mouse had fallen victim to my child so, and he had taken it because I was also having to facilitate, umm,

prepping him for at-home learning as well in some ways because being off and they did is it all happened I'm at the end of spring break, and for umm him it was the end of his spring break, and then they got the call we got the message that we weren't going to go to school for a week and then they were going to supposedly go back to in person so it was supposed to be just for a week and so I think that in all honesty having a young child certainly played into umm I need to get home and figure out what this is going to look like for that as well and so that you know how to entertain him while I'm doing these magically amazing virtual clinicals that I have absolutely no idea how to do just yet and how am I going to teach class with him running around and what's he doing you know while I am doing that.

Heidi had children at home during her virtual clinical, and she described how her children believed that because she was at home, she was available to them as well:

On the flip side, you be on a zoom (laughs), and your daughter would walk behind your screen and go "(whispers) are you on Zoom?" (laughing), and the students were like, what is wrong with her but you know it was hard because they were home too and you know they were used to me going to the office, and when I was at the office they didn't have access to me and now all of a sudden they did, and so they were used to always before if I was home that I was available and so now suddenly I was home all the time, and so I was available all the time.

In response to the lack of boundaries, some participants used various methods that assisted them in re-establishing their boundaries with their work and their students. The most common methods mentioned by the participants were to be more purposeful with their time by

scheduling time for emails, turning notifications off to avoid distraction, and role modeling to students how to set boundaries. Beena shared:

One of the things that I learned to do was I learned how to put how to stop my notifications on my computer so that when I was when I got emails or text messages or whatever, they didn't pop up every time that I was on my screen, so you know, so like if I'm getting emails or whatever they're not constantly popping up at me, so I'm not compelled to check them okay while I'm in the middle of class or in the middle of a meeting ...I set aside time like at this time I'm going to check my emails at this time I'm in a meeting at this time I'm going to do I'm going to work on my lesson plan ...instead of I'm working on my lesson plan oh now here's an email let me go get distracted ... I also started dedicating time to it's Saturday and Sunday my computer is getting shut ...and I'm not checking emails anymore I'm done.

Dina used her experience as a teaching moment for her students, showing them the importance of establishing boundaries in their workplace "I think it was good to say 'okay, wait a minute, let me rethink this and role model how to set appropriate boundaries for my students' just like they're going to have to do with their patients and their colleagues."

Marlena and Haley had differing views on setting boundaries and were always available to their students. These feelings may have been related to their role as adjunct faculty but were not expressed. For Haley, she stated she maintained the same boundaries relating to her students as she did before COVID-19:

I felt like I could have been available 24/7, but I feel that in every job, I turn off my phone at night. I have boundaries. I sometimes wake up during the night and look at my phone, and maybe a student has texted me or something during that time. I certainly work

on the weekends a lot, you know, but I have learned as this time has gone by to get my work done at work if it all possible. I can't do all of it at work, but that's part of being a teacher. You're going to have to do something at home. You're going to have to prepare some stuff at home. I recognize that you can't possibly get everything done while you are at work, and I don't feel like that. I do not feel at this point that I am very resentful about it.

Marlena admitted to feeling like she had to be available for her students more than before COVID-19. However, for her, she felt that it helped to strengthen a bond between her and her clinical group:

I liked it, actually. I mean, it didn't bother me, I mean, we have a lot of downtime here at home, so I liked it. It really kind of gave me an insight of what the student was feeling and maybe their own challenges. And sometimes, you know, we would have students that maybe had a family member that had COVID-19 or was sick, and we really didn't know that, but they would open up more when they were one-on-one, and I could really see what they were struggling with... I felt like I was really close to those students that we did virtual because we experienced it together. You know, we all kind of went through that huge growing pain together.

Theme 2: Magically Amazing Virtual Clinical

The *Magically amazing virtual clinical* theme relates to the "behind the scenes" efforts and frustrations participants experienced during the transition to virtual clinical experiences. Participants recounted stories of how they worked to appear proficient in the virtual setting, with comments that included feeling like a beginner and struggling to create and provide authentic experiences. Various amounts of training were provided to some participants; however, many of

participants felt like they could have benefited from more. Even with training, participants said they felt like a beginner, using phrases such as muddled through, faked it, and not smooth.

Marlena shared how, in preparation for her first virtual clinical, she had her husband help her with practice virtual sessions:

He helped me like get this set up...we did some practice prior as well, so I didn't look like, you know, like a complete beginner. Like, I knew I had to have control over my students, and I had to act like I knew what I was doing and give them confidence that we've got this.

Marlena continued to explain how using the virtual platform was the biggest struggle:

The hardest part, I'm going to say, and I still struggle with, is iHuman, and I think our students struggled with that too. We started to incorporate iHuman scenarios in, but not at first. It probably took several weeks before we got those. You want to be able to answer their [students] questions, and a lot of times, I could not, or I would be like, hold on, let me figure this out and get back to you, you know? And I did not feel that confident. I just kind of faked it a lot of times. I mean, it's not a blaming on the school or blame it on anybody. It was just kind of what we had to do at the time for survival and to keep the students forward. iHuman for me was for me what I struggled with the most, and because I was never trained on it, it was like, 'here, tell them to do iHuman, so I felt like I was kind of trying to learn it as they were learning. I think I would have done better if we had had maybe a day or two where we could go and train and talk it out.

Even with some training, Amanda explained how she still felt challenged to appear proficient in the virtual setting in front of her students:

We did trainings, and it is one thing to do a training, and it is another thing when you're sitting down with people staring at you and you're having to do it under pressure. It looks a bit different, then. So there was certainly that umm and then, so definitely the technical things, which button do I push, how do I make the patient change from state 1 to state 2, so there is definitely a technical component...also having the added pressure of running new scenarios plus the technical component (laughing) it's really that idea of wanting to have the student feel as though you are prepared and that you know what you are talking about, and this is, you know, can be a positive experience and true learning experience, and have value.

While Amanda and Marlena both shared how the technological component played a large part in their learning curve, Heidi expressed similar feelings when she described how she implemented an in-person simulation, she had facilitated before, and did it in the virtual setting, "we actually had a simulation scheduled the week that we came back online, umm, so it, so it really was (long pause) probably choppy or (laughs) it was it was not a smooth process."

Amanda could articulate why she felt it was imperative to appear proficient in front of her students. Amanda explained how confident she appeared in front of her clinical group, which directly correlated with how the student possibly perceived the experience:

On the faculty side, well, I think this is true in life in general, you know, if you're the person kind of leading an activity, if you will, you know, it does help with how someone perceives how your ability to proficiently kind of work through an activity can certainly umm have an effect on how others place value on that. If it's done really poorly, then you know the students may not perceive that this is a positive experience or they may not perceive it as umm useful...you know, you don't ever want the front of the house to see

all the stuff that happens at the back of the house, so trying to you know have an authentic experience in the front of the house while managing everything that happens on the back end.

One common feeling expressed by participants was frustration over how the virtual experience did not feel like what they felt was an everyday clinical experience. One source of frustration was focused on the authenticity of the experience and how it was vastly different from what many participants were used to. In virtual lab experiences, both Amanda and Beena reported how there were not enough appropriate supplies to demonstrate skills, forcing students to be creative in completing their skill check-offs. Amanda explained, "you know, not having necessarily the equipment at home...[deciding] how to walk students through something without having a mannequin or without having equipment." During the transition to online clinical learning, faculty were not the only ones who had to be creative. Students had to attempt to simulate the clinical environment in their homes. Beena recounted one of her students' experiences during a head-to-toe check-off:

We had a couple of students who actually lived alone and then weren't able to get a partner for their head to toe...one of the students had one of those big teddy bears like you see at Costco, you know, those huge ones...so he had one of his house, and umm he used that for his talking about his head to toe exam, and he wove the story of The Three Little Bears...he wove in that this bear had someone break into his house and then he was consistent with it throughout the head to toe exam talking to the bear about Goldilocks and the chair being broken and the soup being eaten the chair being broken, it was really funny he did a great job, and he really didn't lose any points, of course, it is different when you are using a bear

trying to do their range of motion teddy bear, but anyways he did a good job, so it was just a little funny story on our transition.

Amanda found skills check-offs problematic, sharing that it was difficult to determine how authentic they were. She expressed concerns over how many times a student attempted a check-off before submission, and did the student have the check-off sheet just off-camera to refer to.

