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Faculty Perceptions of Teaching Clinical Reasoning at the Patient Bedside

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FACULTY PERCEPTIONS OF TEACHING CLINICAL REASONING AT THE PATIENT BEDSIDE

by

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ABSTRACT

FACULTY PERCEPTIONS OF TEACHING CLINICAL REASONING AT THE PATIENT BEDSIDE

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Nurse educators meet frequently in conference settings and peer groups seeking an answer to "How do you do clinical?". The purpose of this qualitative, phenomenological study was to explore faculty perceptions of clinical teaching experiences at the patient bedside at a level one or two associate's degree nursing program by faculty within the Virginia Community College System (VCCS) that teach a rural student population.

Rural students struggle with work-life barriers that complicate their educational journey. This was compounded by the COVID-19 pandemic that presented new challenges to the way nursing education could be delivered creating a need for on line and blended learning environments. Many programs experienced a shutdown of clinical teaching facilities and were forced online. This new learning environment proved to be another educational challenge for rural healthcare communities.

This study explored faculty perceptions with interview sessions addressing clinical teaching practice over the last five years at the patient bedside with eight nurse educators from VCCS rural community colleges. A literature review revealed gaps in the research; the utilization of a comprehensive clinical teaching model and an overall disagreement on any one "best" teaching method. Three research questions on the teaching of clinical reasoning, safe patient care outcomes, and the experiences of new teaching environments during the COVID -19 pandemic were developed. Following hermeneutic analysis, the primary themes of *Collaborative Teaching*

Practices, *Traditional Teaching Methods, and Pandemic Teaching* emerged with secondary themes of *Concept Based Curriculum* and *Blended Learning Environments*.

Academic nursing leaders and faculty should use this information to create a common clinical teaching model. Health care leaders should use this information to enhance bedside teaching practices to produce safe outcomes for patients in their care. Nursing educators should use this information to make strong clinical thinkers that will address the growing need for nurses in the United States in the wake of the most significant nursing shortage experienced in this profession. This hermeneutic phenomenology is the beginning of a much-needed change in clinical education. Nurse educators must develop critical reasoning skills in nurses that will care for an aging population using innovative methods for critical thought.

Keywords: clinical teaching strategies in nursing, clinical reasoning in nursing, nursing faculty, patient bedside

This dissertation is dedicated to so many inspirations in my life. As is the premise of hermeneutics “all is interpretation” and every one of you has made an impact on my life. From the very beginning, my “bossiness” now lovingly called leadership skills, has been fostered by some amazing people. I dedicate this journey first and foremost to My Lord and Savior, Jesus Christ, without His strength, I can do nothing. One of the hallmarks of a servant leader is to be willing to be led, something He has taught me along the way. I would also be remiss if I did not include my wonderful family, they are my biggest cheerleaders and without them, we would not be here today. I come from a very long line of strong powerful women that make a mark wherever they go. To be a Pittman woman is to be strong, accept what is, and make it more… My mama, Aunt Kay, Aunt Kelly, beautiful Grandmama, and all of the Pittman girls continue a legacy that is tough as nails and filled with grace. The men in my life, they are such an inspiration as they continue to hold us up and let us bloom. We miss our patriarch, but so many have shown up and pushed me to these final steps, Pop, Papa Don, and Uncle Kenny, and my Boon. They never expected less and always had me laughing. My work family, which includes over 1000 nursing students that have taught me so many things. My girls and Charles, we are truly his angels, and what a ride! Every day we push harder. Charles, you believed in me when I never thought I could do this. Ellen you pushed me to keep going more times than I can count. I will forever be grateful. Our dear friends have believed in me, traveled with me, and taken time in between my drafts and edits and have always said, you can do this! I am certain the list goes on…I could write and write, but I must reserve these last words for my Chris and my Andrew. They are my reason, they are my very best friends, our family is my everyday reason for 530 wakeups and Saturdays full of edits finished with a warm meal and nights by the fire. They have supported me when I am tired and they have celebrated each step of this journey. I am Blessed!

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CHAPTER I

INTRODUCTION

Attrition, retention, and completion data are continually being examined in nursing education to identify and support successful initiatives in community colleges. The Virginia Community College System (VCCS) currently reports an overall 16% completion rate of first-time students within two years and 30% within three years of admission to a community college (National Center for Education Statistics, 2019). Nursing program success rates in the VCCS are measured by completion within three academic years. As of December 2020, the Virginia Board of Nursing reports that 112,420 registered nurses are licensed in the state (Virginia Board of Nursing, 2020). However, nursing program success rates are under scrutiny as the national nursing shortage continues to increase with an expected 450,000 registered nurse job vacancies by the end of 2020 (Heilferty, 2018). The state of Virginia ranks in the top ten states with a registered nursing shortage estimating only ten licensed nurses per 1000 people ("The U.S. Nursing shortage: A state-by-state breakdown", 2022).

Nurses should be prepared to care for complex cases in an aging population using new and innovative methods. The idea that student nurses will be prepared for employment by earning a two-year nursing degree can seem daunting. Nursing faculty should be prepared to promote strong critical reasoning skills in the classroom and laboratory settings allowing students to make safe judgments in clinical practice at the patient bedside (Gonzalez, 2018). In current pandemic times, educators have to consider all aspects of teaching and learning to produce strong thinkers (Chang, 2020). Nurse educators are now challenged with identifying ways to teach complex clinical judgment to students in a new learning environment.

Clinical judgment is not the same as critical thinking. Although critical thinking skills are required to make clinical decisions, other elements are necessary to ensure safe practice outcomes (Bartlett et al., 2008). As faculty in the VCCS wrestle with retention and attrition in nursing programs, it is evident that strong teaching of clinical reasoning is imperative. Learning objectives focused on clinical reasoning are essential to producing successful graduates. Graduate nurses must be prepared to use complex thought processes to quickly evaluate a patient's condition (Gonzalez, 2018). Nursing faculty in the VCCS are faced with uncovering ways to teach these complex thought processes within an associate degree program.

Historical and contemporary research reports are focused on the student's ability to clinically reason at the bedside. Many models and theories support the study of clinical reasoning. This study focused on aspects of four clinical judgment theories: the nursing process (1982), problem-based learning (2018), outcome present state (1999), and theories by Tanner (2006) and Lasater (2007). Each of these concepts has been explored by various nursing faculty within the VCCS. However, there are differing opinions on the strategies commonly used to teach clinical reasoning.

The national nursing shortage is more severe than ever, ranking nursing as the third most in demand job in the United States in 2019 ("The U.S. Nursing shortage: A state-by-state breakdown", 2022). Academic leaders should evaluate teaching methods for clinical reasoning that promote safe nursing care (Gonzalez, 2018). Within the VCCS, anecdotal evidence is often generated and disseminated at conferences and peer group meetings. Most group presentations focus on a specific college initiative in a VCCS nursing program that is not generalizable to all. Although much of the anecdotal evidence produces strong nursing graduates, there must be a foundational model for faculty to build upon. Nursing faculty cannot agree on a particular

method to teach the complex thought required in clinical reasoning. This study will explore the phenomenon of faculty perceptions of teaching practices in the VCCS for bedside clinical reasoning by rural students in Virginia schools.

At the onset of the pandemic of 2019, faculty were challenged to be creative in their teaching of nursing students in associate degree programs. In March of 2020, community colleges in Virginia were forced to close the doors to their campuses. However, nursing students continued to be educated and graduate into clinical practice. The Virginia Board of Nursing asked faculty to decide if students were ready to graduate with fewer clinical hours than originally mandated (Virginia Board of Nursing, 2020). Nurse educators had to determine if a student was ready for safe practice at the patient bedside for the graduation year of 2020. Nurses were identified as front-line service providers in pandemic times and graduates were critical to filling shortages.

Virtual instruction has continued into the new academic year and nursing programs nationwide are having to teach clinical reasoning with limited clinical bedside experiences. This study focuses on aspects of teaching clinical reasoning, both in-person and in a virtual setting. Colleges and universities have been forced online and more research is needed on how to navigate the new norms of instruction. As the nursing shortage in Virginia continues, the VCCS is still challenged to produce nurse graduates that can excel in the workforce promoting safe patient outcomes in the community.

Clinical reasoning is a tool that exceeds learned skills. Nursing students should be able to work through a patient scenario with guided reflection to produce safe patient outcomes (Kautz et al., 2005). Although the nursing practice has changed over time, patient safety and critical reasoning are still the most important components of nursing education (Gerog et al., 2019).

Background

Although much research exists on the topic of nursing education and clinical reasoning, there appears to be a disconnect in the way that faculty choose to deliver and henceforth evaluate this complex thought process. Often, faculty present ideas to teach clinical and didactic elements in the VCCS but no one agreement has been identified. These seminars are based on anecdotes specific to one community college associate degree program. This anecdotal evidence is valuable for idea sharing and produces learning activities that are often used in bedside education to explore the concepts of safe patient care. However, the use of a common model for bedside teaching that provides a framework for educators should be explored. This common model will allow for academic freedom as it is utilized in the individual nursing programs of study. Faculty should be able to determine how to best teach their student demographic bringing their students to the level of a safe and effective nurse graduate.

The VCCS adopted the concept-based curriculum in 2016, and all schools are required to teach this curriculum. However, while the curriculum remains common, the choice in how to deliver the education remains fluid. Nursing faculty at each VCCS school prescribe different methods in teaching the curriculum and delivering course content. Methods vary from traditional lectures to a completely flipped classroom approach. Faculty should continue to explore ideas for teaching in their individual programs. These ideas should be shared as faculty seek to answer the question “How do you do clinical?”

According to Harmon and Thompson (2015), collaborative learning should be used to teach complex thought processes. In their study, a case analysis was prescribed, and students were asked to collaborate and solve clinical problems (Harmon & Thompson, 2015). Pesut and

Herman (1999) agree that a model that provides tools for clinical reasoning and collaboration is necessary for the identification of safe practice outcomes. Gonzalez (2018) concurred that a concept-based learning model should yield new opportunities for faculty to teach clinical reasoning and interdisciplinary collaboration. However, she identified that faculty often have a different focus when teaching clinical, basing much of their practice on skills and tasks (Gonzalez, 2018). This is an extremely important article because in nursing education the identification of a change in patient condition reaches beyond learned skills and tasks.

Nursing skills are an important part of clinical practice but are only one component of safe care. The nursing student has to identify the reason for the skill. In a phenomenological study, Herron et al. (2016), found that students were able to recognize the importance of safe practice but were sometimes unsure of what was best based upon how they were taught to reason.

Nursing instructors are responsible for teaching nurse-like thinking but many were found to be using outdated methods in bedside teaching (Herron et al., 2016). Identification of patient trends and data analysis, responding to changing conditions, is important to teach to promote safe decisions by the nursing student (Herron et al., 2016). Moreover, many research articles identified a focus on skill tasking rather than on analysis of patient trends.

Students reported that clear expectations and open communication were also important as they began to develop as novice nurses (Alfayoumi, 2019; Herron et al., 2016). Esteem developed in clinical rotations is necessary for students to feel prepared to make safe practice decisions (Herron et al., 2016). Alfayoumi (2019) provided evidence that many nurse graduates are underprepared to make safe decisions and lack the reasoning skills necessary to complete this important work. Using theory-based strategies to teach clinical reasoning is as important to

student growth as is communication and support offered by a clinical faculty (Herron et al., 2016).

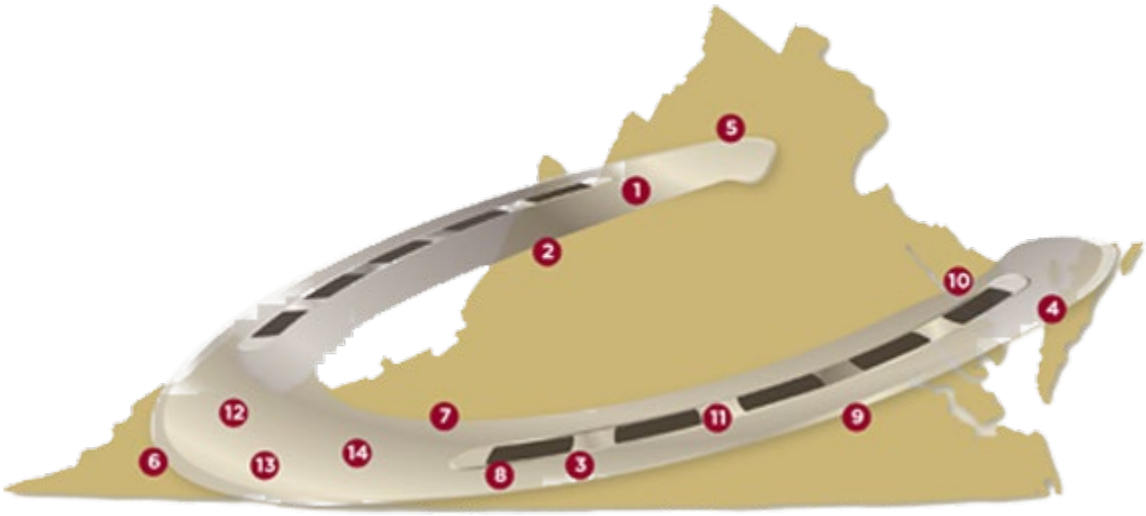
The identification of priority of care is present in many of the teaching and learning models explored in this study. Students should be able to analyze data trends and connect interventions that will help to improve the patient's condition. Faculty teaching methods should be explored to allow for optimal student outcomes and growth in this area where research is lacking. Research articles are consistent in the recommendation that more work is needed to move towards a goal of fostering nurse-like thinking in an associate degree graduate (Benner, 1984). A focus on thinking in the clinical setting is more important than content saturation and skill tasking (Alfayoumi, 2019).

Faculty-led clinicals are an important part of nursing education in an associate degree program. Faculty have various opportunities to develop the reasoning skills of their students. At the end of most programs, students are required to complete a preceptorship experience, working one-on-one with a practicing registered nurse, albeit not under traditional faculty supervision. In a study by Kim (2006) the preceptorship experience was explored, discovering numerous student’s perceptions of clinical readiness. Students reported that the time in the preceptorship experience was valuable in increasing competence and confidence as novice practitioners (Kim, 2006). However, currently in academia during COVID-19, faculty in the VCCS are concerned with how students will achieve clinical competence in a world forced into virtual learning. The preceptorship experience, once thought to provide the final elements of clinical reasoning education, is no longer an option for most VCCS nursing students for the graduation year of 2019 and beyond for some rural programs. Rural area colleges struggle with providing enough precepting hours and experiences as sites are vastly limited.

This phenomenological study will focus on the nursing programs in the rural horseshoe of Virginia. The rural horseshoe of Virginia includes fourteen of the twenty-three community colleges that serve a rural population (Virginia Community College System, 2022). This important initiative was created by the VCCS in an effort to help students that typically end their education at the completion of high school. The rural horseshoe (depicted in Figure 1) was designed to teach a student to believe there were choices beyond a K-12 education (Virginia Community College System, 2022).

Figure 1

Rural Horseshoe of Virginia (Virginia Community College System, 2022)



In March 2020, VCCS faculty were challenged to quickly transition to online learning and virtual clinical experiences. Rural colleges, already faced with internet bandwidth challenges, we now asked to teach online. With the pandemic shutdown, nursing graduates were

needed to fill the staffing shortages that were already present in the workforce (Heilferty, 2018; Nursing Journal, 2021). The teaching of bedside reasoning to nursing students presented with new challenges as health care facilities closed their doors to students. The Virginia Board of Nursing challenged VCCS faculty to determine if students were ready to graduate and make safe practice decisions with a limited number of clinical bedside hours. Again, faculty responded at the individual college level.

A need for blended learning opportunities was clear as a response to the COVID-19 pandemic for nurse educators (Koch et al., 2019). Tutors and innovative teaching methods were necessary to provide nursing students an opportunity to continue to learn in a complex way. Student engagement and interaction remained a void in need of fulfillment (Koch et al., 2019). Stress and mistrust of educational endeavors became commonplace among faculty and students alike in many areas of higher education (Moawad, 2020). Students needed to know that they would receive the same education that was once offered in a traditional face-to-face model.

Nursing faculty have begun a quest to develop quality teaching practices in the new normal of online education (Raoufi et al., 2020). Development of frameworks and step-by-step processes are underway as this study is being conducted. An eLearning model that incorporated the elements of legality, culture, infrastructure, and support was quickly developed with the desired outputs of clinical reasoning and efficiency (Raoufi et al., 2020). Medical education as a whole is under review as educators continue in their pursuit to deliver clinical reasoning skills among graduates (Yusoff et al., 2020). Within the VCCS, nurse educators should work together to create a blended learning environment that promotes strong clinical reasoning skills. More information is needed on how VCCS nurse educators perceive teaching in an online environment with limited bedside experience.

Nursing education in the VCCS continues to be under review as faculty move towards the identification of clinical teaching practices in a concept-based curriculum. Faculty should develop a model for teaching clinical reasoning at the patient bedside that is literature-based, combining anecdotal evidence with strong research. More information is needed on how faculty perceive bedside teaching practices for this important work to promote future endeavors. A shift from traditional face-to-face methods of teaching clinical reasoning calls for innovation and exploration of best practice.

Faculty must teach clinical reasoning skills to students to help them process the complex information necessary for the National Council Licensure Exam (NCLEX). The NCLEX exam is the final licensing exam that determines if the student is ready to practice as a safe bedside practitioner (National Council for State Boards of Nursing, 2022). Without the ability to think like a nurse and process complex care principles the nursing graduate will not be prepared to pass the exam, nor will they be able to care for patients at the bedside.

The problem examined in this study focused on teaching practices in the area of clinical reasoning. Nursing educators should be interested in this study as I explore faculty perceptions and uncover what may yield future recommendations for the teaching of safe clinical practices. In a pandemic era, I would be remiss to not include online educational strategies that will help to develop clinical reasoning skills. This study investigated the identified problem by exploring VCCS faculty perceptions that can further be utilized in the development of a common core teaching method for clinical practice.

Purpose Statement

The purpose of this phenomenological study was to explore the faculty experience of teaching clinical reasoning at the bedside to nursing students in level one or two of an associate

degree nursing program in the Virginia Community College System (VCCS) using a blended online and face-to-face environment that teach in a rural community college. Clinical reasoning is defined as the ability of the nursing student to make safe practice decisions on behalf of the patient in varying degrees of context from simple to complex processes. For this study, faculty experiences were explored using open-ended questions focused on educational practices in teaching clinical reasoning. Online delivery of clinical reasoning experiences was also explored with nurse educators who have encountered online teaching during the COVID-19 pandemic.

Research Questions

This study is guided by the following research questions:

1. What are the experiences of clinical nurse educators in the rural horseshoe of the Virginia Community College System (VCCS) who directly supervise nursing students at the patient bedside?
2. How do rural nurse educators describe safe judgment and clinical reasoning of students in their bedside clinical teaching practices?
3. How do the restrictions of the COVID-19 pandemic affect the nurse educator's ability to teach clinical reasoning?

Professional Significance

Clinical reasoning skills are developed throughout nursing education and require guidance from faculty at each level (Gonzalez, 2018). One Dean of Health Sciences in the community college system indicated that faculty have different methods in which they guide students and many of these methods are based only on anecdotal measures (C. Smith, personal communication, July 8, 2018). It has been my experience at peer group meetings that faculty focus on one method not generalizable to all VCCS schools. I chose to study the lived

experiences of expert nursing faculty in the Virginia Community College System (VCCS) who teach at the patient bedside and in a blended learning environment in rural community colleges.

This phenomenological study is of value to nursing educators because there currently is no collective agreement on a method for teaching clinical reasoning. Expert nurse faculty cannot agree on a process although the research provides theoretical frameworks for clinical teaching. Theorists from Tanner (2006), Lasater (2007), Pesut (1999), Kuiper (1999), and Herman (1999), have all attempted to prescribe strategies to teach nurse-like thinking. As the population ages and the nursing shortage increases in numbers, it is imperative to train students to enter the nursing workforce (Heilferty, 2018). Online application of teaching methods for clinical reasoning have emerged in the pandemic era of COVID-19. Educators will continue to seek optimal teaching methods for clinical reasoning while bedside experiences are limited.

Within the VCCS, nursing faculty teams meet regularly to discuss best teaching practices, concept-based curricula, and clinical reasoning. Nursing faculty attend conferences and sessions on how to teach clinical. Each year, peer groups host sessions on teaching students how to think and process complex information. However, most of these sessions are created with anecdotal information lacking researchable evidence. It is important that nursing educators use both anecdote and evidence based clinical models to teach clinical reasoning and nurse-like thinking. Understanding the lived experiences of expert nurse educators in the field is important to begin to address the need for a consistent approach to teaching and evaluating clinical reasoning. A combination of anecdotes and research should be used to create a common model that will help promote optimal outcomes in the teaching of bedside clinical reasoning.

This study addressed faculty perceptions concerning collective practices for teaching clinical reasoning at the bedside. It is my goal for this study to begin a conversation amongst

VCCS nursing faculty on teaching practices used to develop a common core clinical model while exploring how they perceive the role of the nurse educator in safe patient care. Faculty should be able to work together to create a common clinical model paired with the Concept- Based Curriculum (CBC) that can be used as a guideline for bedside teaching while remaining flexible in the application of the model at the individual college level. Therefore, this study has value to future scholars and researchers interested in clinical reasoning and bedside teaching practices.

Nursing faculty and health sciences administrators should be interested in these findings as they continue to search for a consensus on how to train strong nurses to make safe decisions at the patient bedside. Health care leaders should be interested in this study as new nurses are graduating and caring for patients in local health systems and communities of interest.

Clinical reasoning tools reach beyond learned skills and provide the student an opportunity to work through patient scenarios with a guided reflection for safe patient outcomes (Kautz et al., 2005). This study will be valuable to nurse educators and health care academic leaders in associate degree programs as the VCCS continues to move towards improving teaching practice through a common curriculum in the community where nurse educators live and work.

Overview of the Methodology

For this project, I completed a phenomenological study of nursing faculty perceptions of teaching practices in clinical reasoning at the patient bedside. I explored the perceptions of expert nurse faculty (Carlson et al., 1989). The study focused on nursing faculty members that teach within the rural horseshoe of Virginia in associate degree nursing programs in the Virginia Community College System, (Virginia Community College System, 2021).

This phenomenon was explored using open-ended interview questions focusing on educational practices in teaching clinical reasoning. I recruited a sample of full- and part-time clinical nurse educators in associate degree programs in the Virginia Community College System who have a rural student population. Currently there are 19 Associate degree nursing programs in the state of Virginia, with 14 located in the rural horseshoe (Virginia Community College System, 2021). I sent email correspondence with survey instrumentation to faculty in these 14 colleges to determine a purposive sample. In the VCCS there are 166 full- and part- time faculty in the rural horseshoe. A sample size of eight participants was selected to represent the population of nurse educators. This sample of volunteer participants who responded to email correspondence was selected for a sample size of approximately ten participants (Noon, 2018). Further explanation of the participant selection is in Chapters Three and Four.

I identified criteria for a purposive sample of the participants. The email correspondence was sent to 14 of the 19 nursing programs in the VCCS rural horseshoe. I originally planned to exclude Rappahannock Community College because I am a full-time nurse educator at this school with plans to advance in a leadership role. However, with a small participant pool, I asked for permission, and was granted by my committee, to include faculty at Rappahannock who were not directly in my line of supervision. Participants were asked to identify in the survey instrument their number of years of teaching experience, the makeup of their student body, and willingness to participate in two interview sessions. From this survey, I identified those in the final sample using a spreadsheet to filter the results and make the selection.

I completed two interview sessions per participant. The first interview was semi-structured, and the second interview was unstructured to allow for clarification of identified themes from the first interview. Interviews were completed in an online Zoom platform.

Following each interview session, I downloaded the Zoom transcription, checked for edits, and completed reflective journaling to begin to identify themes during the hermeneutic reduction process (Suddick et al., 2020). I used primary and secondary coding to extrapolate themes and identify the essence of the faculty perceptions. I used a spreadsheet function to manually code for primary and secondary themes from the interview sessions. A review of the Virginia Board of Nursing policy waiver was reviewed to verify the current climate of pandemic teaching and reflective journaling was used to strengthen the trustworthiness and accuracy of the interviews collected.

Delimitations

The study was delimited by the following characteristics:

- Participation in the study was limited to faculty within the Virginia Community College System (VCCS).
- Data were collected through interviews. Interviews were conducted with nursing faculty from five rural community colleges.

Definitions

The following key terms are defined:

- Associate degree nursing student: A student who is a first-time nursing student that chose an associate degree nursing program of study.
- Attrition: Student's inability to participate in nursing courses in the sequence prescribed by the concept-based curriculum because of course or clinical failure (dhp.virginia.gov, 2020).

- Bedside clinical teaching practices: A combination of theories used to teach nurse-like thinking to a student in the clinical arena (Henderson, 1982; Herman, 1999; Kuiper, 1999; Lasater, 2007; Tanner, 2006; Pesut, 1999; Wosinski et al., 2018).
- Blended learning environment: A combination of virtual and face-to-face methods of delivering concepts to a student population (Koch et al., 2019).
- Clinical reasoning: Students' ability to process complex information, make safe decisions, and apply the knowledge learned in their program of study to the patient's condition (Gonzalez, 2018).
- Concept-based curriculum: Statewide nursing curriculum adopted by the VCCS in 2016 (learn.vccs.edu, 2020).
- Expert faculty: Those with a minimum of five years of nursing teaching experience as outlined in Benners' Novice to Expert Model (Benner, 1984; Carlson et al., 1989)
- Patient bedside: Any clinical setting where students are participating in one-on-one patient care.
- Persistence: Students' ability to remain in the program of study without course or clinical failure.
- Preceptorship: The culminating clinical experience in a nursing student's associate degree program.

Chapter Summary

Clinical reasoning continues to be a topic in nursing education that is somewhat of a methodological enigma. This phenomenology should help educators within the VCCS to align teaching methods with sound clinical reasoning skills. Faculty play an important role in the development of the novice nurse. Nurses are needed to fill staffing shortages both present and

increasing in the nursing profession. Teaching students to reason and solve complex problems is a challenge in both face-to-face and virtual learning environments and theory-based methods for teaching clinical reasoning should be explored in modern times. The nurse educator who is inquisitive and desires to develop skills within another should be able to use this study to cultivate strong clinical practitioners. Research in bedside teaching practice is essential to guide the clinical growth of nursing students in the VCCS associate degree programs.

CHAPTER II

LITERATURE REVIEW

Chapter II provides my research findings on the theories and frameworks identified in the literature summarizing clinical reasoning education since the early 1950s. Teaching practices have been explored extensively and the literature keenly supports the use of various modalities in the teaching of clinical judgment at the bedside by expert nurse faculty. The primary models of outcome, present state (OPT) (1999), problem-based learning (2018), Tanner's model of effective noticing and reflection (2006), and the nursing process: assessment, diagnosis, outcome identification, implementation, and evaluation (ADOPIE) (1982) have been researched building a foundational argument that no one best method exists for clinical teaching. Nurse researchers have attempted to prescribe the best teaching strategies but still resolve that clinical reasoning education is fluid and ever evolving. As patient care changes so do the teaching methods of nursing scholars of critical reasoning and clinical judgment.

Method of the Literature Review

For my initial search of the literature, I used keywords and phrases in the Old Dominion library search engines of Medline, CINAHL, ProQuest, and Academic Search Complete. The keywords and phrases "success", "nursing student", "clinical reasoning", "retention and attrition in nursing school", "critical thinking at the bedside", "concept mapping", "nursing program success", "faculty perceptions in nursing education", "clinical reasoning and critical thinking", "eLearning in a pandemic", "first-generation college student", and "novice to expert" were searched yielding several works for review.

I have included peer-reviewed articles since 2000, published dissertations, textbooks, and conference presentations in my literature review. The literature I have found was organized in

Mendeley and the findings have been annotated. This aided in the development of an outline of the work to be included in the literature review by the extrapolation of key constructs. The following themes emerged and yielded the basis for each section of this literature review: Models and Frameworks, Measurement Tools and Methodology, Virtual Learning in Pandemic Times, and Methodological Issues. I have examined both argument and counterargument on each topic for consideration of potential biases, both personal and professional. I have included various international sources on the topic of pandemic virtual learning as most literature is written on or after the year 2020 in global journals.

The research strongly supports the idea that clinical reasoning and critical thinking are different in nursing education. Clinical reasoning models and frameworks have been designed by nursing experts to provide a foundation for bedside teaching and learning. Nursing faculty agree that a theoretical framework is important in the quest to educate strong nursing graduates. However, they do not agree on one best method. Faculty use one model or a combination of the four explored in this study.

Changes in the way nursing education is delivered have affected academia as the pandemic of COVID-19 forced campuses to close their doors and switch to virtual learning models. The most current changes in higher education were researched and yielded articles that reviewed the predicament from all angles. eLearning, face-to-face, hybrid, and blended modalities will be discussed as I would be remiss not to include this information in my study because of its relevance to higher education and henceforth nursing programs. The purpose of this study was to explore faculty perceptions on teaching clinical reasoning in rural associate degree nursing students in the Virginia Community College System (VCCS) regardless of pedagogical design.

Models and Frameworks

Clinical reasoning models and frameworks have been designed by nursing experts to provide a foundation for bedside teaching and learning. The models that are consistent in the literature are: the nursing process: assessment, diagnosis, outcome identification, implementation, and evaluation (ADOPIE), outcome present state model (OPT), problem-based learning (PBL), and Tanner's model of effective noticing and reflection (Henderson, 1982; Pesut & Herman, 1999; Tanner, 2006; Wosinski et al., 2018). Faculty use one model in teaching clinical judgment or a combination of the four theoretical frameworks mentioned in this review.

The Nursing Process ADOPIE

The nursing process has been used by scholars in nursing education since its emergence in the early 1950s (Henderson, 1982). The nursing process is designed for students to organize complex patient care information cyclically into the categories of assessment, diagnosis, outcome identification, implementation, and evaluation (ADOPIE). Nurse educators have agreed that the use of the nursing process is proven to allow students to organize the patient data that they collect, producing safe outcomes (Huckabay, 2009). The nursing process should be used when the nursing care is of a problem-solving nature (Henderson, 1982). Nursing faculty use the nursing process, including it in curricula as a key element, but still do not always agree that it can operate alone as a critical reasoning model.

Although the nursing process serves as a guide for the student nurse to analyze a complex set of information, eight other elements of critical thinking must be considered: purpose, point of view, assumptions, implications, consequences, data, inferences, and concepts (Huckabay, 2009). Key constructs defined as part of this complex process help the student to organize their thoughts and answer important questions considering all aspects of patient care (Huckabay,

2009). Henderson (1982) agrees that other elements of nursing should accompany the nursing process and argues that there are many more psychological factors necessary for the nurse to evaluate when prioritizing patient care. Intuition and instinct cannot be removed from this intricate decision-making process (Henderson, 1982).

Campbell (2008) further supports the idea that while the nursing process is used to formulate patient care plans, there is still no defined process for analyzing the varied information necessary to produce safe patient outcomes. In a qualitative study on clinical judgment in baccalaureate nurses (n = 12) junior and senior nursing students were asked to explore their educational experiences and to identify the reasons behind their clinical judgments at the patient bedside. The study identified five common themes among nursing students that were holistic in nature: focusing on connectedness, knowing, heroism, frustration, and anxiety (Campbell, 2008). The human emotions identified in this study further support the work of Henderson (1982) and many other nursing scholars that recognize no one construct as the best for processing clinical connections.

The nursing process does provide a foundation for clinical judgment and critical reasoning (Huckabay, 2009). However, there are many other factors vital for the production of safe care outcomes. Nursing scholars have further recognized the use of the nursing process and its relationship to other models and frameworks using ADOPIE as a basis for support. The review of the literature revealed the nursing process as part of the complexity involved in a nursing student's ability to clinically reason. Figure 2 further explores the intricacy involved in the nursing process model. Other models investigated in this study further support critical reasoning as a complex process that cannot merely be explained using one model or framework.

Figure 2

The Logic of Nursing Process: Critical Thinking Elements and Universal Standards (Huckabay, 2009)

What is the purpose of the Nursing process (NP)?	To provide a systematic approach for processing patient care information for handling actual or potential patient care problems.	Clarity, Significance, Feasibility, Consistency of purpose
What is the Key question?	What must the nurse do to accurately assess and diagnose actual and potential patient care problems, plan, and implement nursing interventions, evaluate and modify the nursing care based on evaluation?	Clarity, Significance of question, Answerability, Relevance
What data/information is needed to answer the main question?	Information about how to collect and assess objective and subjective data to make nursing diagnostics, pathophysiology anticipatory strategies, evaluation methods.	Clarity of evidence, relevance of information, Fairness, Accuracy, Adequacy, Consistency
What is the most basic concept in the question?	Relevant concepts related to each of the steps of the NP. Theories of nursing and pathophysiology.	Clarity, Relevance, Depth, Neutrality of concepts
What assumptions are being used in reasoning?	Patients are subject to actual or potential health care risks. Humans are predisposed to illnesses. The nurse has accurately implemented the NP.	Clarity, Justifiability, Consistency
What is the point of view with respect to the issue	1) Consideration of not only the specific nurse's point of view but also other relevant ones. 2) A systematic approach to resolving patient care problems is more productive than random approach.	Flexibility, Fairness, Clarity, Breadth
What are the most fundamental inference or conclusions?	1) Judgments are made re: consequences of interventions. 2) Judgments about patient's health seeking behaviors.	Clarity, Justifiability, Profundity, Consistency
What are the implications of the reasoning if NP is used correctly?	If the nurse accurately implements the NP, the patient will receive appropriate care and the nurse would have provided optimum care.	Significance, Realistic, Clarity, Precision, Completeness

Outcome Present State

The outcome present state (OPT) model as defined by Pesut and Herman (1999) uses a bedside concept map through a patient story that allows students to conceptually recognize the outcome or goals they are setting for their patient as they develop the pathways for care (Barlett et al., 2008). Figure 3 provides an example of a concept map in a clinical scenario using the OPT model. Students use this given scenario in the OPT model and work backwards to see how they could have prevented a decline or change in their patient. The research shows that students who can effectively plan and map outcomes can think critically through the process of patient care. Wuryanto et al. (2017) explored the use of the OPT model identifying how peer support and questioning are fostered in this complex process; they defined the importance of self-directed learning and peer collaboration in the OPT model.

An investigation into patient situations with peer collaboration, both in the classroom and at the bedside, helps learners to identify critical pathways for patient care. Theobold and Ramsbotham (2019) agreed that collaboration and peer coaching are important in the development of safe and effective care outcomes. The idea that clinical reasoning is a process that begins with an end goal is present in this work.