Amanda further explained:

I found the videos to be a bit tricky in terms of, you know, how many, how many videos have they recorded prior to actually submitting one, when, you know, and then take out that component of having to be able to do it on the spot in lab, so I think it really changed the dynamic of how I would have evaluate, wait let me rephrase that. It changed the (hmm) I think it changed (pause) hmhhh I think it changed the evaluation in that you know that they were at home and in a familiar environment and 'cause they have the opportunity to try again and had the opportunity to watch it and see how they felt about it before it was submitted, which isn't always necessarily the most realistic in a hospital setting. If they were in a skills lab or if they were in a real clinical environment, you know you don't get to practice 17 times on a patient and be like, 'no no, no, this is the one I want to really count,' umm id doesn't work that way on real people.

Amanda continued to explain how evaluating the check-off by use of a video was equally difficult:

That was one thing that I found it a little bit difficult to judge how I really felt they did. Yes, they did all the steps but is that because they have someone prompting them off-screen, you know, I don't know whether they did, and or did they have another checklist just outside the camera view so they could run down it...but the idea about evaluating

was really an authentic evaluation of their true performance or was it what we got kind of on camera.

Evaluating and assessing student performance was a struggle and a source of frustration for other participants. Leanne shared:

In the vSim, they [students] couldn't even like put their stethoscope on the chest and choose what they heard. They were given that information, so to me, it was a very low level of simulation for a senior student who should be trying to achieve that higher level of application and examination.

Marlena mentioned her experiences evaluating students:

The evaluation of the students that they were actually getting a concept skill-wise, I couldn't help them with their skills. They could talk me through a skill, but I couldn't really evaluate if they were doing it correctly.

Dina expressed a different frustration in the virtual environment that was a struggle for her.

Other participants shared how they struggled to interact with and evaluate students during virtual experiences. Dina missed the flow of ideas and conversation that would happen between her and her students while in clinical:

In-person, you kind of get this free-flowing ideas, and people are sometimes almost talking over each other when you are having a discussion. It can be very fluid and organic, but when you're online, there's those breaks in those times making sure that you know only one person's unmuted at a time.

Haley also revealed how, in her virtual experiences, she was frustrated because she would often have more students in her online group than she would normally have in person:

In a Webex meeting, I would have up to sometimes up to twenty-something students all in there. You're supposed to only have eight in the hospital, that is the limit, but sometimes we had greater numbers online.

Participants voiced other frustrations of discouragement and concern that students were not getting what they needed out of their clinical experiences. Many participants shared stories of how they felt students needed to be prepared for their role as new nurses and felt limited in what they could offer. Haley explained:

I [couldn't] watch my students do nursing anymore. Usually, I could walk into a room and be there five minutes and tell if that student was understanding how to be a nurse. How did they interact with that patient? Were they smooth? Were they systematic with their assessment, and that's one of the things that you just almost can't teach, you just have to feel it, and you have to get to that point and be confident. I felt like these students are not gaining confidence by doing this online virtual stuff. They're frustrated because they're all hands-on learners. Most nursing students are...and the stuff that you need to learn during clinicals are hands-on skills. They're not book skills.

Leanne added:

Needless to say, our students suffered for that semester, umm, because they didn't get the full clinical experience that they should have...it was very frustrating because we know we were going to be short-changing the students, and I don't care what anybody told you they were all short-changed because they did not have clinical. It's just a huge disconnect when you don't have that body there to look at...we were very limited on what we could do for the students, umm, those of us that actually care about the students were it just kind of was sad because the students weren't getting what they should have got...we

were sending these students out basically ill prepared umm to walk into practice...and I knew from the hospital that the hospitals weren't going to treat them any differently, they weren't going to give them any extra time.

Summary

This chapter presented findings of a study that looked at participants' experiences transitioning from live simulation and face-to-face clinical to VS during the COVID-19 pandemic. First, participants' demographic data were provided and discussed, followed by an introduction of each. The introduction included a description of the established rapport and the circumstances surrounding each participant's story. The introduction was followed by an in-depth discussion of themes that represented participant experiences.

CHAPTER V

RECOMMENDATIONS AND CONCLUSIONS

Overview

Nursing education was evolving to prepare nursing students to enter a changing, increasingly complex healthcare system before the onset of the COVID-19 pandemic. The pandemic accelerated these changes in many ways. Traditionally, nursing education has relied on the ability to train nursing students in face-to-face clinical, in hospital settings, in community settings, or within a simulation laboratory. The evolution of technology has allowed nursing schools to implement VS into their curriculum. In the literature, VS has been studied as a supplemental tool for clinical instruction, not as a replacement. Though there are studies on faculty experiences as they transition to new learning management systems or online platforms, little research has been published on these experiences during a rapid transition such as that required by the onset of the pandemic.

This qualitative study aimed to understand the experience of nursing faculty as they transitioned from live simulation and face-to-face clinical to VS during the pandemic. Using a narrative approach, nine nursing faculty members shared their experiences transitioning to virtual clinical and labs due to the pandemic. Participants were selected based on the following criteria: 1) nurse faculty in a pre-licensure program, 2) instructed students in a clinical environment, and 3) transitioned to VS to replace either face-to-face simulation or clinical experiences. Data for this study was generated from recorded Zoom meetings with participants. Data analysis was conducted using Riessman's (2008) narrative analysis framework. Data analysis revealed five themes.

The purpose of this chapter is to discuss findings and themes identified through personal narratives in Chapter 4. Findings are discussed in the context of current and relevant literature. The potential value and implications of the findings are discussed. Finally, recommendations for future research are addressed, as well as limitations.

Discussion of Themes

The following discussion presents the themes that emerged from the analyzed data. These themes included: 1) *I was really stressed out*, 2) *We had a meeting*, 3) *Everything can be a learning experience*, 4) *I can't be available 24/7*, and 5) *Magically amazing virtual clinical*.

I Was Really Stressed Out

Stressed, rushed, and uncertain are some emotions participants described during the initial transition. Some contributing factors to these feelings included the speed at which the transition had to occur and the attempt to visualize what this new clinical format would look like. While most of the participants voiced feelings of stress and uncertainty, two were able to focus on more positive experiences.

The availability of literature on quickly transitioning to online learning environments is limited; some feelings of desiring more time are consistent in the literature. For example, when transitioning to an online platform, faculty want time to develop needed course material and learn the technology used (Verkuyl et al., 2020). Learning technology can be difficult, with some faculty experiencing frequent changes in the platform, and technology that did not work needed to be more reliable (Richter & Schussler, 2019; Walters et al., 2017). As a result of the pandemic, participants explained how it was frustrating having to learn new online simulation programs or new conferencing platforms such as Zoom or Webex in a very short amount of time.

Only one participant worked in a collaborative team in preparation for the transition to an online course. The lack of collaboration with peers for other participants may have contributed to feelings of stress. Collaborative planning and peer support can assist in a more positive experience, allowing faculty to exchange ideas and receive guidance and pedagogical support (Chiasson et al., 2015; Gazza, 2017; Onalan & Kurt, 2020; Simes et al., 2018). With the abrupt transition due to the pandemic, faculty needed help to plan and collaborate with their peers or find a mentor. The absence of a mentor may be a barrier to faculty accepting their role in teaching online (Simes et al., 2018; Sinacori, 2020).

Participants used words such as rushed, sudden, and overnight when telling their stories. Some participants described how they received an email in the middle of the day that they would not be returning to clinical next week, and others had to rush to campus to gather what supplies they thought they needed. Time was a crucial element in the literature for the successful transition to and implementation of online teaching (Chiasson et al., 2015; Hampton et al., 2020; Richter & Shussler, 2019; Simes et al., 2018; Verkuyl et al., 2020; Wright, 2014). Researchers have found time spent in the online teaching environment is often more than in face-to-face teaching (Chiasson et al., 2015; Gazza, 2017; Wright, 2014).

Feelings of uncertainty ultimately focused on the current situation, with participants reflecting in their stories how they wondered how long they would be online and how long the pandemic would last. Many remembered thinking it would only last "a couple of weeks." Some uncertainty centered on participants' attempts to visualize how this clinical format would look or how it would work. Little time was available for them to develop a sense of comfort in the virtual environment. Research shows a correlation between faculty comfort and self-efficacy and

time spent preparing and learning a new platform (Richter & Idleman, 2017; Verkuyl et al., 2020).

Development of an online course is more time-intensive than a face-to-face course, related to learning technology and placing new content into the online platform, and often traditionally requiring release time (Chiasson et al., 2015). However, Richter and Idleman (2017) reported that release time increased the faculty's level of comfort adjusting to online teaching and the use of technology. In addition, release time for participants in this study was unavailable; thus, their transition to VS and virtual clinical was sudden and required them to learn and transition rapidly.

We Had an Email

During the initial stages of the online transition, many participants experienced an increased volume of emails, training, phone calls, and meetings. Participants shared that the volume of emails was often due to continuous changes and was more information focused on what was happening on each campus rather than leadership offering or providing support. Support from administration and leadership plays a critical role in the successful transition to a virtual environment (Cherry & Flora, 2017; Walters et al., 2017). Those who received training continued to feel unprepared to facilitate online clinical, claiming that learning how to operate and facilitate the virtual clinical with their students in real-time was different. Some participants, feeling a lack of support from their institution, told stories of figuring things out as they went along, determining what worked and what did not, using trial and error (Gazza, 2017).

In preparing their workspace and equipment for teaching online, some participants had family members assist in preparation. Other participants received support from their IT department. However, participants who had family members assist them with IT support did not

disclose why they chose to utilize family members. They did not share if the decision to use family was driven by availability of IT, personal choice, or because they were following isolation recommendations for COVID-19. IT support is desired when transitioning to online teaching and can often alleviate faculty frustrations (Kowalczyk, 2014; Porter et al., 2020; Richter & Schussler, 2019; Sinacori, 2020).

While studies do not necessarily indicate the type of training that faculty need, training has been shown to correlate with faculty maintaining student engagement (Richter & Idleman, 2017). Some participants received training during the initial few weeks; however, training was often focused on how to use the virtual technology being implemented. Faculty did not describe if their institution offered training related to training for teaching in the online environment. Transitioning either new or face-to-face content to an online platform can be time-consuming, with much of the time learning technology (Chiasson et al., 2015; Porter et al., 2020; Richter & Idelman, 2017).

Because of time constraints and necessity, many participants transitioned their in-person simulation content to the virtual environment, which is common when faculty transition to online (Al-Freih, 2021; Chiasson et al., 2015). The participants did not reveal if using their old content was comparable or effective, except for one, who shared that, because of time, transferring their in-person simulation content was not successful in the virtual, which caused her to make adjustments in her delivery method. Many of the factors that can inhibit the success of using face-to-face content in the online platform include the learning environment, different methods needed to engage with students, more detail needed, and learning activities in a face-to-face setting do not work in the virtual environment (Al-Freih, 2021; Chiasson et al., 2015; Jokinen &

Mikkonen, 2013; Stephens & Coryell, 2020). Instructors often have to change their approach to teaching after moving online since face-to-face content does not fit (Al-Freih, 2021).

Everything Can Be a Learning Experience

This theme relates specifically to participants guiding and supporting students while creating meaningful clinical experiences. Each participant told stories about spending additional time with their students, often at the beginning or end of their clinical. Much of this time was spent reassuring students and allowing them the opportunity to voice their concerns. Increased communication between faculty and students is common in the online environment. Because of student concerns and communication, participants felt the need to increase their availability, taking extra time in clinical and showing students how they are continuing to learn.

To provide students with an experience close to what they had in clinical, participants devoted time at the beginning of their virtual clinical to discuss and reinforce clinical expectations, professionalism, and engagement. Participants found the level of student participation difficult to gauge with students having their cameras off or extended periods of silence during class discussions. Using successful content in the clinical setting may not fit the unique virtual environment and will often cause students to become disengaged (Al-Freih, 2021).

Student engagement is one area faculty often feel is the most challenging (Al-Freih, 2021; Gazza, 2017; Hampton et al., 2020; Horvitz et al., 2015; Porter et al., 2020; Richter & Idleman, 2017; Sinacori, 2020; Walters et al., 2017). Maintaining and ensuring student engagement was difficult, as participants described difficulty simulating the clinical environment and keeping students engaged. For example, students would often have their cameras off or be distracted by children or pets at home, going on internet sites, or texting each other. Faculty admitted that most of these activities could occur in the clinical site but are usually easier for

students to do in the online environment. In some cases, faculty have reported that, in an online learning environment, students will be engaged in higher levels of critical thinking; however, the same faculty have shared that they struggle with verifying how to confirm their students were engaged with the instructor and with each other (Stephens & Coryell, 2020; Wands et al., 2020).

Teaching strategies and delivery had to change after participants realized it was necessary since they were facilitating clinical skills without adequate supplies or access to mannequins or patients. A change in pedagogical thinking and implementing new techniques often occurs in a transition to virtual experiences (Al-Freih, 2021; Chiasson et al., 2015; Gazza, 2017). Because of the lack of supplies, participants changed their teaching strategy to include learning how to explain or show the clinical environment in a way that made the virtual experience more immersive. In addition, teaching strategies during simulation were altered to keep students engaged. With many students keeping their cameras off, they did not appear as connected without having a mannequin or a patient to lay their hands on. Participants used other strategies to keep students connected and engaged, including bringing activities back and presenting them to their peers. When teaching online, faculty often have to be creative to help maintain student engagement, peer interactions, and student knowledge acquisition (Al-Freih, 2021; Chiasson et al., 2015; Gazza, 2017; Stephens & Coryell, 2020).

To provide students with a meaningful clinical experience, participants spent much of their planning time searching for additional resources to help replicate the clinical environment. YouTube videos, images, and readings were often added to clinical time or available for students to access independently. Many participants spent hours finding resources and materials for their students. One participant found it more beneficial to be purposeful and selective with her student resources and supplemental materials in the hope students would see more value from the

provided content. Faculty often provide students with more detailed descriptions of assignments and their due dates to increase their understanding, making the content easier for students to understand (Chiasson et al., 2015). However, the literature mentions little about the faculty's use of additional course materials and videos.

I Can't Be Available 24/7

This theme relates to the stories reported by participants and how they felt that work and home almost became one entity. Participants shared how they extended their work hours to accommodate extra time to plan, time spent with students, and work commitments. Stories revealed how participants felt it necessary to extend their office hours and maintain an "open door" type policy for their students compared to scheduled office hours they would have posted on their door before the pandemic began. In the online environment, there is an increased level of communication and support, leading to a student-centered approach to teaching (Al-Freih, 2021; Chiasson et al., 2015; Gazza, 2017; Stephens & Coryell, 2020). Faculty will often report feeling like they are to be available to their students and will respond to student emails, calls, or texts during their off hours (Gazza, 2017; Wright, 2014). Many felt they were working into the late hours of the day, claiming they were getting and responding to emails and texts just before midnight. One participant described a story of a student who was at home with her small children and had to complete exams and check offs late in the evening after her children went to sleep, leaving her to feel the only option was to be flexible with her students.

Participants described how they made purposeful decisions about setting boundaries while working from home. Some of these methods included turning off notifications, establishing specific times to address emails and text messages, and dedicating time to turn the computer off. One participant described establishing boundaries as a teaching point for her

students and explained to her students that they would have to establish boundaries with their patients when they were in the hospital. Two participants who were adjunct faculty had different experiences with their students. One maintained the same hours that she did prior to COVID, and the other felt that always being available to her students gave her insight into what her students were feeling and going through.

Magically Amazing Virtual Clinical

Participants discussed persistent challenges in this theme during their transition to virtual clinical experiences. Participants shared how the amount of training provided did not affect their self-efficacy. Many participants wanted to appear proficient in front of their students, often focused on how to use the technology, believing that how the student perceived the experience correlated to the value the student saw in that specific experience. Some faculty can manage technological issues as they come up in their online classes (Onalan & Kurt, 2020). However, others felt they lacked knowledge about the technology they use (Sinacori, 2020). A perceived lack of training is often seen as an obstacle in the transition to online teaching, leading to increased anxiety and fear of making mistakes in front of students (Simes et al., 2018), as experienced by study participants.

Participants found evaluating student learning difficult to evaluate related to their ability to determine the authenticity of return demonstrations, claiming that they were not able to know how many times a student recorded a demonstration before submission or if the student was using a copy of their competency checkoff, which does not replicate how students have traditionally completed this same assignment. Faculty will often report concerns about their struggles to evaluate how much students have understood, often related to a lack of student responses when they are asked questions (Al-Freih, 2021), and in many cases, will resort to

exams, skills tests, or self-assessment to evaluate student learning (Jokinen & Mikkonen, 2013). Evaluation of a nursing student's clinical competence is an ongoing challenge. It is often done during practical nursing skills rather than with a written exam that assesses theoretical nursing knowledge (Immonen et al., 2019).