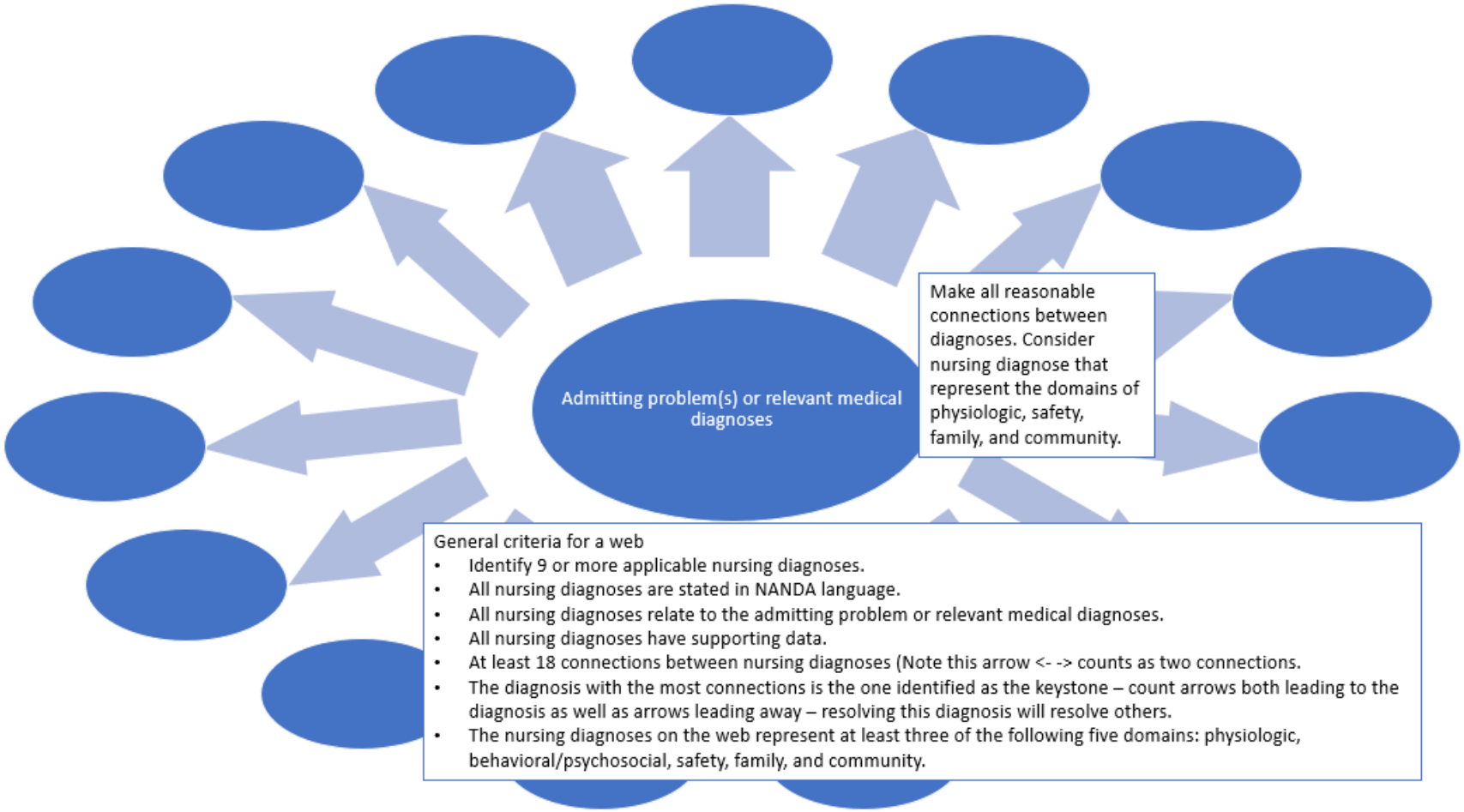
Inquiry-based learning supports the need for students to think like a nurse. To complete these difficult tasks students should guide their thinking in a series of questions that help identify the goal (Theobold & Ramsbotham, 2019). Learners should be encouraged to test out ideas in student groups identifying needs and gaps in patient care models (Theobold & Ramsbotham, 2019; Wuryanto et al., 2017).

Harmon and Thompson (2015) identified the use of the OPT model and its importance regarding collaboration in learning. In a quasi-experimental design of second-year nursing students (n = 17), case studies with data evaluation gave way to the premise that nursing students in collaboration can identify favorable patient outcomes (Harmon & Thompson, 2015). Collaboration in groups coupled with the use of Pesut and Herman's (1999) OPT model to enhance clinical reasoning showed how students can work together for best patient care. Each study in this framework indicated statistical significance for improvement in the nursing student's growth in knowledge of clinical judgment principles.

Every one of these studies focuses on the use of a story or case for students to analyze in an attempt to make sound practice decisions (Bartlett et al., 2008). Identification of story parameters and patient assessment helps the student to create a critical pathway for safe, effective care.

Figure 3

Outcome Present State Model (Pesut & Herman, 1998)



Problem-Based Learning

Problem-based learning focuses on a student's ability to apply learned principles to a given set of circumstances, developing a plan of action based upon the analysis of the situation (Wosinski et al., 2018). The practice of problem-based learning techniques by nurse educators is often used to teach clinical reasoning. Faculty can use this pedagogical design in collaboration with other teaching methods in the classroom, clinical setting, or simulation lab. A systematic review of the literature by Wosinski et al. (2018) focused on the faculty perspective and identified the need for educators to develop plans that foster success employing guided questioning.

Meriser et al. (2018) explained that problem-based learning provides an opportunity for educators to develop higher-level questioning that facilitates sound clinical decision making. They agree with Wosinski et al. (2018) that often faculty use lower-level questioning that does not provide an opportunity for students to think like a nurse. Problem-based learning allows students to apply knowledge and move beyond critical thinking (Meriser et al., 2018). Students should be challenged through the use of scaffolder questions that trial nurse-like thinking as they unfold a solution to a patient's condition. In problem-based learning, educators develop nursing student inquisition to support learning. Students should seek understanding, through inquiry to develop a plan of care (Meriser et al., 2018; Wosinski et al. 2018).

Tanner's Model of Clinical Judgment

Tanner's (2006) model of clinical judgment concentrates on the ability of a student to use authentic self-reflection in the learning process. The idea that students can recognize their own need to improve is important in this framework. Koharchik et al. (2015) identified the key components of this clinical model as the ability to notice, interpret, respond, and reflect on a

clinical scenario because the importance of students being able to notice a problem and respond appropriately will provide safe patient outcomes. Koharchik et al. (2015) also incorporated the use of specific questions in the post-conference of a student's clinical experience; an idea similar to the previously mentioned problem-based learning framework (Koharchik et al., 2015; Meriser et al., 2018; Wosinski et al., 2018).

Tanner's (2006) reflection on action principle allows students to identify areas of strength and weakness. In a mixed-method nonexperimental review on virtual patient simulation, students were challenged to use Tanner's model and the Lasater clinical judgment rubric (LCJR) to self-reflect on care provided (Gerog et al., 2019). The Lasater rubric prompts the student to reflect upon their actions, collecting cues that a student should effectively notice changing the trajectory of outcomes (see Table 1). Gonzalez (2018) agrees that the combination of the Lasater tool and Tanner's model provides nursing students the opportunity to reflect and identify areas in need of improvement.

Table 1

Aspects and Dimensions from the CJM and LCJR (Lasater, 2007)

Aspect of the CJM	LCJR Dimension
Effective Noticing	Focused observation, recognizing deviations from expected patterns, information seeking
Effective Interpreting	Prioritizing data, making sense of data
Effective Responding	Calm or confident manner, clear communication, well planned interventions, flexibility, being skillful
Effective Reflecting	Evaluation and self-analysis, commitment to improvement, transfer of learning.

Tanner's model should be used in a concept-based learning curriculum to provide students with a framework as they work through a series of patient problems (Gonzalez, 2018; Koharchik et al., 2015). Students should be challenged to notice cues, identify problems, and reach decisions about patient care. In a review of concept-based learning at the College of Southern Maryland, Gonzalez (2018) was able to use the Lasater tool and Tanner's clinical model to define weekly activities that support teaching and learning in a concept-based method. Gonzalez adapted learning activities to support the nurse-like thinking necessary for safe effective care.

Tanner's (2007) research supported reflection on action. This allows students to work through a series of activities that focus on safe decision making, not merely nursing skills. This model identifies student nurses' need to think beyond medication administration and hands-on tasking to the application of concepts that will promote sound clinical judgment.

Summary

Each model in this study contributes to the way nurses currently teach clinical reasoning. An exploration of the models and frameworks that shape clinical judgment is important to this study to help identify an emerging conceptual framework that combines the four discussed. The idea that outcomes are driven by a student's ability to reflect, notice, and act is part of each of these frameworks. The nursing instructors need to identify and ask questions to promote learning is an important aspect of all four models. A nursing instructor should use questions both in the classroom and at the patient's bedside. A combination of each of these four models when planning a clinical reasoning activity should help the nursing student to begin to make strong clinical connections.

Measurement Tools and Methodology

Clinical models and frameworks each have nuances that allow for differing evaluation techniques to define nursing student success. Each framework uses empirical research to develop an evaluation tool or grading rubric that allows for students to authentically self-reflect on their abilities to clinically reason. The Lasater (2007) clinical judgment rubric focuses on effective noticing, interpreting, responding, and reflection. Each framework mentioned in the Models and Frameworks section of the literature review has an evaluation of self in conjunction with chosen nursing interventions designed to promote safe patient care.

Nursing students use assessment tools to reflect upon and evaluate their decisions made at the patient bedside. Authentic self-reflection is a necessary component of the clinical evaluation process and without it, students may not be able to recognize when changes in patient condition occur. The need to react quickly to incite optimal outcomes may never be explored by the nursing student without effective evaluation. Rubrics, concept maps, and clinical assessments are all components of the evaluation process. Each of these evaluation tools provides measurements for nursing faculty to assess a student's growth in clinical reasoning skills.

Clinical Judgment Rubrics and Assessment Tools

Effective noticing, interpreting, responding, and reflection are all important parts of the LCJR designed with Tanner's model of clinical judgment as a guide for the teaching and learning of clinical reasoning (Lasater, 2007). Nursing faculty use this rubric to evaluate a student's ability to authentically self-reflect on the decisions they are making at the bedside (Lasater, 2007). The assessment rubric acts as a guide for both student reflection and teacher evaluation. Each of the domains in the rubric is important to develop in a nursing education program and is thus equally as important for faculty to be able to evaluate growth of beginning practitioners.

Questioning and case scenarios are an important part of a clinical judgment assessment (Carvalho et al., 2016). Students are asked to use cognitive cues, behavioral skills, and mental habits to effectively plan patient care and make safe practice decisions (Carvalho et al., 2016). Although faculty can encourage growth in these areas, rubrics help aid in the proper assessment of clinical progress (Lasater, 2007). Pre- and post-test models have been developed in the assessment of clinical judgment and often accompany the various frameworks for teaching and learning (Bartlett et al., 2008; Harmon & Thompson, 2015). Both qualitative and quantitative assessment tools have been established in an attempt to evaluate student learning.

As student nurses grow in their breadth and depth of understanding, they must evolve in the ability to effectively respond to a patient's deteriorating condition (Liaw et al., 2017). In a study of 30 second and third level nursing students, an assessment tool was developed in an attempt to score the student on his or her clinical progress (Liaw et al., 2017). The use of a questionnaire addressing components of clinical judgment allowed researchers to evaluate both the student and faculty ability to reflect on growth in these complex processes. The clinical reasoning evaluation simulation tool (CREST) in this study was found to be reliable and valid in efforts made to assess a student's clinical judgment abilities (Liaw et al., 2017).

There are many assessment modalities that faculty and researchers have utilized to measure clinical reasoning. As models emerge and practices change, so do assessment modes. A holistic view of assessment and an approach that meshes both qualitative and quantitative data is needed to effectively evaluate clinical reasoning skills.

Quantitative Assessment

Nursing student success rates continue to be under scrutiny as the national nursing shortage continues to climb (Heilferty, 2018). In the state of Virginia, it is estimated that for

every 1000 people there are only ten registered nurses in employ ("The U.S. Nursing shortage: A state-by-state breakdown", 2022). Faculty are challenged with being able to effectively evaluate clinical reasoning education and thusly have created tools that quantitatively measure success. The use of the CREST assessment tool, pre- and post-tests for the OPT model, and program analysis aimed at improving the clinical judgment of medical education students attempted to define the best assessment parameters for clinical judgment education (Guerrasio & Aagaard, 2014; Harmon & Thompson, 2015; Liaw et al., 2017). Each of these quantitative assessments is addressed in this literature review in an attempt to unearth best practice recommendations.

The CREST assessment tool was developed to help students and faculty evaluate the student's ability to rapidly respond to a deteriorating patient condition (Liaw et al., 2017). Students and faculty were asked to evaluate the learning on a ten-item questionnaire. The data were analyzed using Spearman's Rho showing a correlation significance at the $p = 0.01$ level in all categories of the assessment tool. The parameters encompassed the ideals of patient situation, collecting cues, processing information, identifying problems, establishing goals, taking action, evaluating outcomes, and reflecting on the process of new learning (Liaw et al., 2017). Not only did students show improvement in clinical reasoning but faculty agreed that this particular assessment tool was a valuable measurement that provided validity of feedback (Liaw et al., 2017).

The validity of feedback is important to student success. Students rely heavily on faculty feedback to be successful and grow in their confidence to make sound decisions (Herron et al., 2016). Through the use of the outcome present state (OPT) model, students were asked to effectively respond to a given scenario and work backward to develop safe interventions of care (Harmon & Thompson, 2015). A quasi-experimental research design was completed on the

sample (n = 17) nursing students in the second level of an undergraduate nursing program (Harmon & Thompson, 2015). In a study using an OPT model worksheet for evaluation, statistical significance supporting collaboration in learning was discovered (Harmon & Thompson, 2015). The OPT model worksheet under review did show an improvement in clinical judgments and the students' confidence in their abilities (Harmon & Thompson, 2015). This evaluation modality provided evidence not only of student success but also guidance for future teaching and learning activities for nursing educators.

Although assessment tools are often seen as valuable measurements of success, other elements in the evaluation process are necessary for faculty to gauge the truth in a student's abilities. Guerrasio and Aagaard (2014) completed a study on 30 medical students in a remediation program designed to measure the validity and reliability of clinical reasoning education. It was identified that medical education students rely heavily on deductive reasoning and testing of hypotheses to make safe decisions. However, many students fail to develop these reasoning skills and thus require remediation (Guerrasio & Aagaard, 2014).

A ten-step remediation process ensued and was analyzed using descriptive statistics yielding the demand for a remediation plan as part of the follow-up in teaching effective clinical reasoning skills. It was noted that more research was needed to validate the use of a program for remediation to assess clinical reasoning (Guerrasio & Aagaard, 2014). However, these measurements in conjunction with qualitative exploration are necessary elements of a strong foundation in clinical reasoning assessment and education.

Qualitative Assessment

Research on clinical evaluation tools is incomplete without an exploration of qualitative inquiry. In clinical education, students are asked to rate themselves using a rubric. However, they

are almost always asked to explore reasoning abilities and decision-making processes providing examples for each clinical objective on a rubric. Students and faculty rely heavily on the open communication techniques hallmark of nursing interaction and feedback for clinical guidance (Herron et al., 2016). Many researchers have explored the qualitative responses of students citing personal reasons for the development of strong clinical reasoning skills.

Conferencing is a tool used by most clinical educators to get on the spot feedback from nursing students as they move throughout their clinical day. A look at pre-, mid-, and post-conference techniques by Gonzalez (2018) revealed that students do well when faculty provide verbal feedback to help guide their thinking during the clinical experience. The mid-conference served as a pulse check or *seventh inning stretch* to allow students an opportunity for open communication and feedback forums during the clinical day (Gonzalez, 2018). This important technique worked well as students reported being able to process information and make decisions. Students do not always trust themselves and continuous feedback in the clinical arena should help them develop confidence in their decisions (Gonzalez, 2018; Herron et al., 2016).

Although students have to trust themselves, they also reported a need to trust faculty feedback (Herron et al., 2016). A study involving BSN students both prelicensure and postgraduate (n = 18) revealed student perceptions in the development of strong clinical reasoning skills (Herron et al., 2016). Students identified that while instructor knowledge was an important trait they appreciated in clinical faculty, they also needed faculty to be trustworthy and approachable (Herron et al., 2016). In a related study, students identified that the best faculty were strong leaders and able to encourage a combination of clinical competency and emotional intelligence when teaching important nurse-like thinking (Kaya et al., 2018). Students shared that

they felt valued when they were encouraged and corrected in a constructive and meaningful way (Herron et al., 2016).

Feedback was cited to be paramount to the student in the development of strong clinical reasoning skills. Students clearly outlined the importance of growth in clinical reasoning abilities and valued being able to reflect both in and on actions during patient care (Georg et al., 2019; Herron et al., 2016) Students, given the opportunity to reflect on the moment, provided examples of how they had grown in confidence in their reasoning abilities (Herron et al., 2016).

Faculty prompts or questions designed to assess the students qualitatively also allowed for students to reflect on how they holistically responded to a situation. Koharchik et al. (2015) described how a concept-based approach can grow the learner as they develop clinical reasoning skills. Using the prompts of the LCJR, the faculty developed a series of questions that allowed the student to self-reflect on each patient situation (Koharchik et al., 2015; Lasater, 2007). The students considered what they observed and the actions they would take in each case scenario while expanding their clinical reasoning skills (Koharchik et al., 2015).

Summary

Multiple studies revealed that students desired feedback and open communication as part of their learning evaluation and assessments. Although students can be graded on a rubric, more holistic assessment is necessary to promote the learning of bedside clinical reasoning skills. The nursing faculty and student relationship is an important element of clinical reasoning teaching. Students have to be able to meet clinical objectives, but also must be able to authentically self-reflect on how their behaviors affect their decisions and thus, patient care. Each assessment parameter is equally important, and one must work in tandem with the other to promote the development of strong clinical reasoning skills and safe patient outcomes.

Virtual Learning During a Pandemic

At the onset of the COVID-19 pandemic, educational institutions had to shift from traditional face-to-face teaching measures to an online learning environment. Educators had to consider new and innovative ways to teach important skills, including, but not limited, to hands-on and didactic components of a course. Nursing professors worldwide were forced to capitalize on online and virtual learning modalities to lead students to graduation and completion.

Online learning contributes to solving some of the issues that institutions face during a pandemic shut down. Budget and costs are huge factors that must be addressed as enrollment in all programs is limited. Online platforms may cut down on rising fiscal concerns. However, while there are benefits to online learning, there are also some negative effects. Students may feel disconnected, and faculty may struggle with taking traditional assessments and activities and turning them into assignments appropriate for the online classroom (Chang, 2020).

As the pandemic continues into the academic year of 2021/22, educators will need to find ways to continually discover new knowledge and assessment therein. The flexibility of the online environment supports the idea that learning can happen anywhere and should continue in these unchartered times. The teaching of clinical judgment and critical reasoning will continue to be a challenge as educators work to teach these important skills across a computer screen (Raoufi et al., 2020).

Virtual Learning: eLearning in Medical Education

Nursing students are not only challenged to rapidly make decisions based on patient condition but are now forced into an e-learning environment when they once had face-to-face instruction guiding these life-altering decisions (Liaw et al., 2017; Raoufi et al., 2020). Many nursing schools at the time of this dissertation and literature review are incorporating e-learning

models using literature review of best practice, focused interviews, and expert review (Raoufi et al., 2020). In Iran, the educational sector was challenged as early as 2001 to incorporate e-learning into their nursing education programs (Raoufi et al., 2020). Most of the literature in the pandemic era of COVID-19 is global and not specific to nursing. However, I would be remiss to not include this research as it is relevant to nursing education.

Learning Environment

Debates over the best delivery system for online education are timeless but have become increasingly important with the pandemic. In a study at Duquesne University, researchers used an information literacy course to analyze the differences between online and face-to-face offerings (Rapchack, 2019). Findings in this study revealed that students struggled with connections and motivation in the online environment often prevalent in the face-to-face offerings (Rapchack, 2019). Likewise, Thi Thai et al. (2019) were able to compare learning environments with a sample of undergraduate students (n = 106) and identified the need for a blended learning environment to promote the best learning outcomes.

While optimal learning environments for education as a whole continues to be under review, students recognize that the flexibility of online programs is positive (Yusoff et al., 2020). Conversely, in a medication education program in Malaysia, the rapid change from face-to-face to virtual learning was found insufficient and educators were challenged with teaching the same content in a new environment (Yusoff et al., 2020). As faculty seek best practice in virtual learning it imperative that they consider a combination of modalities and milieu (Thi Thai et al., 2019; Yusoff et al. 2020).

Nursing Student Challenges

Raoufi et al. (2020) outlined steps necessary for ensuring online success and the promotion of all features of the online learning modality to encourage the end goal of strong clinical reasoning. A qualitative study of 19 undergraduate nursing students revealed student preference for face-to-face instruction. However, in a world where online learning is becoming more of the new normal, it is important for instructors to analyze the findings and themes in the literature to improve coursework and thus student learning outcomes (Moawad, 2020; Raoufi et al., 2020).

In a descriptive qualitative study, Raoufi et al. (2020) explored how students perceived the online components of a blended curriculum, as well as the preferences students have for face-to-face teaching. Tutors were an integral part of the nursing curricula and their delivery in Australian nursing programs. In this exploration, researchers identified that tutors were still a significant reason why students continued in the program and were motivated to learn. It was also noted that students were motivated by a reward for completing the pre-work necessary in the flipped classroom approach (Raoufi et al., 2020). Students in these studies did find value in the flipped classroom and blended online environment citing flexibility and support and mentioned trust in the educational environment as a must for success (Moawad, 2020; Raoufi et al., 2020).

Many factors affect the way students learn and can process information in this time of global crisis. Overall, this literature review has yielded the underlying themes of common educational stressors: exams, assignments, lecture time, home settings, internet, and uncertainty during the pandemic (Moawad, 2020). Female students proved to have an increasingly significant unease concerning the online learning environment during the pandemic (Moawad,

2020). However, regardless of race, gender, or creed students and faculty alike are experiencing challenges as they seek innovation and best practice for distance learning.

Summary

Nursing students are no different than other learners in this instance as they also are having to do more with less, learning to stretch their thinking to keep patients safe in bedside practice (Yusoff et al., 2020). The common curricular models of flipped classrooms, self-reflection, and concept-based learning are now challenged even more as we continue in the new normal of nursing education. It is now more important than ever that nursing faculty perceptions are heard, as educators continue to work towards producing nursing graduates that can think at the bedside and prevent patients from succumbing to deteriorating conditions (Liaw et al., 2019).

Methodological Issues

VCCS nursing programs are experiencing challenge and change at the writing of this study. The move from a medical model to a concept-based curriculum and limited clinical experiences in pandemic times may influence the findings. The exploration of the challenges will help shape the questions that are developed to explore the faculty perceptions being studied.

Concept-Based Learning and Clinical Reasoning

In 2016, the Virginia Community College System (VCCS) faculty collectively decided to move to a concept-based curriculum (CBC) model for best teaching practice in nursing. For many years, faculty taught the traditional medical model where nursing students were required to learn medical diagnoses and apply nursing diagnoses as defined by NANDA International (nanda.org). Students were asked to think like a nurse but were still given medical terminology

to recall that was meant for ordering physicians. There always seemed to be a disconnect and pathways for nurse-like thinking were increasingly more difficult to navigate.

The CBC, introduced by Jean Giddens to the VCCS, was a way for students and faculty to explore nurse-like thinking that made sense to those practicing nurses at the patient bedside. Traditional terminology of *ineffective airway clearance* and *as evidenced by* was replaced with the broad concept of *oxygenation* (nanda.org; vccs.edu). The faculty began the process of introducing the pathophysiology involved in oxygenation allowing students to apply knowledge to the care of any patient with any medical diagnosis affecting oxygen stores. Clinical reasoning became more about gathering and analyzing data to develop safe patient outcomes and less about the disease process (Carvhalo et al., 2016).

According to Gonzalez (2018) the development of strong clinical reasoning skills is directly related to the student nurse's ability to apply information to a given patient scenario and make decisions based upon what they understand about a particular concept. The models mentioned in this literature review are currently in use by nurse educators that teach in a concept-based curriculum. Faculty look for ways to draw the students to a conclusion by inference and insight (Alfayoumi, 2019).

In a quasi-experimental study, Alfayoumi (2019) sought to explain the relationship between concept mapping and the use of concept-based curricula. In a sample of 40 nursing students, pre- and post-test data were analyzed to identify student perception of learning in a concept-based model. Overall, students did report feeling more confident in their decisions, seeing marked differences in their abilities to make safe practice decisions (Alfayoumi, 2019). Generally, nursing faculty within the VCCS have begun to see a change in the student's ability to

reason. However, at the time of this review, some VCCS faculty are still in the implementation phase of this new curricular model.

Clinical Assignments and Preceptorships

At the time of this study, faculty in the VCCS continue to seek out opportunities for students to have a rich clinical experience where they can practice clinical judgment skills. With the onset of the COVID-19 pandemic, nursing students in some of the VCCS schools are without clinical experiences while others have seen a drastic decrease in the number of experiences that schools can provide. Preceptorships are limited and the invitation into maternal-child, psychiatric, and long-term care experiences is null. Faculty are consistently seeking virtual learning opportunities to provide the experience in specialty areas. Many health systems in larger urban areas are denying preceptorship experiences, believed to be the final culminating experience of the clinical judgment education (Kim, 2006).

Although students agree that the preceptorship experience is an important element of their clinical education, they also concur that being able to practice clinical reasoning in various areas is important (Herron et al., 2016). Students report that with proper faculty guidance, they can develop confidence and connect the concepts necessary to effectively care for their patients (Herron et al., 2016). Faculty face challenges with not only clinical placements but also with ensuring the environment is best for student learning (van Wyngaarden et al., 2019).

Educators should be concerned with not only the environment but also with how to best draw the student to a conclusion that will yield the strongest clinical connections (Herron et al., 2016; van Wyngaarden et al., 2019). Higher-level questioning is important to elicit nurse-like thinking and the use of multimodal clinical experiences is a must (Hege et al., 2018; van Wyngaarden et al., 2019).

Virtual experiences continue to be explored as faculty are limited in clinical placement and encounters (Hege et al., 2018). At the time of this study, faculty in the VCCS are just beginning to introduce the use of virtual platforms and will continue to seek new knowledge in pedagogy and course delivery. More research is needed on the use of virtual learning platforms to teach strong clinical reasoning skills. As the COVID-19 pandemic continues to surge, it will be imperative for faculty to identify new and innovative ways to teach critical reasoning at the patient bedside.

Faculty Perceptions and Agreed upon Frameworks

While faculty continue to grapple with the best method to teach clinical reasoning, many ideas and models are under examination. In this literature review, I have mentioned four main theories that are in use collectively by faculty teaching nursing in the VCCS. The use of Tanner (2006) and Lasater's (2007) clinical judgment rubric, the OPT model of Pesut and Herman (1999), problem-based learning (Wosinski et al., 2018), and the nursing process ADOPIE (Henderson, 1982) are in use nationwide. A combination of models is often what most faculty perceive as strong teaching practices. However, it is still clear that VCCS faculty cannot agree on any one model.

The purpose of this study is to explore the faculty perception of clinical judgment teaching practices at the patient bedside in VCCS nursing programs with at least a fifty percent rural student population. With this important work, I hope to begin a conversation about the development of a cohesive structure for the teaching of clinical reasoning in the VCCS associate degree nursing programs. The frameworks mentioned above give faculty a guide to develop a clinical teaching strategy, but each work explored in this literature review has that suggested future research is necessary to decipher core strategies for teaching clinical reasoning.

Summary

Clinical teaching and learning will remain under evaluation as the VCCS explores the new concept-based curriculum and COVID-19 restrictions. The effect on the nursing graduate knowledge because of a lack of clinical experiences and limited preceptorships will continue to be assessed as this phenomenon is explored. Faculty continue to cite literature-based methods and anecdotal measures for the teaching of clinical judgment in peer groups and conference proceedings. However, as previously discussed in this chapter, there are multiple frameworks used that point to success stories across the VCCS nursing programs. One of the main methodological issues addressed in this literature review is access to opportunities for nursing faculty to teach clinical reasoning in the current pandemic conditions. A cohesive structure is needed to help students learn to identify deteriorating patient conditions and guide them in the development of safe patient outcomes making resilient future graduates.

Chapter Summary

Nursing faculty continue in the quest to find a theoretical framework to help them lead students to a strong foundation necessary for safe, effective patient care in the clinical setting. As the nursing faculty in the VCCS work together to make a change to concept-based thinking they must complete a deep analysis of the four main frameworks mentioned in this literature review to prescribe teaching practices. The nursing process (Henderson, 1982), outcome present state (Pesut & Herman, 1999), problem-based learning (Wosinski, 2018), and Tanner's (2007) model of clinical judgment should be used to begin a conversation among faculty members on how to bring graduates to nurse-like thinking. Inquiry, peer collaboration, and a questioning attitude are all hallmarks of these frameworks and should be further explored in the interview sessions of this study.

Current reflections on teaching and learning are essential to exploring the phenomenon of faculty perception in teaching bedside clinical reasoning. To identify the essence of what faculty, perceive as strong clinical reasoning teaching, it was imperative to develop questions in the interview sessions grounded in the literature. It was the aim of this study to identify those things that faculty believe to be crucial in the development of a strong nursing graduate that can respond to a deteriorating patient condition. These perceptions should lead to the discovery of how nurse educators in the VCCS practice the teaching of bedside reasoning and will hopefully guide future research and the creation of a common conceptual framework.

There is a gap in current practice as nursing faculty cannot agree on teaching methods. There is a consistent reflection in the literature reviewed that no one best method exists. As I seek to identify the essence of the phenomenon, I hope to understand what the VCCS faculty identify as key constructs for the rural associate degree nursing student to be prepared for graduation and work in their first nursing job. Students gaining a strong understanding of how to make safe decisions will continue to advance as COVID-19 changes the learning modalities and environments for the teaching of clinical reasoning.

The gap identified in the literature is a general mismatch of methods for clinical teaching. As nursing faculty continue to work to create strong thinkers, they also may shift from one modality to another and one learning environment to another. This study will be an imperative first step in the development of a conceptual framework for teaching clinical reasoning in nursing education at the VCCS. It is my hope that this research will begin a conversation concerning a cohesive clinical teaching model.

Faculty can use this important work to develop a framework for teaching clinical reasoning in the VCCS. As educators are working to make practical nursing (PN) and associate

degree nursing (ADN) a comprehensive concept-based curriculum, this research would guide the creation of strong clinical nurse graduates. This study provides an opportunity to create a comprehensive and cohesive process to teach clinical reasoning in the VCCS nursing programs soon.

Clinical teaching has shifted to a blended format. Faculty are having to shift to an online focus because of the pandemic and limited clinical sites. New challenges have emerged, and the teaching of bedside clinical judgment skills will require innovative methods to meet the demands of the nursing profession. Finding the essence in how faculty perceive clinical teaching practices will be valuable as nurses seek to advance the knowledge of graduates in the VCCS addressing the care of an aging population in the United States.

CHAPTER III

METHODOLOGY

For this study, I completed a phenomenological examination of nursing faculty perceptions of teaching practices in clinical reasoning at the patient bedside. I explored the perceptions of nursing faculty within the VCCS rural horseshoe schools. I recruited full- and part-time clinical nurse educators in the Virginia Community College System nursing schools as participants in this study. Faculty experiences were explored in nursing programs with a rural student population in the Virginia Community College System (VCCS) schools that are located in the rural horseshoe of Virginia.

This study explored the central phenomenon by using open-ended questions focused on educational practices in teaching clinical reasoning. A purposive sample of participants that responded to the open call was selected for a sample size of approximately 10 participants. According to Noon (2018), a qualitative sample size is dependent upon the phenomenon being explored. Each sample should be representative of the phenomenon being studied (Noon, 2018). Within the VCCS there are currently 166 nurse educators in 19 schools of nursing, with 14 of the schools located in the rural horseshoe (Virginia Community College, 2021).

Each participant was asked to complete a survey that defined the student body of whom they serve. I used this survey to identify the nursing student body makeup. With the use of a survey (see Appendix A), rural colleges were identified, and faculty interviewees from these schools were chosen. The survey was sent to VCCS nursing faculty teaching within the rural horseshoe (Virginia Community College, 2021).

Each selected participant was asked to participate in a two-part interview series between October and December of 2021. Interviews were completed in an online Zoom platform. I am a current faculty member at Rappahannock Community College, with aspirations to move into a leadership role. I did not plan to use faculty at my institution in an attempt to avoid power dynamics. However, the participant pool was low and with permission I used three faculty who were not in my direct line of supervision.

I used two faculty colleagues, registered nurses with clinical teaching experience. One who is also a doctoral candidate in nursing education, and one with a Master's Degree in nursing education, participated in a pilot test of the survey instrumentation and interview protocol. I also used my Dean, who holds a Ph.D. in nursing education, to vet my interview protocol. The pilot test with peer reviewers/faculty colleagues was used to evaluate credibility, confirmability, and trustworthiness. I used primary and secondary coding to extrapolate themes. More discussion on the method of this research is explained below.

Research Questions

This study of the central phenomenon will be guided by the following research questions:

1. What are the experiences of clinical nurse educators in the rural horseshoe of the Virginia Community College System (VCCS) who directly supervise nursing students at the patient bedside?
2. How do rural nurse educators describe safe judgment and clinical reasoning of students in their bedside clinical teaching practices?
3. How do the restrictions of the COVID-19 pandemic affect the nurse educator's ability to teach clinical reasoning?

Role of the Researcher and Theory

I identify as a social constructivist who believes that multiple realities exist in the world. People are free to experience their reality and are impacted by their life world. For this study, I used phenomenology grounded in Heidegger (1927/2011) with Vagle's (2018) theoretical framework for reflexive thought and the Suddick et al (2020) framework for hermeneutic reduction (see Figure 4).

Heidegger promoted a strong belief in the lifeworld where an individual must dwell within their experiences before discovery of their thoughts and perceptions (Heidegger, 1927/2011; Pool, 2018). Heidegger believed that the researcher cannot bracket out their personal biases and thus dwell time is necessary before making a reduction, to avoid potential predispositions (Heidegger, 1927/2011; Pool, 2018). I have adopted this belief through investigation into the differences in phenomenological research design. Education on both descriptive and hermeneutic phenomenology has produced a strong conviction that the researcher cannot bracket out personal experiences and remove oneself from the data. Being a nurse educator in rural Virginia does elicit a fear of being unable to bracket out feelings and opinions in the reporting of the data. I do, however, acknowledge that while I will have opinions, I had to bridle my passions in the interview and reduction processes to avoid leading the interview participants and skewing the data, with careful consideration of context (Dahlberg & Dahlberg, 2019).

Vagle (2018) reports hermeneutic phenomenology as intertwined with perception and ongoing interpretation of intentional relations that tie the researcher to the work. He further explains how the researcher must be intentional in their consideration of time and space,

understanding that they are embedded in position for a reason (Vagle, 2018). As a doctoral student I, too, have had the opportunity to consider both types of phenomenological discovery.

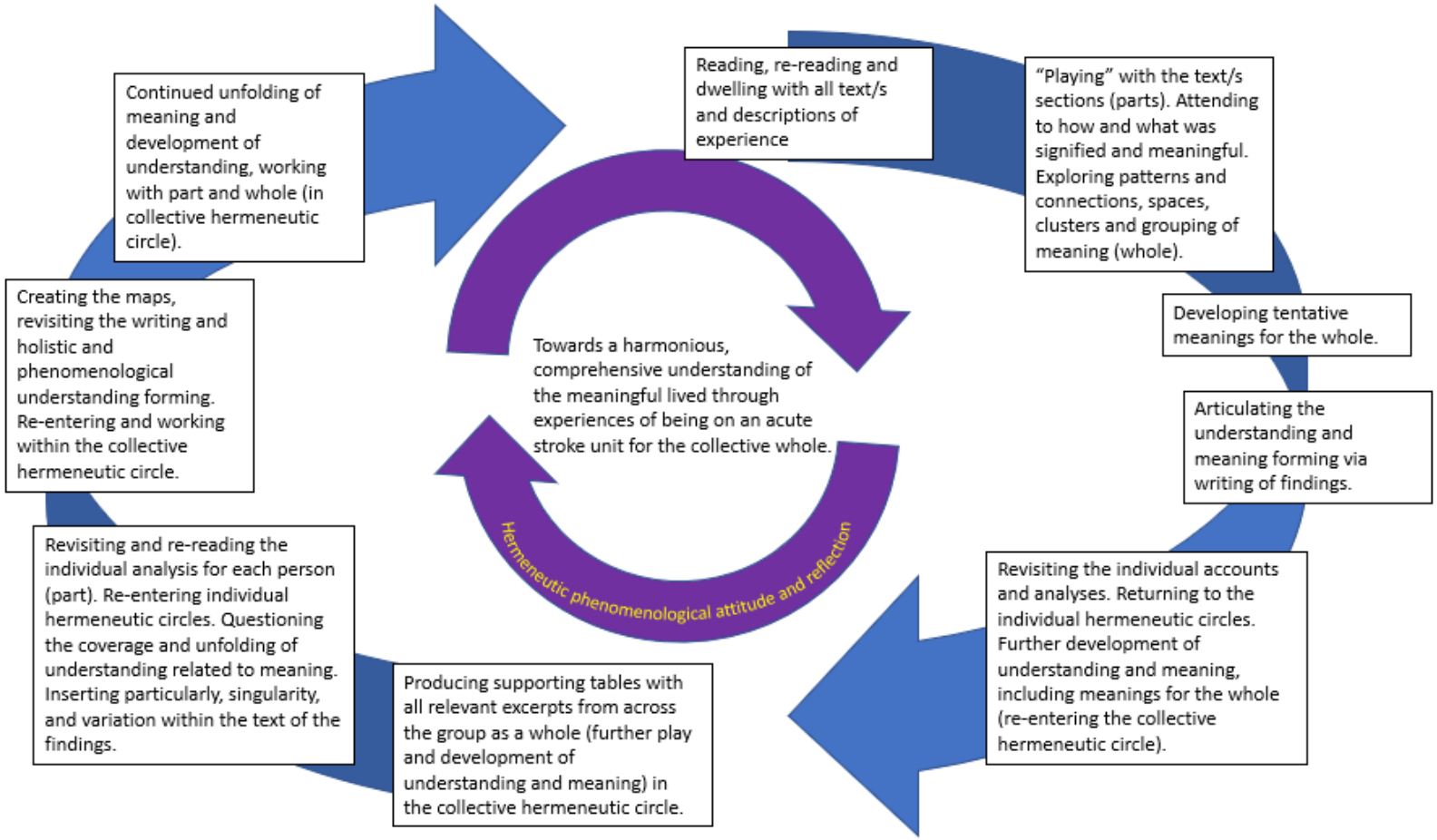
Hermeneutic phenomenology allows the researcher to consider their positionality and thusly their place within the phenomenon. The use of dwell time and reflective journaling in the hermeneutic reduction process allows the researcher to accurately reflect on their positionality (Suddick et al., 2020). In using reflective journaling and dwell time the researcher should be able to identify his or her own assumptions and realities recognizing an inability to detach from the process (Vagle et al., 2009).