Participants also described their struggle to evaluate student learning related to the number of students they would have in their virtual clinical, claiming that during a hospital clinical day, they would traditionally average approximately eight students in each group. However, they could potentially have up to 20 students in virtual clinical. In some instances, faculty who feel comfortable with their ability to connect with their students, varying their teaching strategies as needed, felt they were able to meet their students' learning needs (Richter & Idleman, 2017) and became more confident teaching in the online environment (Horvitz et al., 2015). However, these studies did not address if faculty were teaching a larger group of students compared to face-to-face.

Finally, a struggle for participants was the change in their relationship with their students. There is a change in the relationship between student and instructor when there is a shift from face-to-face to virtual instruction (Al-Freih, 2021). The student and instructor relationship is central in face-to-face and virtual environments (Richter & Idleman, 2017). Participants expressed missing free-flowing conversations that would happen with students in the clinical setting. In the online environment, faculty often report difficulty impacting student learning when they are not physically with their students (Jokinen & Mikkonen, 2013). The lack of physical presence and technology-induced miscommunications often made faculty feel the online environment was less fulfilling and different than in person (Richter & Schussler, 2019; Stephens & Coryell, 2020). Many faculty members feel that losing the connection between faculty and

student is a barrier to online teaching (Al-Frieh, 2021). The inability to assess student learning and have what felt like natural conversations and relationships with their students ultimately appeared to leave faculty feeling as if they were unable to prepare their students for being a nurse after graduation. Participants did not indicate if they would want to return to teaching virtually if provided the opportunity.

Implications

By April 2020, approximately 95% of the country was under "lockdown, with 42 states issuing stay-at-home orders" (Sacco & Kelly, 2021, p. 285). As a result of the pandemic, nursing schools quickly stopped both in-class didactic and in-hospital clinical experiences (Sacco & Kelly, 2021), leading nursing schools faced unprecedented interruptions to clinical practice. As a result, nursing schools were forced to get creative to provide students with clinical hours. In addition, schools were challenged to increase online technology used to maintain student academic progression, create learning opportunities for students to continue clinical learning, and manage increased stress levels (Leaver et al., 2022). As a result, participants had to move quickly and transition a part of nursing curricula that had traditionally been facilitated in a hands-on, face-to-face environment. This transition happened rapidly and did not allow time to plan, prepare or learn new technology.

The stories shared by participants did not differ from what was presented in the literature. Faculty focus, however, was different. Faculty did not expect support from their institutions, and many participants were left to "figure it out," adding that it was not the "institution's fault" and many of the lessons learned from the pandemic and the adaptations made by faculty can be applied moving forward.

Online higher education is becoming increasingly common. Before the COVID-19 pandemic, approximately one-third of higher education students were enrolled in at least one, if not all, online classes (Martin, Budhrani, & Wang, 2019; Mohr & Shelton, 2017). This transition to online teaching requires training and support for educators in the form of professional development, technical education, and the use of online teaching pedagogies, better-preparing faculty to teach online (Albrahim, 2020; Dolighan & Owen, 2021; Martin, Budhrani & Wang, 2019; Mohr & Shelton, 2017). Many undergraduate faculty lack the knowledge and experience to effectively and comfortably facilitate virtual experiences (Sumardi & Nugrahani, 2021)

Learning to teach online takes time and can be impacted by frequent technology changes, technology that does not work, or is unreliable or inaccessible (Chiasson et al., 2015; Richter & Schussler, 2019; Walters et al., 2017). As a result of the Covid-19 pandemic, many faculty have had the opportunity to be exposed to VS experiences. This study showed the importance of continued faculty development in VS and virtual technology. Although instructors will often "teach the way they were taught," there is an opportunity for faculty development (Konrad et al., 2021. p. 55). Participants reported how, even without training, they transitioned themselves from having to "fake it" and "figure it out," to feeling more comfortable facilitating their clinical in the virtual environment. Faculty development must include more focus on the transition to online teaching pedagogy and less on technology use (Albrahim, 2020; Gudmundsdottir & Hathaway, 2020; Mohr & Shelton, 2017). Training should also be carefully orchestrated to provide ample opportunities for faculty to take part (Sumardi & Nugrahani, 2021) and educate them on pedagogical practices needed for planning and implementing robust virtual experiences at the postsecondary level (Albrahim, 2020). Nurse educators also require knowledge of how best learning activities are utilized to meet the unique needs of clinical nursing education (Konrad et

a., 2021). This study showed how, with time, faculty became comfortable utilizing the technological component of their VSs, but their level of comfort with facilitating the actual clinical experiences did not change.

The COVID-19 pandemic has changed nursing education, and online simulation, once a novelty, will likely remain as a significant part of the nursing curriculum. As online education continues to grow, it becomes increasingly important to provide exposure and education on online teaching pedagogies in nursing education graduate programs. When learning to teach, many students do not receive instruction on how to create robust online learning experiences (Dolighan & Owen, 2021; Hartshorne et al., 2020; Konrad et al., 2021) and are not familiar with virtual instruction pedagogies (Sumardi & Nugrahani, 2021). As graduate students prepare to become nurse educators understanding the nuances of online teaching pedagogy will be an integral part of their transition to academia. Teaching online requires providing students with more detail, learning activities and methods to ensure student engagement different from those used in the classroom, (Al-Freih, 2021; Chiasson et al., 2015; Jokinen & Mikkonen, 2013). This unique teaching environment is often why transferring face-to-face content is found to be unsuccessful or unrealistic (Chiasson et al., 2015). Providing student nurse educators with the means to create and facilitate high-quality online experiences will assist them if or when they teach online.

Prior to the pandemic, simulation had been a standard teaching method in nursing programs for many years. The number of approved practice hours that can be completed in simulation varies by state, with some states having approved up to 50% of clinical hours to be spent in simulation (Alexander et al., 2015). In response to the COVID-19 pandemic, the Texas Board of Nursing (2020) approved the use of simulation to exceed the traditional allotment of

50% of clinical hours for students in the final year of nursing school and provided programs with flexibility in their provision of clinical objectives for nursing students. Standards of simulation best practice have been in place for many years, however these standards may not fit the virtual environment (Verkuyl et al., 2020). There are currently very few guidelines established to regulate VS use, including the components of pre-brief, and debrief, and there is little evidence on the processes that nurse educators are using to facilitate their VS experiences (Verkuyl et al., (2020). There is a variety of VS platforms and experiences available for use in nursing programs which offer different levels of fidelity and scenarios. Standards and guidelines, similar to those in place for mannequin based simulations are needed to ensure that VS programs are robust, and are being facilitated in a way that meets the clinical needs of nursing programs.

Consistent with previous studies, this study showed the difficult and stressful transition of moving to an online environment. Nevertheless, the participants adapted and continued to develop new teaching strategies to provide students with continued clinical progression. In previous studies, much of the faculty focus when transitioning to online teaching was on support from colleagues and their institutions, release time to plan and prepare to teach in the online environment, and how to maintain student engagement. The themes presented in this study painted a picture of the struggles faculty endured during the transition to online clinical. Participants reflected on how they extended work hours, increasing availability to students, to meet their student's academic needs and mental health. This study found that a change in focus caused a blurring of the boundary between work and personal life; however, many of the adaptations that faculty made can be applied in education, even without a pandemic.

Limitations and Future Research

One limitation of this study was the length of time between the initial transition from in-person clinical to implementation of virtual clinical experiences. Approximately 2 years between the transition and the interviews could have impacted participants recall about specific experiences. The time could have played a role in many participants sharing their experiences but using experiences from their online didactic classes and virtual clinical interchangeably. The purpose of a narrative inquiry is to focus on the stories and experiences of each participant, which contributes to the inability to apply these findings to a larger population of nursing faculty.

Narratives presented by the participants expand on what is known about faculty experiences transitioning to a virtual platform. Very little was known about how faculty would transition to virtual clinical, with much current research focused on transitions to online didactic courses. This study exposed faculty experiences during an unprecedented and rapid transition to online clinical experiences traditionally taught face-to-face. While this study contributes to the current body of knowledge, further research opportunities remain.

In this study, all participants taught in a pre-licensure nursing program. Therefore, the findings of this study may not be representative of other nursing programs. Repetition of the study in various types of nursing programs, including associate degree, licensed practical nurse, registered nurse to BSN, and advanced practice, would allow for a fuller understanding of how faculty transition to facilitating online clinical. These results can then enhance professional development further as VS use continues to evolve.