As a nurse educator who serves rural populations, I have my own personal opinions on nursing teaching practices in the clinical setting. Heideggerian philosophy notes that the researcher's preconceived ideas can lead to discovery and subjectivity in the report of the findings (Dahlberg & Dahlberg, 2020). However, although a researcher may not be able to bracket out personal feelings, it will be important to both recognize and bridle passions identifying one's place in the phenomenon when reporting findings (Dahlberg & Dahlberg, 2020). Bridling is used as a metaphor in Dahlberg and Dahlberg's research to describe the way one can use their personal assumptions to explore units of meaning within the central phenomenon recognizing their position in time and space (Vagle et al., 2009). Through the practice of bridling, the researcher should remain open and consider their feelings about the phenomenon through personal life experiences and perceptions (Dahlberg & Dahlberg, 2020).

As a nursing faculty, I used journaling and dwell time based on the Suddick's model (see Figure 4) for reflection and data analysis while remaining open with regard to my positionality (Dahlberg & Dahlberg, 2020; Suddick et al., 2020; Vagle, 2018). In hermeneutic phenomenological research, often the researcher interprets all things as meaning. It was important to consider these principles as I reduce the findings to meaning units and themes (Suddick et al, 2020).

Figure 4

The Ongoing Dialogue and Work Toward a Unified, Hermeneutic, and Phenomenological Understanding (Suddick et al., 2020)



Sample Selection and Instrumentation

For this project, I studied nursing faculty in the VCCS rural horseshoe schools that teach in associate degree nursing programs, with one participant who teaches in both the practical nursing and associate degree programs in her rural school. Email correspondence containing a survey link for selection purposes was sent to 14 of the 19 nursing programs in the rural horseshoe of Virginia (see Appendices A & B). I did include three faculty participants from Rappahannock Community College who were not in my direct line of supervision. This also involved bridling of my passions as described prior (Dahlberg & Dahlberg, 2020).

I identified criteria for a purposive sample of interview participants and included these qualifying factors on the initial survey instrumentation (see Appendix A). Participants were asked to identify their number of years teaching experience, the service region of their college with the makeup of their student population, and if they were willing to participate in the research process to completion. Because of the composition of most VCCS colleges, students are from varied areas: rural, suburban, or urban. The potential participants were asked about the student population of whom they serve to ensure that schools with rural students could be extrapolated for further investigation. To further limit the sample, those schools within the rural horseshoe of Virginia were asked to complete the survey.

I further narrowed the purposive sample by analyzing the survey data for the aforementioned qualifying factors (see Appendix A). When the surveys were returned, I used a spreadsheet function to sort the sample of respondents. The goal of the survey was to procure those with a rural student body who were willing to participate in the two-part interview process.

Data Collection

I used a two-part interview process with open-ended questions in an initial semi-structured interview with a second unstructured interview for follow up (Suddick et al., 2020). An interview protocol was developed based upon the research questions and framework of Suddick et al. (2020) (see Figure 4; Appendices C & D). Prior to beginning the interview process, I obtained written consent (see Appendix E). In hermeneutics it is essential for the researcher to consider a follow up interview for clarification of content from the first interview (Suddick et al., 2020). Careful analysis of the first responses yielded emerging themes that were further explored in the second interview (Suddick et al., 2020).

I offered a ten-dollar Starbucks gift card for participation in this study (Leedy & Ormrod, 2019). I retained all eight participants through this process. Ongoing communication was essential to elicit strong responses and continued participation.

The development of the interview protocol is the beginning of the data collection process. The interview protocol was vetted by a content expert (Hays & Singh, 2012) who has a PhD in nursing education with over 30 years of clinical teaching experience. A fellow doctoral student, and masters prepared nurse educator, both employed as nursing professors at the institution in which the researcher is employed completed the pilot test of the interview protocol. The pilot test of the interview protocol provided the researcher with confirmability and trustworthiness of the data collection tools. The survey was vetted by this content expert to ensure accuracy and completeness (Hays & Singh, 2012).

Following approval for the use of human subjects, I sent out email correspondence with an embedded survey that had qualifying questions to procure a purposive sample of no more than ten participants as mentioned above (see Appendices A & B). Written consents were exchanged

through a secure email server and password protected (see Appendix E). I used Zoom to conduct interviews because of current restrictions placed on community colleges and the need to socially distance in COVID-19 pandemic conditions. At the beginning of the recorded Zoom interview sessions, I obtained verbal consent and confirmation of the written consent. The interview protocol was used in sessions of approximately sixty-minutes. I prepared the interview questions with a series of possible sub-questions (Leedy & Ormrod, 2019; Suddick et al., 2020) to create an interview protocol for both the first and second interviews, with the second interview being unstructured for follow-up (see Appendices C & D). As the COVID-19 pandemic continued to surge, it was important to remind participants that this study includes the last two years, but also the three years prior to the pandemic. Participants were allowed the opportunity to express COVID-19 teaching practices but were also asked to recall the three years prior (see Appendices C & D).

Following each Zoom session, I used transcription, collected field notes, and journaled my potential predispositions and personal experiences (Pool, 2018; Vagle, 2018) The hermeneutic spiral, as identified in Suddick et al. (2020), was used to allow me to process the information in an ongoing cyclical fashion. Part of the analysis in hermeneutics calls for the researcher to “read and re-read texts” while “exploring patterns and connections of meaning” (Suddick et al., 2020, p. 10).

Data collected during the interviews was protected using an internet password. The internet cloud was accessible only through my password-protected Old Dominion University account and all transcriptions, field notes, and reflective journals was stored on a password-protected computer located in a locked office.

Dwell time with the content of the interview sessions is meant to allow the researcher to further explore meanings and groupings of information that can further develop into themes embedded in the data (Suddick et al., 2020). The dwell time with personal experiences and the interview data through reflective journaling allows the researcher the opportunity to analyze positionality and aids in the inquiry phase of discovery (Heidegger, 1927/2011; Pool, 2018; Suddick et al., 2020; Vagle, 2018). Following dwell time, a second interview was used for trustworthiness in the data. This allowed participants to expand on their original interview, offer clarification, and provided the researcher an opportunity to ask follow-up questions (Suddick et al., 2020). After the data were collected, the process of hermeneutic reduction and ongoing consideration of findings commenced (Suddick et al., 2020).

Data Analysis

Following data saturation from both interview sessions, I organized themes and units of meaning using a spreadsheet function. I used reflective journaling to promote dwell time considering how the underlying themes connected (Suddick et al., 2020). Immediately following the interview session, I downloaded the recorded transcript and edited for typographical and content errors. I waited twenty-four hours to allow for thought and re-read the transcripts and field notes collected (Suddick et al., 2020). As I began to explore units of meaning, I revisited my journals and looked for themes or like phrases that are embedded in the data. As indicated in the hermeneutic spiral, for reduction I used reflection to continue to unfold meaning (Suddick et al., 2020)

Hermeneutic reduction allows the researcher to examine the preconceived notions that may exist that could greatly reduce the ability to be objective (Heidegger, 1927/2011; Pool, 2018). Identification of predispositions is important, however, as is the premise of hermeneutics,

I still believe that *all is interpretation* and requires consideration as I reduced my findings to themes. Once I extrapolated the primary themes, I reduced them to secondary themes, again allowing for dwell time and consideration before reporting on findings. Figure 4 provides a guide for dwell time and hermeneutic reduction to achieve understanding (Suddick et al., 2020) I used this tool for processing the information retrieved in data collection and to identify fusions of horizons and units of meaning (Heidegger, 1927/2011).

Inquiry

Turner and Crane (2016) advise that researchers should become intimate with the data and form their questions with a direct reflection on a person's experience. This thought mirrors the ideas supported by Heidegger (1927/2011) and Vagle (2018) concerning dwell time in one's lifeworld. Dahlberg and Dahlberg (2019) agree that no one method of phenomenological reduction can be chosen in analysis and inquiry of the central phenomenon. As a researcher, using hermeneutic reduction each of these thoughts was considered. I spent time with the data, considering multiple angles and the realities in which the data exist.

Through the use of the ongoing dialogue of Suddick et al. (2020), I revisited the interview data collected to *unfold the meanings* noted in the responses. During the interviews, participants were allowed to express themselves without the researcher using leading questions that sway participant response (Hays & Singh, 2012). Participants were subjective in their thoughts and the findings were explored based upon understanding that people are positioned in time and space for a reason (Vagle, 2018). All things are interpretation when seeking a *harmonious and comprehensive understanding* of the central phenomenon (Suddick et al., 2020).

Validation of Trustworthiness and Integrity

One of the most important considerations when using a qualitative approach is not to solve a problem, but to explore a phenomenon (Leedy & Ormond, 2019; Pool, 2018). Perception is reality and as a social constructivist, I strongly believe in one's ability to create a reality founded on assumptions and interpretations of their position in this world (Vagle, 2018). As I explored the phenomenon in the data and its meaning for the common world, I addressed the credibility, confirmability, and trustworthiness of my research.

Credibility and trustworthiness were addressed with the use of a content expert for a critique of the survey instrumentation and interview protocol (Hays & Singh, 2012). For transferability, I ensured my methods could be used by other faculty researchers in the future. In the review of the data, I was honest in my examination and forthright concerning my limitations to ensure trustworthiness.

Through reflective journaling, I examined my own opinions concerning clinical reasoning teaching practices and identified those opinions to ensure I did not bias the report of my findings (Suddick et al., 2020). Confirmability was verified through the use of video recording and Zoom transcription. I aim to allow for these data to help VCCS nursing scholars create a common conceptual framework to outline best clinical teaching practices that produce safe patient outcomes. This should allow for VCCS nursing faculty to provide the health care community with strong nursing graduates to care for an aging population in Virginia.

Limitations

This study was not without some limitations. Each college within the VCCS serves a different region and demographic of its constituents. Nursing faculty in the VCCS collectively teach a concept-based model and strive to employ common themes in the classroom, but

pedagogical design is often up to the individual faculty member. This study was not only limited to the VCCS faculty teaching preferences but to a sample of volunteer participants within the VCCS.

Interview sessions took place from October to December 2021. It was difficult to procure participants during this time. Fall is a very busy time of year for nurse educators as new cohorts of students begin and curriculum planning commences. As expected, time missed during pandemic instruction created busyness as faculty began to return to campus and experience changes in instructional methods. More information on the challenges faced in procuring participants is discussed in Chapter Five.

The use of Zoom for interview sessions limited me in identification of nonverbal cues and environmental assumptions. As a current VCCS nursing faculty it was important for me to acknowledge that I am a professional with my own experiences in education. I acknowledged that this is part of the process in hermeneutic reduction. I recognized that *all is interpretation* (Poole, 2018). I also assumed that the participants were knowledgeable-concerning clinical reasoning practices and that they were honest in their reply. Interviews cannot produce the full context of what a participant believes in mind and spirit and certain topics or thoughts may have been omitted. It was important to consider these limitations as I explored the findings.

Chapter Summary

Investigations into the perceptions of common teaching practices for clinical reasoning are necessary as scholars attempt to prescribe methods to help students achieve safe clinical outcomes. The VCCS is charged with producing strong nursing graduates that can make decisions to prevent patients from deteriorating while promoting overall wellness (Liaw et al.,

2017). Nursing faculty have attempted to develop models and frameworks that help teach clinical judgment. However, many models are not grounded in empirical evidence.

It is the design of this study to begin a series of research in the VCCS that will allow faculty an audience to share their perceptions and help other scholars to guide students to think like a nurse. A common conceptual framework is needed as faculty continue to work together teaching a concept-based curriculum. A framework would propel the VCCS in its quest to allow students a seamless transition into the nursing workforce. Above all, nursing faculty are first nurses, bound to do no harm and promote the greater good while providing safe effective care to the public (Virginia Board of Nursing, 2021).

CHAPTER IV

FINDINGS OF THE STUDY

Teaching of bedside clinical reasoning continues to be a topic of discussion among nursing scholars in higher education. As stated in Chapter One, faculty within the Virginia Community College System (VCCS) often meet in peer groups and conference settings to discuss best teaching practices. The conversation in the room focuses on this main question "How do you do clinical?" Chapter One introduced this study as interesting to nurse educators, academic leaders, and healthcare professionals served by nursing programs in VCCS rural communities. Faculty from five of the fourteen Virginia rural horseshoe schools participated in this phenomenological study (see Figure 1).

The purpose of this qualitative, phenomenological study was to explore faculty perceptions of clinical teaching experiences at the patient bedside at a level one or two associate's degree nursing program by faculty within the Virginia Community College System (VCCS) that teach a rural student population.

This study was guided by the following research questions:

1. What are the experiences of clinical nurse educators in the rural horseshoe of the Virginia Community College System (VCCS) who directly supervise nursing students at the patient bedside?
2. How do rural nurse educators describe safe judgment and clinical reasoning of students in their bedside clinical teaching practices?
3. How do the restrictions of the COVID-19 pandemic affect the nurse educator's ability to teach clinical reasoning?

In this chapter, I present the findings of the study. Included in this chapter are the references to appendices with summaries of the data collection methods including samples of correspondence to participants, tables and figures that describe the participant demographics, examples of interview responses, and reflective journaling that further led to the development of themes. The findings are organized by research questions that were explored by the questions in the interview protocols (see Appendix C) all seeking to answer the overarching question "How do you do clinical?" Each research question led to the development of a series of sub questions discussed in initial interviews. The second interview further explored the responses from the first and also yielded further discovery of units of meaning in the data. Policy waivers instituted during COVID-19 from the Virginia Board of Nursing in response to the state of emergency were reviewed and included for consideration of context.

Using the process of hermeneutic reduction as described by Heidegger and Vagle (1927/2011; 2018) and the procedure defined in Suddick et al.'s (2020) spiral framework, I was able to identify the following data described in the Findings section of this chapter. Primary themes of *Traditional Teaching Practices, Pandemic Teaching*, and *Collaborative Practices* emerged from the data collected in this phenomenological study. Secondary themes of *Concept Based Curriculum* and *Blended Learning Environments* were also identified in the exploration of content.

Setting

Community Colleges in Virginia serve a mixed population of rural, urban, and suburban students. Schools that have over fifty percent of rural students are further divided into the rural horseshoe schools at the VCCS. The rural horseshoe initiative was created to provide further credentialing to students that often end their education at the completion of high school (Virginia

Community College System, 2022) (See Figure 1). Each of the participants in my study represented a nursing education program in one of the fourteen rural horseshoe schools in the system. Six out of eight interview participants reported teaching a rural population of 81-100%. Rural students face significant barriers to nursing education. This thought was further considered in the interpretation of the data and creation of the initial criteria for participants in this study.

The interviews of selected rural horseshoe faculty participants were conducted using scheduled Zoom sessions with the first interview sessions held in October to early November of 2021 and the follow-ups held in December 2021. At the onset of COVID-19 in March of 2020, community colleges were forced to close their doors and Zoom became commonplace. There were advantages and disadvantages to the use of the Zoom platform for the interview process in this phenomenological research. There were a mix of environments observed in each Zoom session. Some faculty chose not to turn on their camera which made it difficult to observe body language and non-verbal cues. However, the use of Zoom transcription and recordings were welcome tools for data collection and re-exploration of content.

Nursing faculty who were in an office setting reported having some distractions and one interviewee admitted to being “interrupted and sidetracked” while another participant stated “I am looking at you but my screens make me look like I am looking away, and I have to look at you because if not I have ADHD”. The use of Zoom was convenient although somewhat prohibitive of the personal touch of an in-person session. However, COVID-19 guidelines and limitations placed on campus settings made the use of Zoom a necessary element of the interview process.

Trustworthiness

I created pseudonyms for each participant and assured them that I would not reveal their identity in the reporting of my findings. I was the only person with access to the interview recordings, transcription, journaling, and informed consent. Trustworthiness is further discerned through the precepts of credibility, dependability, confirmability, and transferability (Hays & Singh, 2012). Credibility and trustworthiness were addressed with the assistance of a nursing content expert with over 30 years of clinical teaching experience to review the interview protocols and initial survey for participants. I further validated the credibility of the interview protocols with two separate pilot studies with master's prepared nurse educators who had greater than five years of teaching experience (Carlson et al., 2005). I was careful to bridle my passions and not insert my personal experiences into the interviews as described by Dahlberg and Dahlberg (2019). I used journaling to explore my own passions and was careful to analyze the journals using the same process described above as the interview responses.

Confirmability was verified with video recordings via the Zoom platform. I used live online transcription and immediately read the transcripts for accuracy, correcting any spelling or typographical errors. I did read and reread the transcripts while watching the videos for nonverbal cues if the participant allowed for use of the camera.

I completed a document review of the waivers issued by the Virginia Board of Nursing. These waivers were sent to VCCS faculty and program heads on March 20, 2020. Each of these policy waivers was in support of the continuance of the nursing education with a reduction in clinical hours mentioned by the interview participants. The policy waiver was a direct response to the state of emergency declared March 12, 2020 to allow nursing students to graduate and

"join the health care workforce as quickly as possible" (Virginia Board of Nursing, 2020). This document review further supports the data discussed in research question number three.