The use of VS in nursing is not new and has proven to be an effective means to provide nursing students with clinical experiences (Palancia Esposito & Sullivan, 2020). However, the use of VS as a replacement for clinical hours has yet to be studied (Palancia Esposito & Sullivan,

2020). Nursing education may always be conducted in the hospital environment, but with some clinical experiences difficult to obtain (Anderson et al., 2019; Bryant et al., 2015; McKenna et al., 2019), continued evaluation of faculty experiences in VS, including teaching pedagogies, evaluation methods, and preparation is recommended.

Summary

This chapter presented the conclusions of this study, along with a presentation of implications and areas of future research. This study found that faculty could make adjustments and adapt to a new teaching platform. Participants found the experience stressful, and some struggled to conceptualize what these new clinicals would look like. Collaboration can be an intricate part of a faculty's online success. However, collaboration was minimal, likely due to time and COVID-19 stay-at-home orders. This study also showed how participants were able to adjust their teaching pedagogies to maintain student clinical learning. Regardless of their stress level, this study showed how the priority and focus for faculty was the student. Participants in this study reported countless hours responding to student messages, increasing their time for online office hours, and supporting students, often at the expense of their time.

Findings from this study support the need for the availability of further professional development on VS pedagogies, with less of a focus on virtual technology use. Preparation for facilitating online simulations should start in programs preparing new nurse educators. Future research opportunities exist with replication of the study across other nursing programs and the continued evaluation of virtual simulation pedagogies and preparation to assist in determining the most effective methods of virtual simulation use in nursing education curricula.

REFERENCES

- Aebersold, M. (2018) Simulation-based learning: No longer a novelty in undergraduate education. *The Online Journal of Issues in Nursing*, 23(2).
<https://doi.org/10.3912/OJIN.Vol23No02PPT39>
- Aebersold, M., Rasmussen, J., & Mulrenin, T. (2020). Virtual Everest: Immersive virtual reality can improve the simulation experience. *Clinical Simulation In Nursing*, 38(C), 1-4.
<https://doi.org/10.1016/j.ecns.2019.004>
- Agrawal, N., Kumar, S., Balasubramaniam, S. M., Bhargava, S., Sinha, P., Bakshi, B., & Sood, B. (2016). Effectiveness of virtual classroom training in improving the knowledge and key maternal, neonatal health skills of general nurse midwifery students in Bihar, India: A pre-and post-intervention study. *Nurse Education Today*, 36, 293-297.
<https://doi.org/10.1016/j.nedt.2015.07.022>
- Albrahim, F. A. (2020). Online teaching skills and competencies. *The Turkish Online Journal of Educational Technology*, 19(1), 9-21.
- Al-Freih, M. (2021). The impact of faculty experience with emergency remote teaching: An interpretive phenomenological study. *IAFOR Journal of Education*, 9(2), 7-23.
- Al-Ghareeb, A. Z., & Cooper, S. J. (2016). Barriers and enablers to the use of high-fidelity patient simulation manikins in nurse education: An integrative review. *Nurse education today*, 36, 281-286. <https://doi.org/10.1016/j.nedt.2015.08.005>
- Alexander, M., Durham, C. F., Hooper, J. I., Jeffries, P. R., Goldman, N., Kardong-Edgren, S., Kesten, K. S., Spector, N., Tagliareni, E., Radtke, B., & Tillman, C. (2015). NCSBN simulation guidelines for prelicensure nursing programs. *Journal of Nursing Regulation*, 6(3) 39-44. [https://doi.org/10.1016/S2155-8256\(15\)30783-3](https://doi.org/10.1016/S2155-8256(15)30783-3)

- Anderson, M., Campbell, S. H., Nye, C., Diaz, D., & Boyd, T. (2019). Simulation in advanced practice education: Let's dialogue!!. *Clinical Simulation in Nursing*, 26, 81-85.
<https://doi.org/10.1016/j.ecns.2018.10.011>
- Anthony, B., Kamaludin, A., Romli, A., Raffei, A. F. M., Abdullah, A., Ming, G. L., Shukor, N. A., Nordin, M. S., & Baba, S. (2019). Exploring the role of blended learning for teaching and learning effectiveness in institutions of higher learning: An empirical investigation. *Education and Information Technologies*, 24(6), 3433-3466.
<https://doi.org/10.1007/s10639-019-09941-z>
- Arkan, B., Ordin, Y., & Yilmaz, D. (2018). Undergraduate nursing students' experience related to their clinical learning process. *Nurse Education in Practice*, 29, 127-132.
<https://doi.org/10.1016/j.nepr.2017.12.005>
- Arrigoni, C., Grugnetti, A. M., Caruso, R., Gallotti, M. L., Borrelli, P., & Puci, M. (2017). Nursing students' clinical competencies: A survey on clinical education objectives. *Ann Ig*, 29(3), 179-188. <https://doi.org/10.7416/ai.2017.2145>
- Barriball, K., & While, A. (1994). Collecting data using a semi-structured interview: A discussion paper. *Journal of advanced nursing*, 19(2), 328-335.
<https://doi.org/10.1111/j.1365-2648.1994.tb01088.x>
- Bdair, I. A. (2021). Nursing students' and faculty members' perspectives about online learning during COVID-19 pandemic: A qualitative study. *Teaching and Learning in Nursing*, 16(3), 220-226. <https://doi.org/10.1016/j.teln.2021.02.008>
- Birks, M., Burkot, C., Bagley, T., Mills, J., & Park, T. (2017). The impact of clinical placement model on learning in nursing: A descriptive exploratory study. *Australian Journal of Advanced Nursing*, 34(3), 16-23. <https://doi.org/10.3316/informit.947093739842983>

- Bogossian, F. E., Cooper, S. J., Cant, R., Porter, J. Forbes, H., & FIRST2ACT Research Team. A trial of e-simulation of sudden patient deterioration (FIRST2ACT WEB) on student learning. *Nurse Education Today*, 35, e36-e42. <https://doi.org/10.1016/j.nedt.2015.08.003>
- Bracq, M., Michinov, E., Arnaldi, B., Caillaud, B., Gibaud, B., Gouranton, V., & Jannin, P. (2019). Learning procedural skills with a virtual reality simulator: An acceptability study. *Nurse Education Today*, 79, 153-160. <https://doi.org/10.1016/j.nedt.2019.05.026>
- Bracq, M., Michinov, E., & Jannin, P. (2019). Virtual reality simulation in nontechnical skills training for health professionals a systematic review. *Simulation in Healthcare*, 14, 188-194. <https://dx.doi.org/10.1097/sish.0000000000000347>
- Bryant, R., Miller, C. L., & Henderson, D. (2015). Virtual clinical simulations in an online advanced health appraisal course. *Clinical Simulation in Nursing*, 11(10), 437-444. <https://doi.org/10.1016/j.ecns.2015.08.002>
- Butler-Kisber, L. (2010). Narrative inquiry. In *Qualitative inquiry*. SAGE Publications, Inc., 62-81. <https://doi.org/10.4135/9781526435408>
- Canhoto, A. I., & Murphy, J. (2016) Learning from simulation design to develop better experiential learning initiatives: An integrative approach. *Journal of Marketing Education*, 38(2), 98-106. <https://doi.org/10.1177/027345316643746>
- Cant, R., & Cooper, S. (2014). Simulation in the internet age: the place of web-based simulation in nursing education. An integrative review. *Nurse Education Today*, 34, 1435-1442. <https://doi.org/10.1016/j.nedt.2014.08.001>
- Cant, R., Cooper, S., Sussex, R., & Bogossian, F. (2019). What's in a name? Clarifying the nomenclature of virtual simulation. *Clinical Simulation in Nursing*, 27, 26-30. <https://doi.org/10.1016/j.ecns.2018.11.003>.

- Cant, R., McKenna, L., & Cooper, S. (2013). Assessing preregistration nursing students' clinical competence: A systematic review of objective measures. *International Journal of Nursing Practice*, 19(2), 163-176. <https://doi.org/10.1111/j.teln.2016.04.001>
- Carolan, C., Davies, C. L., Crookes, P., McGhee, S., & Roxburgh, M. (2020). COVID 19: Disruptive impacts and transformative opportunities in undergraduate nurse education. *Nurse Education In Practice*, 46. <https://doi.org/10.1016/j.nepr.2020.102807>
- Cherry, S. J., & Flora, B. H. (2017). Radiography faculty engaged in online education: Perceptions of effectiveness, satisfaction, and technological self-efficacy. *Radiologic Technology*, 88(3), 249-262.
- Chiasson, K., Terras, K., & Smart, K. (2015). Faculty perceptions of moving a face-to-face course to online instruction. *Journal of College Teaching & Learning*, 12(3). <https://doi.org/10.19030/tlc.v12i3.9315>
- Clandinin, D. J., & Connelly, F. M. (2000). *Narrative inquiry: Experience and story in qualitative research*. Jossey-Bass.
- Cobbett, S., & Snelgrove-Clarke, E. (2016). Virtual versus face-to-face clinical simulation in relation to student knowledge, anxiety, and self-confidence in maternal-newborn nursing: A randomized controlled trial. *Nurse Education Today*, 45, 179-184. <https://doi.org/10.106/j.nedt.2016.08.004>.
- Coyne, E., Calleja, P., Forster, E., & Lin, F. (2021). A review of virtual simulation for assessing healthcare students' clinical competency. *Nurse Education Today*, 96. <https://doi.org/10.1016/j.nedt.2020.104623>
- Creswell, J. W., & Creswell, J. D. (2018). *Research design qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage Publications, Inc.

- Dankbaar, M. E. W., Richters, O., Kalkman, C. J., Prins, G., Ten Cate, O. T. J., van Merrienboer, J. J. G., & Schuit, C. E. (2017). Comparative effectiveness of a serious game and an e-module to support patient safety knowledge and awareness. *BMC Medical Education*, 17(30). <https://doi.org/10.1186/s12909-016-0836-5>
- De, S., Mahadalkar, P., & Podder Bera, L. (2016). Nursing student's clinical learning experiences and the barriers faced. *International Journal of Nursing Education*, 8(2), 169-174. <https://doi.org/10.5958/0974-9357.2016.00070.2>
- Dolighan, T., & Owen, M. (2021). Teacher efficacy for online teaching during COVID-19 pandemic. *Brock Education Journal*, 30(1), 95-116. <https://doi.org/10.26522/brocked.v30i1.851>
- Dubovi, I., Levy, S. T., & Dagan, E. (2017). Now I know! The learning process of medication administration among nursing students with non-immersive desktop virtual reality simulation. *Computers & Education*, 113, 16-27. <https://doi.org/10.1016/j.compued.2017.05.009>
- Durkin, J., Jackson, D., & Usher, K. (2020). Qualitative research interviewing: Reflections on power, silence and assumptions. *Nurse Researcher*, 28(4). <https://doi.org/10.7748/nr.2020.e1725>
- Fogg, N., Wilson, C., Trinka, M., Campbell, R., Thomson, A., Merritt, L., Tietze, M., & Prior, M. (2020). Transitioning from direct care to virtual clinical experiences during the COVID-19 pandemic. *Journal of Professional Nursing*, 36, 685-691. <https://doi.org/10.1016/j.profnurs.2020.09.012>

- Foronda, C., Alfes, C. M., Dev, P., Kleinheksel, A. J., Nelson, D. A., O'Donnel, J. M., & Samosky, J. T. (2017). Virtually nursing emerging technologies in nursing education. *Nurse Educator*, 42(1), 14-17. <https://doi.org/10.1097/NNE.0000000000000295>
- Foronda, C., & Bauman, E. B. (2014). Strategies to incorporate virtual simulation in nurse education. *Clinical Simulation in Nursing*, 10(8), 412-418. <https://doi.org/10.1016/j.ecns.2014.03.005>
- Foronda, C., Godsall, L., & Trybulski, J. (2013). Virtual clinical simulation: The state of the science. *Clinical Simulation in Nursing*, 9, e279-e286. <https://doi.org/10.1016/j.ecns.2012.05.005>
- Foronda, C. L., Shubeck, K., Swoboda, S. M., Hudson, K. W., Budhathoki, C., Sullivan, N., & Hu, X. (2016). Impact of virtual simulation to teach concepts of disaster triage. *Clinical Simulation in Nursing*, 12(1), 137-144. <https://doi.org/10.1016/j.ecns.2016.02.004>
- Foronda, C. L., Swoboda, S. M., Henry, M. N., Kamau, E., Sullivan, N., & Hudson, K. W. (2018). Student preferences and perceptions of learning from vSIM for nursing. *Nursing Education in Practice*, 33, 27-32. <https://doi.org/10.1016/j.nepr.2018.08.003>
- Gazza, E. A. (2017). The experience of teaching online in nursing education. *Journal of Nursing Education*, 56(6), 4343-349. <https://doi.org/10.3928/0148834-20170518-05>
- Gudmundsdottir, G. B., & Hathaway, D. M. (2020). “We always make it work”: Teachers’ agency in the time of crisis. *Journal of Technology and Teacher Education*, 28(2), 239–250. <https://www.learntechlib.org/primary/p/216242/>
- Gunn, T., Jones, L., Bridge, P., Rowntree, P & Nissen, L. (2018). The use of virtual reality simulation to improve technical skill in the undergraduate medical imaging student.

Interactive Learning Environments, 26(5), 613-620.

<https://doi.org/10.1080/10494820.2017.1374981>

Hampton, D., Culp-Roche, A., Hensley, A., Otts, J., Thaxton-Wiggins, A., Fruh, S., & Moser, D. K. (2020). *Nurse Educator*, 45(6), 302-306.

<https://doi.org/10.1097/NNE.0000000000000805>

Hartshorne, R., Baumgartner, E., Kaplan-Rakowski, R., Mouza, C., & Ferdig, R. E. (2020). Special issue editorial: Preservice and inservice professional development during the COVID-19 pandemic. *Journal of Technology and Teacher Education*, 28(2), 137–147.

<https://www.learntechlib.org/primary/p/216910/>.

Hassmiller, S. B., Beauvais, A. M., & Shellenbarger, T. (2020). The future of nursing report 10 years later: Where is nursing and what work remains? *Nursing Education Perspectives*, 41(5), 272-273. <https://doi.org/10.1097/01.NEP.0000000000000724>

Hezaveh, M. S., Rafii, F., & Seyedfatemi, N. (2014). Novice nurses' experiences of unpreparedness at the beginning of the work. *Global Journal of Health Science*, 6(1), 215. <https://doi.org/10.5539/gjhs.v6n1p215>

Holloway, I. & Freshwater, D. (2007). *Narrative research in nursing*. Blackwell Publishing Inc.

Horvitz, B. S., Beach, A. L., Anderson, M. L., & Xia, J. (2015). Examination of faculty self-efficacy related to online teaching. *Innovative Higher Education*, 40, 305-316.

<https://doi.org/10.1007/s10755-014-9316-1>

Howe, D., Chen, H., Heitner, K. L. Morgan, S. A. (2018). Differences in nursing faculty satisfaction teaching online: A comparative descriptive study. *Journal of Nursing Education*, 57(9), 536-543. <https://doi.org/10.3928/01484834020180815-05>

- Immonen, K., Oikarainen, A., Tomietto, M., Kaariainen, M., Tuomikoski, A., Kaucic, B. M., Filej, B., Riklikiene, O., Vizcaya-Moreno, M. F., Perez-Canaveras, R. M., De Raeve, P., & Mikkonen, K. (2019). Assessment of nursing students' competence in clinical practice: A systematic review of reviews. *International Journal of Nursing Studies*, 100. <https://doi.org/10.1016/j.ijnurstu.2019.103414>
- Jamshidi, N., Molazem, Z., Sharif, F., Torabizadeh, C., & Kalyani, M. N. (2016). The challenges of nursing students in the clinical learning environment: A qualitative study. *The Scientific World Journal*. <https://doi.org/10.1155/2016/1846178>
- Javaid, M., & Haleem, A. (2020). Virtual reality applications toward medical field. *Clinical Epidemiology and Global Health*, 8, 600-605. <https://doi.org/10.1016/j.cegh.2019.12.010>
- Jeffries, P. R. (2005). A framework for designing, implementing, and evaluating simulations used as teaching strategies in nursing. *Nursing Education Perspectives*, 26(2), 96-103.
- Jeffries, P. R., Rodgers, B., & Adamson, K. (2015). NLN Jeffries simulation theory: Brief narrative description. *Nursing Education Perspectives*, 36(5), 292-293. <https://doi.org/10.5480/1536-0526-36.5>
- Jeffries, P. R. (Ed.). (2016). *The NLN Jeffries simulation theory*. Wolters Kluwer.
- Jokinen, P., & Mikkonen, I. (2013). Teachers' experiences of teaching in a blended learning environment. *Nurse Education in Practice*, 13, 524-528. <https://doi.org/10.1016/j.nepr.2013.03.014>
- Jovchelovitch, S., & Bauer, W. (2000). *Narrative interviewing*. LSE Research online. <http://eprints.lse.ac.uk/2633>