I have thoroughly described the data collection and analysis to ensure that this study can be replicated in the future in other contexts. Although this study is not generalizable to all community college nursing students, it should be easily replicated. My hope is to allow for this study to help VCCS nursing scholars to begin a conversation about a common conceptual framework for the teaching of bedside clinical teaching that produces safe patient outcomes.

Participant Demographics

For this study, a participant survey was sent to 166 full- and part-time nursing faculty in 14 of the 19 VCCS nursing programs. The initial participation survey sent in September 2021 (see Appendix A) yielded 13 responses. It was difficult to procure participants, supporting the findings on the nursing shortage mentioned in Chapter One. Many faculty participants noted the challenges they faced during this pandemic and the new normal of nursing education with regard to the shortage of staff. The eight faculty in this study responded to the email pleas, scheduled, and attended both interview sessions from October to December 2021. Table 2 shows the demographics of the participants.

Table 2

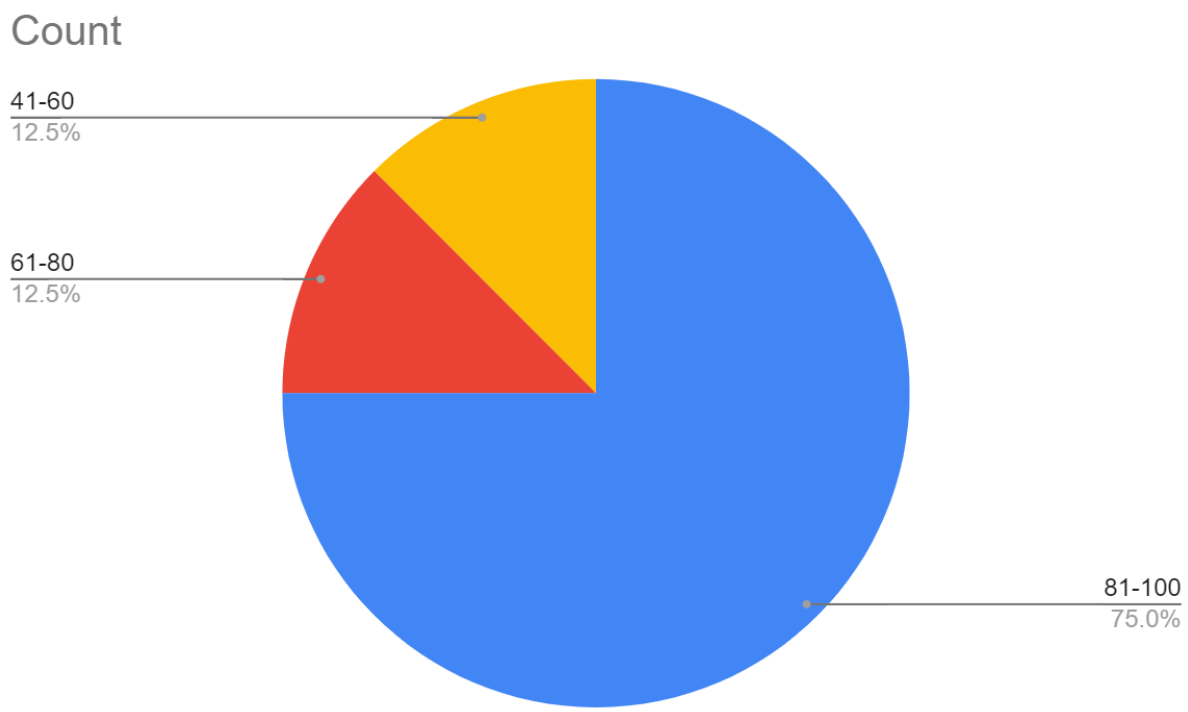
Participant Demographics

Pseudonym	Years of Teaching Exp.	Days/Week Teaching Clinicals	Rural Population Percentage
Jan	10+	2	81-100
Stevie	5-10	>2	81-100
Melanie	<5	1	81-100
Fran	<5	2	61-80
Suzy	5-10	2	81-100
Debra	10+	>2	41-60
Maggie	5-10	1	81-100
Kaitlyn	5-10	1	81-100

The teaching experience of those who participated ranged from three years to 12 years. All participants teach in the clinical setting at least one day a week and most (5/8) teach more than one day per week. They all teach in VCCS nursing programs in the rural horseshoe and serve at a minimum, a student body of 41% rural students. Not all of the participants are full time faculty. Five of the faculty participants teach in the classroom, clinical, and laboratory settings, while three of the participants only teach in the clinical setting. Each of these participants teaches students from rural communities (see Figure 5).

Figure 5

Total Percentage of Rural Students Taught by the Interview Participants in the Nursing Education Program



Participant Profiles

Participant profiles were developed based upon interview data and the initial participation survey. I used pseudonyms to protect the identity of my participants. Each profile includes the number of years of clinical teaching experience, number of clinical days taught per week, number of students in each clinical group taught, percentage of rural students served by the nursing program, and the faculty member's definition of clinical reasoning.

Jan: Jan is a nursing faculty from a rural mountainous community college. She has been teaching for 11 years. She teaches at the patient bedside two days a week and in the classroom and laboratory setting the remainder of the five-day work week. She has eight students per clinical group on average and 81-100 percent of her students are from rural areas. Jan shared that her definition of clinical reasoning is "being able to detect changes in the patient situation." She shared the importance of "taking that information from the classroom" and having students "put the puzzle together" as important elements of safe judgment and strong clinical reasoning.

Stevie: Stevie is a nursing faculty from a western rural community college. She has been teaching for seven years with five in associates degree nursing and two in certified nurse aide instruction. She teaches clinical at a local hospital one day a week and teaches in the classroom and laboratory setting for the remainder of the work week. She has nine students per clinical group on average and 81-100 percent of her students are from rural areas. Stevie shared her definition of clinical reasoning as "the ability of students to see the bigger picture and anticipate what is to come." She further explained that students should "be able to think about how action is going to lead to outcomes" as they develop safe clinical reasoning skills.

Melanie: Melanie is a nursing faculty member from a small college in Virginia. She has been teaching at the patient bedside for three years. She teaches clinical one day a week and 81-100 percent of her students are from rural areas. She does teach eight students per clinical group. Melanie shared her description of safe clinical reasoning as the student's ability to "not merely memorize different facts and information, but combining

everything that they know about anatomy and physiology, lab values, med surg [medical surgical], therapeutic communication, and then acting on those confidently."

Fran: Fran teaches clinical two days a week at a mountainous rural community college. She has 10 students per clinical group and has 81-100 percent of students that come from rural areas. She has been teaching at the patient bedside for three years. She teaches primarily Licensed Practical Nursing students. Fran identifies key indicators of safe clinical judgment as a student being able to "think about the correlation between what's presenting and what's on paper" and being able to "put puzzle pieces together."

Suzy: Suzy teaches nursing in a community college with an 81-100 percent rural student body. She teaches in the classroom, laboratory, and clinical settings. She teaches clinical two days a week and has four to eight students per clinical group depending on the setting. She is newer to collegial nursing education although she has experience in women's health as a nurse and staff educator. Suzy describes safe clinical reasoning as a student needing both "street smarts and book smarts and figuring out how to combine the two."

Debra: Debra is a nurse educator in rural Virginia that teaches at a proprietary hospital-based school full time. She also is an adjunct at the local community college. She has been teaching in the classroom, laboratory, and clinical settings for nine years. She has been a nurse for 25 years. Debra teaches 41-60 percent rural students in clinical groups of nine student nurses. She defines safe clinical reasoning and judgment as "critical thinking at different levels".

Maggie: Maggie is a nurse educator and nursing supervisor at a small college in rural Virginia. She has been teaching clinical groups of six to ten students for five years. Her

student population is 81-100 percent from rural areas. Maggie defines safe clinical reasoning as “seeing the person as a whole” while identifying if students can “see the big picture, not just completing the task, but also knowing why you’re completing the task.”

Kaitlyn: Kaitlyn is a clinical nursing instructor that has taught clinical groups of six to ten students with an 81-100 percent rural population for six years. She is also a staff educator at a mid-level hospital. Kaitlyn defines safe clinical reasoning and judgment as “assessment; application; confidence” with acceptance of “constructive feedback” that allows a student to “go in the opposite direction.”

Data Collection Issues

I applied to the Human Subjects Review Committee at Old Dominion University (Appendix F). After receiving approval and exemption from the committee, I emailed each Dean and Director of the rural horseshoe community colleges in the VCCS nursing programs. Each VCCS school has a different process for research and I filled out individual applications for the schools asking for consideration. After completing the requirements of each college, my email plea (Appendix B), the participant survey (Appendix A) and the informed consent form (Appendix D) were emailed on my behalf by my Dean and content expert to all of Deans and Directors of the full- and part-time nursing faculty in each of the colleges. After procuring my participants and ensuring that the consent form was returned to me, I emailed a link to an online Google Calendar for an interview session. Interviews were scheduled through the Google platform and then an individual Zoom link was sent to the participants. The first interviews took place in late October and early November 2021 and the second follow up sessions in December 2021.

At first, the participant pool was small. I created a short video plea and sent it to my content expert and Dean of Health Sciences, Dr. Charles Smith. He sent this to the other college Deans and Directors on my behalf and three more participants agreed to interview. At this point, I asked for, and was granted permission by my committee, to include the clinical faculty at my institution (RCC) that were not in my direct line of supervision. I was able to procure three more participants. A third plea was sent on my behalf, at the request of my Dissertation Chair, to a rural college Vice President to send to his nursing team. Although three participants filled out the survey, none of them scheduled an interview. Eight nurse faculty respondents did fully participate in two interview sessions via Zoom between October to December 2021.

After reviewing the informed consent for interviews, an initial Zoom interview was scheduled. The interview sessions lasted approximately 60 minutes. At the end of each initial interview a second follow up was scheduled and a subsequent Zoom link was shared. The first interview protocol had structured questions that were guided by the initial research questions and literature review. The second interview was unstructured and participants were asked follow up questions to the first (Leedy & Ormrod, 2019). Trustworthiness and validity of content was assessed by using a pilot study of the interview questions with two full time nursing faculty, one a Master's prepared nurse educator enrolled in a Doctorate of Nursing Practice program with 15 years of teaching experience, and the other a Master's prepared nurse educator with eight years of teaching experience.

Following each interview session, I commenced to journal my experiences during the sessions for that given day. These journal entries included personal reflections for bridling purposes (Dahlberg & Dahlberg, 2019), and general observations of the process moving forward.

The entire process of recruitment, interviewing, and reflection took place from September to December 2021.

The interview transcripts were downloaded from Zoom transcription and kept on my password protected ODU Google cloud account. Transcripts were immediately analyzed for typographical errors and content validity. I found the Zoom transcription to be valuable. However, I did read each transcript as soon as it was available to insure accuracy. The transcription did not always pick up each word spoken and the recorded interviews provided additional detail. I also used this time of correction to add any inflection or observed nonverbal cues as applicable.

Following the close of the second interview, a ten-dollar Starbucks gift card was sent to each of the interviewees in thanks for their participation. Faculty participants were then asked to review the final transcription of their sessions. One respondent replied and stated the transcript was accurate, the others did not respond with any changes.

Coding and Analysis

Heidegger and Vagle (1927/2011; 2018) explored hermeneutics as an encompassing idea that "all is interpretation". This interpretation has driven each aspect of the study and exploration of the central phenomenon. From the lack of willing participants, to the rich data collection and subsequent saturation, the feelings I have experienced, and the attempts at bridling my own passions (Dahlberg & Dahlberg, 2019), this premise of *all* rings true. I firmly believe the timing, the content, and the circumstances exist exactly as they should. This has allowed me to fully consider context and be reflective as I digest the findings of this important research.

Using the spiral framework of Suddick et al. (2020), I was able to identify emerging themes through reading and re-reading the data collected in each interview session. After much

contemplation and consideration of the interview transcripts and Zoom videos, I highlighted important words and phrases that captured the essence of the interview responses. Each of the color-coded highlights was chosen to represent the research question that it addressed. Research Question One was pink, number two green, and number three yellow. From these highlights I created a chart of subcategories by each research question using phrases from the participant interview responses.

As I was analyzing the interview transcripts and my reflective journals I asked myself "what commonalities did the interviewees share", "what did this mean in current time and space?", "what was the meaning of these shared experiences?" and "how do these findings relate to the research questions?" I considered those things that clustered together, driven by my interview protocol designed to address my three primary research questions. I then settled on those common themes identified within the responses.

I did use my own experiences as part of this discovery (Heidegger 1927/2011; Vagle, 2018). However, I was careful to bridle my passions and remain as removed as possible (Dahlberg & Dahlberg, 2019).

Findings

I explored three research questions focused on clinical teaching practices at the patient bedside all aimed to answer "How do you do clinical?" My first research question asked faculty to share their experiences as clinical nurse educators in the rural horseshoe of the VCCS directly supervising nursing students at the patient bedside. The second research question explored faculty perceptions of what makes a safe effective nurse. The third research question sought to explore the clinical teaching practices of nursing faculty during the COVID-19 pandemic. Each part of the interview protocol was divided by research questions to allow participants time and

space to explore the phenomenon comprehensively (see Appendix C). In the next sections, I will describe the three research questions and their relationship to the findings in this study.

Research Question One

Research Question One refers to the experiences of nurse educators in the rural horseshoe schools of the Virginia Community College System (VCCS) and their bedside clinical teaching methods. This research question is important because it provided faculty a platform to discuss their individual experiences with teaching students at the patient bedside. This question was explored in the interview process allowing faculty to share their practices for teaching nurse-like thinking. Many faculty admitted to the use of some form of a clinical model and collaborative teaching practices to grow a student's critical reasoning abilities.

The idea that students needed to collaborate on patient care and subsequently be able to *connect the dots* when applying pathophysiology was present in the findings. Faculty agreed that students not only had to be able to complete tasks but also think critically to keep their patient from deteriorating (Liaw et al., 2018).

Research Question One addressed clinical teaching practices of nurse educators in the rural horseshoe of Virginia that teach at the patient bedside. In the exploration of this topic faculty were asked to speak to common practices used to elicit nurse-like thinking. Many times, faculty discussed using various pieces of clinical models to teach students to *connect the dots.* Faculty also explored the importance of students' understanding of scope of practice and the critical thought necessary to learn in a concept-based curriculum connecting the classroom to the clinical setting.

Clinical Models

Each of the eight nurse educators identified that there was not a current clinical model that was specific to their teaching practice. Most of the participants mentioned the nursing process of assessment, diagnosis, outcome identification, planning, implementation, and evaluation (ADOPIE) but admitted that it was merely a guideline for critical reasoning education. Each of the eight participants noted the use of the nursing process but admitted that they used pieces of multiple clinical models. Collectively, they did not have any specific outline, nor true prescription to a clinical model as a policy for beside teaching.

In her follow up interview, Suzy shared that our initial session sparked her interest and she had attended a session on the Next Generation NCLEX exam and was surprised to hear that "71 percent of schools admit to not teaching from a clinical model and 21 percent still have no plans nor desire to begin using one". She also confided that she was "planning to use a clinical model in the spring" in her teaching practice. Kaitlyn noted that a common clinical teaching model would be helpful to "keep adjuncts and all faculty on the same page". Stevie and Maggie agreed that a comprehensive model would be a welcome addition to the concept-based curriculum. Each of the participants made some reference to the need for a comprehensive clinical model to effectively teach safe clinical judgment.

Perhaps one of the most remarkable findings was noted in not merely what was said, but what went unsaid in support of this theme. In the analysis of all interview data, it was noted that each participant used multiple forms and methods of questioning at the bedside to try to elicit an understanding of student critical reasoning processes. Kaitlyn spoke of the importance of "real time questioning" while Melanie mentioned the need for students to reflect on their patient condition using "rubrics and assessment guidelines". Debra consistently mentioned the use of

"paper forms and games" to elicit nurse-like thinking. Stevie specifically discussed the use of "concept mapping and discussions in pre and post conference". Jan and Maggie also gave examples of concept mapping activities in clinical. I noticed that all of these methods, while valuable, supported the idea that there is no specific model in use and although the ideas are rich, they are still not comprehensive and fully based on the research.

Scope of Practice

Also identified in the exploration of Research Question One was the importance of a student's understanding of scope of practice in nursing education with regard to their ability to reason. The scope of nursing practice is guided by the Nurse Practice Act (Virginia Board of Nursing, 2022) and helps students to effectively delegate, report and share information, and set goals that may guide them in becoming leaders in their profession. An understanding of scope helps the student to collaborate with other members of the health care team all the while keeping patients safe. Each participant expressed the need for students to understand these things often thought of as the *soft skills* in nursing education.

Suzy gave examples of students working together with a team approach, collaborating with another school of nursing in the clinical setting. She noted that students were able to benefit from her "stepping back and letting the student take a chance to come to a conclusion". She also noted that the shared experiences allowed students to "manage a bigger load, so they can get used to the time management piece" necessary for safe clinical judgment practices.

Maggie gave examples of being creative during clinical rotations to explore the use of delegation principles, sending students to alternative learning environments to "get more out of it [an experience]". She also described having students "pick out a patient that they had during the

day and then discuss the entire patient and what they had, you know learned, and what their reasoning was, their clinical background with the patient…"

Debra provided tangible examples of a situation, background, assessment, recommendation (SBAR) reporting form and team nursing model that she used to enhance communication amongst the students. She stated "they have to be more, well, very independent, when you're developing them, you know, working together as a team, and then eventually one becomes the leader, or they'll have an [student] aide…so they work as a team". She further explained that expecting the use of SBAR format for communication of pertinent information helped students to understand their role in safe patient care.

The understanding of one's scope of practice and soft skills in nursing are not only for legalities. They also help to guide decision making on who should be involved in patient care. The use of student teams and collaboration is mentioned many times in the literature. The literature review in this study cited the importance of the preceptorship experience and how it is used to put a final touch on the learning process (Kim, 2006). The precepted experience allows students to effectively learn their scope and students with a strong preceptorship experience often refine their *soft* skills during that time (Kim, 2006).

Concept Based Teaching Practices

With the onset of the Common Concept Based Curriculum (CBC) adopted by the VCCS in 2016 (VCCS, 2022), nursing faculty have met in peer groups and conferences to discuss clinical teaching practices. Each of the participants expressed a desire to have students connect the concepts from the classroom to the clinical setting and also in the reverse. Students often struggle with linking their clinical experiences beyond the skill or task (Carvhalo et al., 2016).