- Junus, K., Santoso, H. B., Putra, P. O. H., Gandhi, A., Siswantining, T., & Edirisingha, P. (2021). Lecturer readiness for online classes during the pandemic: A survey research. *Education Sciences, 11*(3), 139. <https://doi-org.ezp.twu.edu/10.3390/educsci11030139>
- Keshavarzi, M. H., Arabshahi, S. K. S., Gharrahee, B., Sohrabi, Z., & Mardani-Hamooleh, M. (2019). Exploration of faculty members' perceptions about virtual education challenges in medical sciences: A qualitative study. *Journal of Advances in Medical Education & Professionalism, 7*(1), 27-34. <https://doi.org/10.30476/jamp.2019.41042>
- Kiernan, L. C. (2018). Evaluating competence and confidence using simulation technology. *Nursing, 48*(10), 45-52. <https://doi.org/10.1097/01.NURSE.0000545022.36908.f3>
- Konrad, S., Fitzgerald, A., & Deckers, C. (2021). Nursing fundamentals - supporting clinical competency online during the COVID-19 pandemic. *Teaching and Learning in Nursing: Official Journal of the National Organization for Associate Degree Nursing, 16*(1), 53–56. <https://doi.org/10.1016/j.teln.2020.07.005>
- Kowalczyk, N. K. (2014). Perceived barriers to online education by radiologic science educators. *Radiology Technology, 85*(5), 486-493.
- Leaver, C. A., Stanley, J. M., & Veenema, T.G. (2022). Impact of the COVID-19 pandemic on the future of nursing education. *Academic Medicine, 97*(35). <https://doi.org/10.1097/ACM.0000000000004528>
- Liaw, S. Y., Chan, S. W., Chen, F., Hooi, S. C., & Siau, C. (2014). Comparison of virtual patient simulation with mannequin-based simulation for improving clinical performances in assessing and managing clinical deterioration: Randomized controlled trial. *Journal of Medical Internet Research, 16*(9). <https://doi.org/10.2196/jmir.3322:10.2196/jmir.3322>

- Marei, H., Donkers, J., & Van Merriënboer, J. J. G. (2018). The effectiveness of integration of virtual patients in a collaborative learning activity. *Medical Teacher*, 40(51), S96-S103. <https://doi.org/10.1080/0142159x.2018.1465534>
- MacRae, D., Jara, M. R., Tyerman, J., & Luckar-Flude, M. (2021). Investing in engagement: Integrating virtual learning experiences across an undergraduate nursing program. *Clinical Simulation in Nursing*, 52, 17-32. <https://doi.org/10.1016/j.ecns.2020.12.12.005>
- Madathil, K. C., Frady, K., Hartley, R., Bertrand, J., Alfred, M., & Gramopadhye, A. (2017). An empirical study investigating the effectiveness of integrating virtual reality-based case studies into an online asynchronous learning environment. *Computers in Education Journal*, 8(3).
- Martin, F., Budhrani, K., & Wang, C. (2019). Examining faculty perception of their readiness to teach online. *Online Learning Journal*, 23(3). <https://doi.org/10.24059/olj.v23i3.1555>
- Martin, F., Wang, C., Jokiabo, A., May, B., Grubmeyer, S. (2019). Examining faculty readiness to teach online: A comparison of US and German educators. *European Journal of Open, Distance and e-Learning*, 22(1), 53-69. <https://doi.org/10.2478/eurodl-2019-0004>
- McGrath, J. L., Taekman, J. M., Dev, P., Danforth, D. R., Mohan, D., Kman, N., Crichlow, A., & Bond, W. (2017) Using virtual reality simulation environments to assess competence for emergency medicine learners. *Academic Emergency Medicine*, 25(2), 186-195. <https://doi.org/10.1111/acem.13304>
- McKenna, L., Cant, R., Bogossian, F., Cooper, S., Levett-Jones, T., & Seaton, T. (2019). Clinical placements in contemporary nursing education: Where is the evidence? *Nurse Education Today*, 83. <https://doi.org/10.1016/j.nedt.2019.104202>

- Mintz, J., Wahood, W., Meghani, S., & Rajput, V. (2020). Emergency transition to virtual education during COVID-19: Lessons and opportunities for experiential learning and practice socialization. *MedEdPublish*, 9(1). <https://doi.org/10.15694/mep.2020.000144.1>
- Mohr, S., & Shelton, K. (2017). Best practices framework for online faculty professional development: A delphi study. *Online Learning*, 21(4). <https://doi.org/10.24059/olj.v21i4.1273>
- Murphy, L., Eduljee, N. B., & Croteau, K. (2020). College student transition to synchronous virtual classes during the COVID-19 pandemic in northeastern United States. *Pedagogical Research*, 5(4). <https://doi.org/10.2933/pr/8485>
- Oermann, M. H., Kardong-Edgren, S., & Rizzolo, M. A. (2016). Towards an evidence-based methodology for high-stakes evaluation of nursing students' clinical performance using simulation. *Teaching and Learning in Nursing*, 11(4), 133-137. <https://doi.org/10.1016/j.teln.2016.04.001>
- Onalan, O., & Kurt, G. (2020). Exploring Turkish EFL teachers' perceptions of the factors affecting technology integration: A case study. *Journal of Language and Linguistic Studies*, 16(2), 626-646. <https://doi.org/10.17263/jlls.759264>
- Padilha, J. M., Machado, P. P., Ribeiro, A., Ramos, J., & Costa, P. (2019). Clinical virtual simulation in nursing education: A randomized controlled trial. *Journal of Medical Internet Research*, 21(3). <https://doi.org/10.2196/11529>
- Palancia Esposito, C., & Sullivan, K. (2020). Maintaining clinical continuity through virtual simulation during the COVID-19 pandemic. *Journal of Nursing Education*, 59(9), 522-525. <https://doi.org/10.3928/01484834-20200817-09>

- Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health*, 42(5), 533-544. <https://doi.org/10.1007/s10488-013-0528-y>
- Patten, M.L. & Newhart, M. (2018). *Understanding research methods: An overview of the essentials*.
- Peddle, M., Bearman, M., & Nestle, D. (2016). Virtual patients and nontechnical skills in undergraduate health professional education: An integrative review. *Clinical Simulation in Nursing*, 12, 400-410. <https://doi.org/10.1016/j.ecns.2016.04.004>
- Polit, D. F., & Beck, C. T. (2017). *Nursing research: Generating and assessing evidence for nursing practice* (10th ed.). Wolters Kluwer.
- Porter, J. E., Barbagallo, M. S., Peck, B., Allen, L., Tanti, E., Churchill, A. (2020). The academic experiences of transitioning to blended online and digital nursing curriculum. *Nurse Education Today*, 87. <https://doi.org/10.1016/j.nedt.2020.104361>
- Pottle, J. (2019). Virtual reality and the transformation of medical education. *Future Healthcare Journal*, 6(3), 181-185. <https://doi.org/10.7861/fhj.2019-0036>
- Prottas, D. J., Cleaver, C. M., & Cooperstein, D. (2016) Assessing attitudes towards online instruction: A motivational approach. *Online Journal of Distance Learning Administration*, 19(4), <https://www.learntechlib.org/p/193257/>
- Ramsbotham, J., Dinh, H., Troung, H., Houng, N., Dang, T., Nguyen, C., Tran, D., & Bonner, A. (2019). Evaluating the learning environment of nursing students: A multisite cross-sectional study. *Nurse Education Today*, 79, 80-85. <https://doi.org/10.1016/j.nedt.2019.05.016>

- Redmond, C., Hardie, P., Davies, C., Cornally, D., Daly, O., & O'Sullivan. (2020). Increasing competence in wound care: A cross-sectional study to evaluate use of a virtual patient by undergraduate student nurses. *Nursing Education in Practice*, 44, <https://doi.org/10.1016/j.nepr.2020.102774>
- Riessman, C. K. (2008). *Narrative methods for the human sciences*. SAGE Publications, Inc.
- Richter, S. & Idleman, L. (2017). Online teaching efficacy: A product of professional development and ongoing support. *International Journal of Nursing Education Scholarship*, 14(1). <https://doi.org/10.1515/ijnes-2016-0033>
- Richter, S. L., & Schuessler, J. B. (2019). Nursing faculty experiences and perceptions of online teaching: A descriptive summary. *Teaching and Learning in Nursing*, 14, 26-29. <https://doi.org/10.1016/j.teln.2018.09.004>
- Rim, D., & Shin, H. (2021). Effective instructional design template for virtual simulations in nursing education. *Nurse Education Today*, 96. <https://doi.org/10.1016/j.nedt.2020.104624>
- Roney, L. N., Westrick, S. J., Acri, M. C., Aronson, B. S., Lisa, M. (2017). Technology use and technological self-efficacy among undergraduate nursing faculty. *Nursing Education Perspectives*, 38(3), 113-118. <https://doi.org/10.1097/01NEP.0000000000000141>
- Sacco, T. L., & Kelly, M. M. (2021). Nursing faculty experiences during the COVID-19 pandemic response. *Nursing Education Perspectives*, 42(5), 285-290 <https://doi.org/10.1097/01.NEP.00000000000000843>
- Schaffer, M. A., Tiffany, J. M., Kantack, K., & Anderson, L. J. W. (2016). Second life virtual learning in public health nursing. *Journal of Nursing Education*, 55(9), 536-540. <https://doi.org/10.3928-01484824-20160816-09>

- Shea, K. L., & Rovera, E. J. (2021). Preparing for the COVID-19 pandemic and its impact on a nursing simulation curriculum. *Journal of Nursing Education*, 60(1), 52-55.
<https://doi.org/10.3928.01484834-20201217-12>
- Simes, T., Roy, S., O'Neill, B., Ryal, C., Lapkin, S., & Curtis, E. (2018). Moving nurse educators towards transcendence in simulation comfort. *Nurse Education in Practice*, 28, 218-223. <https://doi.org/10.1016/j.nepr.2017.10.024>
- Sinacori, B. C. (2020). How nurse educators perceive the transition from the traditional classroom to the online environment: A qualitative inquiry. *Nursing Education Perspectives*, 41, 16-19. <https://doi.org/10.1097/01.NEP.0000000000000490>
- Sobocan, M. & Klemenc-Ketis, Z. (2017). Medical students' attitudes towards the use of virtual patients. *Journal of Computer Assisted Learning*, 33, 393-402.
<https://doi.org/10.1111/jcal.12190>
- Stephens, M. L., & Coryell, J. (2020). Faculty perspectives on context, benefits, and challenges in fully online graduate adult education programs. *Adult Learning*, 32(2), 79-88.
<https://doi.org/10.1177/1045159520959468>
- Sumardi, S., & Nugrahani, D. (2021). Adaptation to emergency remote teaching: Pedagogical strategy for pre-service language teachers amid COVID-19 pandemic. *Turkish Online Journal of Distance Education*, 22(2).
- Texas Board of Nursing. (2020). *Managing clinical experiences during the COVID-19 pandemic*.
https://www.bon.texas.gov/pdfs/MANAGING%20CLINICAL%20EXPERIENCES%20V5_for%20web.pdf

- Tobase, L., Peres, H. H. C., Tomazini, E. A. S., Teodoro, S. V., Ramos, M. B., & Polastri, T. F. (2017). Basic life support: Evaluation of learning using simulation and immediate feedback devices. *Rev. Latino-Am. Enfermagem*, 25, e2942. <https://doi.org/1518-8345.1957.2942>
- Ulenaers, D., Grosemans, J., Schrooten, W., & Bergs, J. (2021). Clinical placement experience of nursing students during the COVID-19 pandemic: A cross-sectional study. *Nurse Education Today*, 99, <https://doi.org/10.1016/j.nedt.2021.104746>
- Verkuyl, M., Attack, L., Kamstra-Cooper, K., & Mastrilli, P. (2020). Virtual gaming simulation: An interview study of nurse educators. *Simulation & Gaming*, 51(4), 537-549. <https://doi.org/10.1177/1046878120904399>
- Wands, L., Geller, D. E., & Hallman, M. (2020). Positive outcomes of rapid freeware implementation to replace baccalaureate student clinical experiences. *Educational Innovations*, 59(12), 701-704. <https://doi.org/10.3928/01484834-20201118-08>
- Walters, S., Grover, K. S., Turner, R. C., & Alexander, J. C. (2017). Faculty perceptions related to teaching online: A starting point for designing faculty development initiatives. *Turkish Online Journal of Distance Education*, 18(1), 4-19. <https://doi.org/10.17718/tojde.340365>
- Wright, J. M. (2014). Planning to meet the expanding volume of online learners: An examination of faculty motivation to teach online. *Educational Planning*, 21(4), 35-49.
- Zhu, F. F., & Wu, L. R. (2016). The effectiveness of a high-fidelity teaching simulation based on an NLN/Jeffries simulation in the nursing education theoretical framework and its influencing factors. *Chinese Nursing Research*, 3(3), 129-132. <https://doi.org/10.1016/j.cnre.2016.06.016>

APPENDIX A

PARTICIPANT ELIGIBILITY SCREENING TOOL

Date	
Research Number	

Eligible to participate in study? YES NO

	Inclusion Criteria	Yes	No
1.	Do you teach in a 4-year pre-licensure nursing program?	<input type="radio"/>	<input type="radio"/>
2.	Did you teach in the clinical setting?		
3.	Did you teach face-to-face simulation before COVID-19 pandemic?	<input type="radio"/>	<input type="radio"/>
4	Did you facilitate mannequin simulation experiences on your campus?	<input type="radio"/>	<input type="radio"/>
5.	Did you facilitate virtual simulation experiences for students as a result of COVID-19?	<input type="radio"/>	<input type="radio"/>

APPENDIX B

DEMOGRAPHIC DATA COLLECTION FORM

1) What is your age?: (free text entry) ____yrs.

2) What is your gender?: __Male __Female

3) What is your highest level of education?

_____Master's

_____DNP

_____PhD

_____Other (Please specify)

4) What is your current academic position?

_____Dean or Director

_____Associate/Assistant Dean

_____Full Professor

_____Associate Professor

_____Assistant Professor

_____Instructor or Lecturer

_____Simulation lab coordinator

_____Clinical Professor

_____Associate Clinical Professor

_____Assistant Clinical Professor

- 5) How many years of clinical experience do you have? (free text entry) _____yrs.
- 6) How many years of experience do you have as a nursing educator/ faculty? (free text entry) _____yrs.

7) What level of nursing program do you teach in? (select all that apply):

_____BSN

_____MSN

_____DNP

_____PhD

8) What is your teaching methodology (select all that apply)

_____Lecture/ Classroom (face to face)

_____Asynchronous Online

_____Synchronous Online

_____Hybrid/Blended

_____Clinical

_____Skills Laboratory

_____Simulation Center

9) Does your institution have a simulation lab?

_____Yes

_____No

10) Does your institution have a simulation coordinator or director?

_____Yes

_____No

11) Did you use virtual simulation in your teaching before COVID-19

_____Yes

_____No

12) How many years' experience do you have using virtual simulation for teaching: (free text entry) _____yrs.

13) Have you ever received training before using virtual simulation?

_____Yes

_____No

14) If yes, how much? Who facilitated the training (School/lab coordinator/ vendor etc.)?

APPENDIX C

INTERVIEW GUIDE

The purpose of this narrative analysis study is to gain understanding and insight into the nursing faculty's storied experiences about quickly switching from clinical-based training to virtual simulation (VS) experiences during the COVID-19 pandemic. The central question for this proposed study is: What are the storied experiences of nurse faculty transitioning from live simulation and face-to-face clinical to virtual simulation during the COVID-19 pandemic? The aims of this study are: (a) to elicit stories about how nurse faculty moved from live clinical to VS experiences, (b) to learn through their stories how faculty guided, supported, and evaluated students during VS learning, and (c) to identify challenges that nurse educators have faced when changing from face-to-face clinical to the VS environment.

Interview Questions

Research Question

What are the storied experiences of nurse faculty transitioning from live simulation and face-to-face clinical to virtual simulation during the COVID-19 pandemic?

Introductory Question

Tell me a story about your transition to VS clinical learning experiences?

Potential Probing/Follow-up Questions

Tell me more about...
How do you feel about...?
What are some of your reasons for...?

Research Aims

(a) to elicit stories about how nurse faculty moved from live clinical to VS experiences

Potential Interview Questions

Tell me about the steps that you went through to move from face-to-face clinical to VS.

Can you describe...
Can you give an example...?
Tell me more about...

(b) to learn through their stories how faculty guided, supported, and evaluated students during VS learning

Tell me about how you guided, supported, and evaluated students during VS experiences.

Can you give an example...?
Tell me more about...
What are some of your reasons for...

(c) to identify challenges that nurse educators have faced when changing from face-to-face clinical to the VS environment

Tell me a story about challenges you experienced when you changed from face-to-face clinical to VS.

Can you describe...
Can you give an example...?
Tell me more about...