Each of the participants identified their students as having difficulty with understanding why they did a given task.

Maggie stated “To me, what constitutes a strong clinical student is not just completing the task but also knowing why you're completing the task”. Suzy gave examples of post clinical journaling and shared a story about students trying to “find the concept in the clinical day”. She said of the concept based clinical journals:

> At first, I noticed that my students were really struggling with writing the journals. Because of how it’s written, they are supposed to be using the concept for that week and applying it to their patient. So, I flipped it because I said you're really struggling with this whole critical thinking and clinical judgment thing. Let’s say, instead of you trying to force or shoe wedge your patient into that concept, I want you to pick from the collection of concepts you’ve learned and tell me about your patient and how that fits.

She later shared that she noticed a “big improvement” in their journals.

The majority of participants shared similar stories about bringing the concept-based curriculum into clinical practice. They expressed that it can be challenging at times but that once they figured out how to get students to prioritize and conceptualize the students' nurse-like thinking improved. All participants agreed that skills could not be the focus in clinical reasoning education. However, they also noted that it sometimes happened because they were “one person with ten students” (Fran) and could not “be everywhere at once” (Suzy).

Research Question Two

Research Question Two focused on elements of safe judgment in nursing practice and the ability for the student to understand the importance of patient safety in each aspect of bedside

care. Faculty participants were asked to reflect upon their teaching practices that helped encourage the safe care principles important to a strong novice practitioner.

Participants described similar methods they used in the teaching of sound clinical judgment while exploring Research Question Two. Faculty described prescriptive assignments used to enhance the understanding of safe effective care. They gave examples of using conferencing and real time feedback to engage with students, helping them understand the importance of timely assessments and interventions to keep their patients safe.

The focus of Research Question Two is important because nursing is not merely a set of skills or tasks. Each task has a purpose to help keep patients from deterioration. The ability for students to understand why they are doing the tasks in a clinical day is imperative. Faculty shared that clinical assignments and *real time feedback* were essential elements of education at the bedside.

Research Question Two prompted the discussion of what determined a “safe” student and how important it was for faculty to be able to evaluate a student's thinking “on paper” while providing constructive feedback that students could trust and use to guide their patient care. Faculty reported the use of questioning to promote safe thinking strategies and help the students to develop time management skills to organize and set priorities of care. Each of these findings support the idea that safe care is perhaps the most important reason that faculty are consistently seeking understanding of how to teach clinical reasoning at the bedside.

Use of Forms

Each of the faculty in this study expressed that they did not use a particular clinical model to guide their clinical teaching practice. However, all participants mentioned forms in use,

ranging from clinical evaluation tools to reflective journals. Using these forms or tools provided students with an opportunity “to get down on paper what their thoughts might be” (Maggie).

Debra discussed the use of an SBAR form that provided specific parameters of those things expected by the students in collaboration of care for their patient. She also described using reverse case study forms to allow the students to develop patient care parameters and define “what they should be looking for”. Debra further explained that using these forms allowed students to be “self-reflective” and “see all they have accomplished”.

Kaitlyn explained that while she “hated grading clinical feedback forms, they were a great way to see what the students understood”. Both she and Maggie cited the use of a clinical evaluation tool and concept map form to allow students to map out what they understood in “real time”. Stevie further explained that a bedside concept map allows the student to “debrief the experience at the end of the day”.

Suzy and Melanie both admitted to the use of the standardized clinical evaluation tool provided in the concept-based teaching resources for the VCCS, but also described using clinical journaling. They both agreed that using journals allowed the student to show what they learned about their patients in a clinical day. Fran admitted that journaling was not only a helpful tool for learning but also allowed the instructor to “hear more about the student connections” since she was “unable to be in ten places at once”.

Concept mapping, SBAR documentation, reverse case studies, and journaling are all modalities supported in the literature review of this study. The idea that students can authentically self-reflect is noted consistently by faculty in the VCCS at conferences and peer groups. The participants in this study are not immune to the need to have a paper format to help identify important connections by their nursing students.

Each program uses various forms to assess a student's understanding. Whether a traditional care plan coupled with medication analysis or a journal with concept mapping, faculty still strive to understand this nurse-like thinking through the use of forms and prescriptive assignments.

Pre- and Post-Conference

Pre- and post-conferencing during the clinical rotation was also a consistent idea that addressed Research Question Two. Conferencing is in use by faculty in many area health science programs. Nursing faculty use this conference time to discuss important findings and explore patterns that develop in the clinical day. Each of the faculty in this study explored its use and value in various ways. Prior to the pandemic, the participants all used a post conference to close out their clinical day.

Stevie described using the post conference as an opportunity to discuss dynamics in a "group setting". She further explained that although she may have to "individually address learning in real time" she often used "the post conference as a way to share important information from the day". She explained that this end of day "debriefing time was a way to discuss real life situations" and allow the students to "see the whole picture".

Jan described the use of a concept map and how she encourages students to "bring it to post debriefing" and then choosing a student to say "Okay tell us about your patient, give some information and see if other students, you know agree with you, agree with what your priority outcome is, let's see what others think". She shared that this allows students a safe place to ask questions, allowing the instructor to correct those things that need to be corrected.

Maggie and Kaitlyn both described the post conference as a time to further explore those things noticed throughout the clinical day and then using that time to explore priority of care linking to the classroom and lab setting.

Pre-pandemic, faculty shared that they often had multiple individuals in a clinical group, sometimes up to ten new student nurses. Maggie stated that was difficult, citing that "by the time you got to know them clinical rotation was almost over". She further explained that conversations and clinical conference time was a nice way to learn more about not only patient care but also her student group. All participants agreed that the pre- and de-briefing time in conference was a necessary element of the clinical day.

Trust and Meaningful Feedback

"Nurses eat their young" is an adage often heard in hospital and clinical settings alike. Many times, in these interview sessions this resounded from participants in response to the interview questions focused on Research Question Two. These faculty participants each made a comment on how hard it was to have a clinical faculty that you were afraid to receive feedback from. Many times, in this study it was said that nursing students need to feel validated, knowing it is okay to make a mistake and they deserve to gain correction for that mistake in a positive way. Feedback for nursing students should be meaningful and with purpose.

Suzy reported that she "really strives to give feedback that is positive and critical, making sure to give as much positive as constructive". She further explained that she builds trust by making sure she replies to her students frequently and "praises them" often.

Debra also cited the need for a trusting student-faculty relationship. She specifically explained that she creates a trusting environment by allowing students to "work as a team". She also notes that being direct but kind is important in the provision of meaningful feedback "I

sometimes pull them aside and say this is what I am seeing from you" and then "I give examples of how to think". "It's important that we guide them, to give them an understanding of how to develop, provide them with respect, and treat them in a manner that is positive and encouraging".

Kaitlyn further explained that she provides honest feedback "right then and there" and how it is "not to be confused with other things that might be said afterwards", while Maggie consistently noted the need to "know the student and meet them where they are". Jan and Fran both cited experiences where feedback may not have been positive but yet crucial to student success and learning. All clinical faculty agreed that the old adage "nurses eat their young" came from "faculty allowing it" (Debra) and that it should not be the way as they continue to provide a strong clinical education.

Questioning

In nursing education, clinical faculty are constantly on the quest to ask the right questions. Research studies have shown that questioning is often the foundation of learning. Models included in this study, ADOPIE (Henderson, 1982; Huckabay, 2009), Tanner and Lasater's Clinical Judgment Rubric (2006, 2007), Problem Based Learning (Wosinski et al., 2018), and Outcome Present State (Pesut & Herman, 1999) all use some form of Socratic questions to elicit nurse-like thinking. Nursing faculty are challenged with not merely asking "what" but also asking "why" this is happening as they help students develop beside clinical skills.

Each of the participants in this study described various forms of questioning in their teaching methods. Most focused on not "merely doing the skills but knowing why we are doing the skills" (Jan). They each gave examples of how they spend their clinical day asking questions

to help students explore their thoughts. Maggie uses questions to make sure the “nurse is going down the right path”. She explained that by questioning a student they had to really “dig into the respiratory system and see why the patient was here”. She further explained that she could just tell the student what they needed to know but that would “not really help them learn”.

Melanie described her teaching method as using different “types of questions to allow students to…. synthesize the different types of education they are getting”. She explained that instead of just giving a “PowerPoint with the answers, I would give them a rationale and questions to further explore their understanding”.

Suzy described using “open ended questions to allow students to explore what they really knew about patient care”. Stevie further explained the importance of questioning when she stated “students have to be able to further do something with the information they are given”. Fran shared that she used a series of questions in the clinical setting to help students “dig into why they [the patients] are here”. “I sit down with them looking at a patient’s chart and ask them to put things together with what they have assessed”.

Many times, the faculty expressed that Socratic questioning helps their nursing students be strong clinical thinkers. They expressed a collective desire for their students to be inquisitive and good investigators. They all felt that the nursing faculty could not merely give an answer but guide the student to discover the answer on their own.

Time Management

One of the hardest things for a nursing student to learn is time management. Most of the participants in this study expressed a desire to not only make a strong clinical thinker, but to also help the student to develop time management skills. As former staff nurses, they all mentioned the importance of helping the student develop confidence and a good routine for ultimate success

and patient safety. They cited the importance of timely assessments, a willingness to participate in clinical conversations, submitting evaluations on time, and the development of a routine.

Suzy recalls many clinical days where students "had not completed a seven am assessment by ten am". She further explained that some students lack confidence and are not able to "manage bigger loads of patients". Fran described how she had to share a clinical site with another school and was sometimes not able to grow the student in numbers of patients, but she still required the students to develop a routine.

Maggie and Kaitlyn, both described how they built the student up to a larger patient load and how they helped them to develop priority of care in doing so. Debra cited the use of team nursing to allow students to grow in the ability to care for more than one patient in a clinical day.

Each of the faculty participants gave examples of students not understanding the true timeliness necessary for patient safety. They all noted that students had to be taught how important morning assessments were. Stevie emphasized students "drove everything else you did all day".

Each faculty member, having been a bedside nurse in their career, strived to impact their clinical groups with the urgency of creating a time management plan. They work hard to help students develop priority of care, hoping they will know when to shift priorities from one patient to six patients. They all agreed that the final semester and precepted experience also allowed for this important skill to be developed as students prepared to embark on their licensing exam and first nursing job.

Research Question Three

Interview questions related to Research Question Three produced the most conversation among faculty participants. The final research question in this study explored changes in nursing

education at the onset of the COVID-19 pandemic continuing into the academic year of 2021/22. This important question was given first consideration in the interview process (see Appendix C) as it is the most current and seemingly pressing agenda for most educators even as this study ended.

The pandemic continues to affect the way education is delivered. The new normal of nursing education must include plans for online and blended learning environments. The participants in this study discussed many strategies and challenges that are still being faced today. This section of the study was rich with findings that explored clinical reasoning teaching practices as participants flexed and changed the way they once taught in the traditional face-to-face setting. Faculty were forced to close the doors to their colleges and health care organizations significantly limited the clinical areas available for bedside education. Research question number three and subsequently the interview questions developed to answer it, provided rich conversation of new and innovative clinical teaching methods.

Each of the participating nurse educators in this study mentioned the challenges faced in the new normal of nursing education, specifically those challenges for rural students trying to learn critical thought processes across a computer screen. They all expressed frustration as regulations and policies “change every day” in their colleges and local area health facilities. Research Question Three addressed the restrictions faced by nurse educators in the rural horseshoe of Virginia as it pertained to bedside clinical teaching and the challenges of pandemic teaching.

Application of Content

Application of classroom content under normal clinical circumstances is cited as a challenge among nurse educators (Raoufi et al., 2020). During the COVID-19 pandemic,

educators had to quickly decide as to whether or not nursing students were clinically sound and ready to graduate. The Virginia Board of Nursing decreased the number of clinical hours needed to graduate into practice in an attempt to meet the growing demand. Nurse educators were asked to decide if students were prepared to graduate and care for patients, although many students did not complete the final preceptor experience, thought to be the culmination of the clinical education (Kim, 2006; Virginia Board of Nursing, 2020).

The literature review in this study firmly supports the use of the preceptorship experience as a necessary element for the success of a nursing graduate in their first year of practice (Kim, 2006). This experience allows the student an opportunity to apply content knowledge from the classroom, clinical, and laboratory settings while working alongside a nurse without direct faculty supervision. As of the writing of this dissertation, seven out of eight participants explained that the preceptorship was eliminated from their students' clinical education and thus the final element was void. Students did not have the opportunity to apply all that they learned in a precepted setting.

Participants noted a lack of confidence in their students' ability to take what was on paper and translate it to safe patient care. Kaitlyn expressed that students "did not have the hands-on experience" having difficulty with identifying "what's going on with my patient right now". Debra described several online games and case scenarios that she used to try to get the students to think through a patient situation when they could not attend on the actual clinical floor. Fran reported using Socratic questioning to try to get students to "put the puzzle pieces together". Jan expressed that because of the restrictions placed on students during the pandemic, students weren't able to "dive into the patient charts" and see what they would "really assess".

Each of the nurse educators agreed that students needed the bedside experience to have confidence in patient care and to be able to apply concepts for best practice. They all expressed concerns with limited experiences and spoke to the necessity of using virtual simulation. Only one participant stated they did not use a virtual environment for teaching of clinical reasoning. Of the seven participants who utilized the virtual environment for clinical reasoning, all identified its value and most still use it as an additional educational tool today for the application of clinical content.

Limited Bedside Experiences

The bedside experience is defined as a clinical experience where students are able to care for multiple patients in a health care setting. As previously mentioned, these experiences were largely limited during the COVID-19 pandemic. Seven of eight participants in this study are still experiencing some limitations with regard to clinical placement. Group sizes, once eight to ten students, have now been limited to four or six per group in some settings. This has greatly limited the number of hours that faculty can offer to the student at the patient bedside.

Suzy noted that her women's health clinical facility only allowed "four students to come at a time" and how this caused a challenge as she tried to meet the number of students she was required to take to this experience. Although the facilities are limiting the student numbers, the board of nursing still requires 500 clinical hours, with certain specialty experiences, and faculty struggle to meet the demand (Virginia Board of Nursing, 2022). The waiver that was granted in 2020 is no longer in effect (Virginia Board of Nursing, 2022).

Faculty participants also described the ever-changing regulations on which type of patients students could care for and the limitations placed on personal protective equipment as challenges to the clinical education. Jan shared that many of her facilities were "changing units

[over to COVID units] to accommodate the growing number of COVID-19 cases and most of these units were closed to students". Stevie reported that many of those same restrictions were placed on her students and it "interfered with a variety [of patients] that the students had in an actual clinical setting".

All participants mentioned the need to be creative and many did describe the use of vaccination clinics as opportunities to further explore patient care principles. Stevie noted a "focus outside of just the skill" and using these clinics to "consider the other co-morbidities that patients had". Stevie further explained that with each opportunity students were asked to focus on an "understanding of why they are doing what they are doing".

Each participant expressed concern with the limited number of actual bedside clinical hours. All agreed that limiting the bedside experiences for the nursing students could be detrimental to their ability to make strong connections to safe patient care outcomes. Although still grateful for the clinical sites that they did have, a general consensus was noted; the limitations were a hindrance to the furthering of clinical reasoning education.

Feedback During the Pandemic

Each participant had similar concerns about bedside clinical teaching and expressed that the pandemic made it even more challenging. They talked about feedback as an important element of clinical education and again, explained how they needed to be creative with giving feedback during the pandemic. In traditional nursing education, the "real time" feedback described by Kaitlyn, is equal in importance to the written feedback provided post clinical.

During the pandemic, faculty expressed challenges with the modalities they were able to use for feedback. Maggie was limited in her ability to meet with students in a post conference at the end of the clinical day because of the social distancing guidelines set by her clinical facility.

She described using a discussion board format to allow students to explore their patient care and to provide feedback to one another. She shared that she used this space to “interject if I saw anything that needed to be discussed further”.

Several participants discussed the use of a clinical journal or post reflection that they required. Faculty were able to comment on the student’s journals and help guide their thinking. Melanie shared that her school used both the clinical journal and the “standard clinical evaluation tool provided by the VCCS” as part of the concept-based curriculum to offer meaningful feedback.

The literature reviewed in this study also spoke to the importance of a trusting student-faculty relationship for students to grow and utilize their feedback, especially in a new-found learning environment (Chang, 2020). Overall, a consensus on the importance of both in person and written feedback was noted regardless of the format used by faculty participants. Faculty agreed that they had to be creative in their feedback as traditional methods were now a thing of the past with the conditional closures of healthcare facilities and social distancing guidelines placed on their clinical groups.

Online Learning

Also, incredibly prevalent in nursing education in the last two years is the use of multiple online formats for teaching and learning. Raoufi et al. (2020) explained the challenges faced by clinical educators to quickly transition to online learning. Chang (2020) further explored the students' need to trust that online education would be comparable to those things once taught in person in the classroom setting. The participants in this study also described how challenging it was to switch to online or remote learning. They identified multiple activities and online meeting platforms still in use today.

Faculty participants shared that they used Zoom, Google Meets, and Moodle to meet virtually when the schools were closed beginning in March 2019. They also described the use of virtual simulation, games, pharmacology applications, and videos for health assessment teaching. Debra noted that "we had to be creative and use a teddy bear for a [video] recorded assessment". Melanie reported the use of the virtual simulation platform from ATI, while many others used Lippincott's vSim platform. Each of the participants reflected on some type of creative license in developing activities to engage the students across a computer screen.

Although the pandemic produced some challenges each participant expressed that many of the ideas they generated are still in use today. Each of these participants have returned to some form of in-person learning. However, they did express the benefits of continuing to use virtual learning and online modalities.

Critical Thinking Across a Computer Screen

Although pandemic learning produced certain challenges, participants in this study all agreed that critical thinking is an essential part of clinical reasoning education. They shared that while needing to be creative in their teaching practices, common themes of hands-on practice, application of content, and Socratic questioning were necessary elements to teach nurse-like thinking. Each participant repeatedly noted that memorization did not make a novice nurse. They all agreed that students had to be able to apply their knowledge to a given patient scenario.

Jan, Stevie, Melanie, and Maggie all agreed that putting the puzzle together and using labs, medications, and assessments to make safe patient care decisions was an essential element of the bedside clinical education. Fran and Suzy both explained how students had to think about the concept they were learning. Suzi added students had to try to "understand why they were experiencing the things they were".

Kaitlyn consistently mentioned that students use “real time opportunities” to further explore how they care for a patient. Debra stated she believed that “critical thinking is the big one”, when asked about what makes a strong clinical reasoner. She further explained the importance of helping students that “make a mistake go through the whole process to see where they're at”, and “what their critical thinking was in that situation”.

Faculty in this study described many learning activities both in person and online, that they used to ignite critical thinking in their students. They all mentioned the importance of critical thinking in the development of a strong novice nurse and how limited they were with COVID-19 restrictions.

Rural Student Challenges

One of the most remarkable findings in this study in the sub category of pandemic teaching was multiple student challenges. Although much of the literature on the COVID-19 pandemic supported these findings, the stories of these rural nursing students are noteworthy. Faculty in this study described many of the normal challenges faced by a rural student body. However, this was compounded by the effects of the COVID-19 pandemic. Many students had children at home and had limited access to the internet. Others reported that vaccination mandates and personal protective equipment (PPE) shortages presented various challenges for students.

Debra shared a story of a student that was having to hide in her car for class to “escape her children”. However, she further explained that the same “student had multiple distractions and that she was out in her car during class, waving at the neighbors and people walking by”. Most participants described students having to drive to campus where internet boosters were installed for access, attending class in their cars. All participants spoke to students having to

home school their children while trying to focus on their own education. Students were not prepared for the challenges of completing their nursing education program during a pandemic and many failed because of these challenges.

Stevie shared a concern that when students weren't able to practice at the bedside there "wasn't a sense of community to where we can get together with different members of the team and really work through what we were seeing". Multiple faculty expressed a disconnect in what students were able to do during this time and their interaction with others, peers and patients alike.

Once students were able to return to clinical practice there were additional challenges. Vaccination mandates were a huge conundrum for nursing programs. Students were afraid of the vaccine and were also afraid to care for COVID-19 patients. Fran shared that when students returned in "August of 2021…the new thing was, well, I don't know if I want to get a vaccine". She further noted problems with fit testing for masks, and protective eyewear being required one day and then not the next. Most participants discussed how difficult procuring masks and PPE was. Fran also expressed that once masks were procured there was a significant "disconnect with the masking" and needing [for faculty] to "promise that we will make sure that they have the tools to be safe and re-educating students that if you wear the PPE you will be safe".

Students and educators alike still face many of these challenges as faculty navigate back to some of their pre-pandemic practices. Many educators question whether nursing education and subsequently, college education and its delivery will ever be the same.

At the time of this study, challenges continue to present. Each day, new COVID-19 variants, guidelines from the Centers for Disease Control (CDC), and government regulations present causing faculty and students to shift, yet again. The challenges of nursing school

continue to be compounded in this day and age and educators should explore and share their experiences as they quest to make strong clinical thinkers.

Identified Themes

Through the process of hermeneutic reduction, using "dwell time", and through the reading and re-reading of context, I was able to identify the three primary themes of *Collaborative Practices*, *Traditional Teaching Methods,* and *Pandemic Teaching*. The aforementioned findings overlapped in many ways and these themes were present in the much of the data collected. The three research questions were answered comprehensively by faculty participants aligning with the idea that faculty were searching for the answer to the question "How do you do clinical?" Each of these themes were identified with secondary themes relating to the research questions. Multiple ideas and thoughts were shared by participants on the connections made to the *Concept Based Curriculum*, the importance of *Safe Effective Care*, and the new normal of nursing education the *Blended Learning Environment*.

Overall, it was evident that faculty participants are passionate about the teaching of clinical reasoning to produce safe practitioners. Many of the findings in this study that led to the identified themes were consistent with the findings of the literature review in this study. Faculty cannot agree on one method of teaching clinical practice and more research is needed in this area. My hope is that the development of these themes will lead to future research in clinical reasoning education.

Each of the themes produced secondary themes. *Collaborative Practices* were highlighted in a review of the findings as faculty answered interview questions that encompassed Research Question One and Two. Faculty shared many practices and instructional activities that were common. Each faculty participant described the use of forms and clinical assignments used

in the clinical day to help students “connect the dots”. Faculty were consistently seeking ways to “make the concepts of the classroom and laboratory come alive”.

Embedded within the primary theme of *Collaborative Practices* emerged a secondary theme of *Concept Based Clinical Teaching*. Thoughts centered on the Concept Based Clinical teaching model of the VCCS adopted in 2016, were present in much of the interview responses. Faculty explored the use of collaborative methods to teach clinical reasoning but consistently referred back to the importance of connections between classroom, laboratory, and clinical learning. Faculty explained that when they began to explore teaching a concept-based model, it became increasingly important to bring clinical learning into the classroom. They all noted that you could not teach one component of a concept without the link to the others. This remained an enigma as faculty worked to link all learning modalities together for a collaborative approach to concept-based teaching.

When asked to explore the interview questions focused on Research Question Three, faculty participants readily expressed the difficulties faced teaching in the rural settings during the pandemic. As doors to institutions closed, faculty were forced to be creative in the way they delivered bedside education. The primary theme of *Pandemic Teaching* emerged as faculty discussed the difficulties with bedside teaching. Without a *bedside* to attend, online and blended environments became commonplace. The Virginia Board of Nursing waiver, under review in this study, gave a prime example of the call to continue critical reasoning education. Nurse educators in the state of Virginia were challenged to continue teaching across a computer screen to produce graduates without delay to answer the demand for nurses in these rural areas.

The primary theme of *Pandemic Learnin*g also produced a secondary theme of *Blended Learning Environments*. The blended learning environment became necessary as most colleges

and universities sent students home for all learning to be delivered online in response to social distancing guidelines. As schools began to reopen, it was slow. The nursing students returned in small groups to the laboratory and clinical setting. Those facilities that once allowed clinical groups of ten students were now limiting the groups to four or six at a time.

Many faculty expressed their creativity when teaching clinical reasoning as students were not allowed to attend a traditional face-to-face setting during the COVID-19 pandemic. Although most local area facilities are now allowing students in the clinical setting there are still many virtual environments in use today. Faculty agreed that blended learning environments would be essential in the *new normal* of nursing education.

Interview responses to all three research questions yielded rich conversation focused on safe patient outcomes. As a nurse, it is imperative to focus on safety as they are called to *do no harm*. The National Council for Licensing Exam (NCLEX) has one priority; to assess if the graduate can perform safely as an independent practitioner. The final emerging themes in this study were those of *Traditional Teaching Methods* with a secondary focus on *Safe Effective Care*. The nurse educators in this study shared many traditional methods they utilized in the quest to produce safe graduates. They spoke to care mapping, conferencing, and Socratic questioning. Overall, each of the interview questions yielded responses that led back to the importance of safe patient care. Faculty described many methods for teaching students to be safe practitioners. They often cited patient safety as the most important reason for growing a student's clinical reasoning abilities.

As I analyzed these findings I asked myself what all of this meant and considered the relationship to the research questions. The content of the interview responses spanned the context of the entire study and were easily linked back to the three initial research questions yielding the

main idea “How do you do clinical?” I explored my own understanding of context but was careful to bridle my passions considering my own clinical teaching practices (Dahlberg & Dahlberg, 2019). Through reflective journaling and dwell time I was able to identify these themes. The identification of these important themes led to ideas for further research and implications for action further discussed in Chapter Five.

Chapter Summary

The research questions in this study yielded the creation of a two-part interview process that provided rich data for analysis on the faculty perception of teaching clinical reasoning at the patient bedside. Although an initial struggle to procure participants in the wake of COVID-19 and the new normal of nursing education, there were eight solid interviewees that fully participated in two interview sessions. Each of these sessions provided a wealth of information that further yielded the development of three primary categories with subsequent secondary themes.

Nursing education in the rural community college is different. There are many strains on the rural student but even more so now during the COVID-19 pandemic. Clinical education continues to be somewhat of an enigma in nursing education. Faculty in this study all provided stories, anecdotes, and perceptions of best teaching practices at the patient bedside. However, it is clear that anecdotes, while valuable, cannot stand alone as faculty consider clinical teaching. A combination of clinical models and anecdotes are necessary for faculty to trial what works to bring their students to nurse- like thinking. Each of these faculty cited challenges both during and pre-pandemic. All participants have a passion for teaching nursing. They all expressed a desire to see students succeed with patient outcomes continuing as a number one priority in safe clinical practice.

It is my hope that this study be used as a starting point for a long overdue conversation at the VCCS and in nursing programs worldwide. Clinical reasoning skills continue to be a challenge to both teach and evaluate. I hope the findings discussed here will continue to yield further research and also allow for the furthering of crucial explorations in nursing education. Chapter Five will discuss my recommendations for the use of these data, connections to the current literature, and future work to be done on this important topic in nursing education.

CHAPTER V

DISCUSSION

Clinical reasoning education continues to be an area of importance for nurse educators striving to produce nurse-like thinking necessary for safe effective graduates. In the rural horseshoe schools of the Virginia Community College System (VCCS) students and faculty alike, face many challenges in the development of strong clinical reasoning skills. Since the onset of the COVID-19 pandemic, nursing faculty in all schools have been asked to do more with less.

The nursing shortage, with ten nurses to every one thousand patients in the state of Virginia, also extends to faculty teaching in nurse preparation programs ("The U.S. Nursing shortage: A state-by-state breakdown", 2022). In March 2020, COVID-19 closed the doors of healthcare facilities in an effort to abide by social distancing rules limiting the number of people allowed indoors to avoid exposure of the vulnerable populations in their service. These closures affected nursing programs nationwide.

In response to the growing need for nurses the Virginia Board of Nursing decreased the requirement of 500 clinical hours upon graduation. (Virginia Board of Nursing, 2020). Faculty in Virginia's nursing education programs were asked to decide if the number of hours they were able to provide, prior to the shutdown, was enough to produce a safe nurse. With fewer staff and less clinical opportunity, program leaders were challenged to continue to provide a strong clinical education producing solid novice nurses.

Clinical reasoning education is always a challenge. As the pandemic continues into the year 2022, nursing education as it once was, at the patient bedside, is limited. Many health care facilities have had to close their doors to nursing education programs because of the growing

number of COVID-19 cases. Nursing schools struggled with how to provide clinical reasoning education when they were not allowed to offer students a bedside experience. Faculty utilized a mix of virtual, simulation, and online experiences to help students learn how to think like a nurse in the academic year 2021/2022. The literature supports the use of multiple modalities to teach this important skill, but faculty are still seeking evidence-based practices in the new normal of bedside clinical reasoning education (Raoufi et al., 2020).

As educators continue to work towards producing safe practitioners, idea sharing should be encouraged. The inspiration for this phenomenological study was to elicit faculty perceptions of teaching clinical reasoning at the patient bedside in a level one or two nursing programs in rural community colleges. The hope is that this study will begin a conversation among nursing faculty in the VCCS answering the question “How do you do clinical?”.

This exploration of faculty perceptions should help build a common clinical teaching model that works alongside the common Concept Based Curriculum, adopted in 2016, by all VCCS nursing education programs (Virginia Community College System, 2022). Nurse educators should be interested in these important findings as they work towards providing a consistent approach to teach safe patient care principles. The experience of these participants is important as nurse educators continue in their quest for new and innovative teaching methods that stretch students' nurse-like thinking.

Academic leaders should use these findings to implement new strategies for teaching in a blended learning environment and develop applications for online learning platforms. Healthcare administrators should see this study as an answer to the national nursing shortage. As the population ages, more nurses are needed in the workforce. This study provides evidence that a strong clinical education produces graduates who are ready to enter the workforce.

Without strong critical reasoning skills graduates will not be able to enhance outcomes for patients in their care. This will greatly affect healthcare organizations because a strong nurse-patient relationship is an essential element of quality health care. Patient safety is dependent upon a workforce full of capable practitioners that can keep them safe and help to heal. Without a strong clinical reasoning education, the nursing shortage will continue and facilities will suffer the cost of medical errors and loss. Nursing education has to be strong to support the health care community as we know it in America.

Purpose Statement

The purpose of this qualitative, phenomenological study is to explore faculty perceptions of clinical teaching experiences at the patient bedside at a level one or two associate's degree nursing program by faculty within the Virginia Community College System (VCCS) that teach a rural student population. Clinical reasoning is defined as the ability of the nursing student to make safe practice decisions on behalf of the patient in varying degrees of context from simple to complex processes. For this study, faculty experiences were explored using open-ended questions focused on educational practices in teaching clinical reasoning. Online delivery of clinical reasoning experiences was also explored with nurse educators who have encountered online teaching during the COVID-19 pandemic.

Research Questions

This study is guided by the following research questions:

1. What are the experiences of clinical nurse educators in the rural horseshoe of the Virginia Community College System (VCCS) who directly supervise nursing students at the patient bedside?

2. How do rural nurse educators describe safe judgment and clinical reasoning of students in their bedside clinical teaching practices?
3. How do the restrictions of the COVID-19 pandemic affect the nurse educator's ability to teach clinical reasoning?

Summary of the Methodology

For this project, I completed a phenomenological study of nursing faculty perceptions of teaching practices in clinical reasoning at the patient bedside. I explored the perceptions of nursing faculty within five of the 14 VCCS rural horseshoe schools (See Figure 1). The study focused on nursing faculty members that teach within the rural horseshoe of Virginia in associate degree nursing programs in the Virginia Community College System (Virginia Community College System, 2021). I did include one faculty member who taught in both the practical and associate degree programs at a rural school.

I completed a study of this phenomenon by using open-ended interview questions focusing on educational practices in teaching clinical reasoning. I recruited a sample of full- and part-time clinical nurse educators in associate degree programs in the Virginia Community College System who teach a rural student population. Currently there are 19 Associate degree nursing programs in the state of Virginia, with 14 located in the rural horseshoe (Virginia Community College System, 2021).

I sent email correspondence with the survey instrument to faculty in these 14 schools to determine a purposive sample. In the VCCS there are 166 full- and part- time faculty in the rural horseshoe. A sample size of eight participants was selected to represent this population of nurse educators. The recruitment process was difficult. The nursing shortage also extends to faculty. Most participants described difficulty with staffing in their nursing programs. After multiple

pleas by myself, my committee chair, and administrators in each of the programs, I was able to recruit eight nurse educators commit to completing the two-interview process.

After identifying criteria for a purposive sample of the participants, email correspondence was sent to the rural horseshoe nursing programs. Participants were asked to identify in the survey instrument the number of years teaching experience, the makeup of their student body, and willingness to participate in two interview sessions. From this survey, I identified those in the final sample using a spreadsheet to filter the results and make the selection.

Following a pilot study with two nurse educator colleagues, I completed two interview sessions per participant with interview questions designed to answer my three research questions (see Appendix C). The first interview was semi-structured, and the second interview was unstructured to allow for clarification of emerging themes from the first interview.

Interviews were completed on an online Zoom platform. Following each interview session, I downloaded the Zoom transcription, checked for edits, and completed reflective journaling to begin to identify themes using the hermeneutic reduction process and the Suddick et al. (2020) framework (Heidegger, 1927/2011; Suddick et al., 2020; Vagle, 2018). Faculty participants were asked to complete a review of their interview transcripts following the conclusion of the second interview.

I used primary and secondary coding to extrapolate themes and identify the essence of the faculty perceptions. I used a spreadsheet function in Google Docs to manually code for primary and secondary themes from the interview sessions. I created a chart to further identify the data in the primary and secondary findings. A document review of the policy waivers set by the Virginia Board of Nursing, in response to the State of Emergency in March 2020, and reflective journaling was used to strengthen the trustworthiness and accuracy of the interviews collected.

Faculty participants were asked to review their transcripts and provide correction as needed to validate integrity and trustworthiness in the interview responses.

Summary of Major Findings

An exploration of the research questions in the two-part interview series yielded three primary themes. Similar themes are also prevalent in much of the literature reviewed in this study. The primary themes of *Collaborative Practices*, *Traditional Teaching Methods*, and *Pandemic Teaching* were identified as faculty participants consistently discussed the challenges and passions they shared in the teaching of bedside clinical reasoning. The secondary themes of *Concept Based Curriculum, Safe Effective Care,* and *Blended Learning Environments* were also noted upon further exploration of context.

Collaborative practices in this study were focused on multiple modalities used to teach nurse-like thinking in the VCCS rural horseshoe nursing programs. Participants identified the need for a comprehensive clinical model, yet clearly stated they did not have one defined in their program of study. They expressed that a common model would be welcome, allowing faculty to be *on the same page* although not all programs were focused on using one teaching model. Each participant spoke to the importance of using the nursing process of assessment, diagnosis, outcome identification, planning, implementation, and evaluation (ADOPIE) but admittedly revealed that they used many other things to elicit nurse-like thinking. This important finding supports the need for a common clinical teaching model in the VCCS abstracted from the interpretation of value from the anecdotes shared by nurse educators.

Also discussed was the importance of a student understanding his or her nursing role and scope of practice. The participants all exchanged ideas that allowed students to work together to care for patients and develop clinical reasoning skills. The nurse educators cited the use of team

nursing and delegation principles in the clinical setting to develop an understanding of scope and the *soft skills of nursing*. This finding also supports the need for a consistent approach to teaching clinical reasoning and builds the case for creating new strategies for teaching nurse-like thinking in the future of nursing education.

Concept-based learning, a mere five years old in the VCCS, continues to be an unfolding process in nursing education. Nursing faculty in the current study expressed a desire to bring concepts alive in the clinical setting. They admitted to challenges in teaching a concept-based curriculum model and linking the classroom, laboratory, and clinical components of a course to maximize student understanding. They also described ways for students to explore classroom and laboratory concepts in the clinical setting, using journaling, effective feedback, and conferencing to encourage those strong connections. Each of the methods described by these faculty participants should be trialed in nursing education programs. These methods described allow for collaborative practice to enhance student learning. As a result of this study, I am using reflective journaling in my spring semester courses and have noticed a difference in the students' ability to self-reflect. This further supports the idea that the findings in this study are of great value to clinical educators.

During the interview process participants were asked to describe the challenges they faced with bedside teaching of clinical reasoning in the COVID-19 pandemic. Research Question Three addressed the restrictions faced by nurse educators during COVID-19 in the rural horseshoe as it pertains to bedside clinical teaching. The findings in this section of the study highlighted restrictions on clinical placements, difficulties with application of content and priority of care, and the use of virtual teaching platforms. Faculty all expressed the need to be creative in their clinical reasoning teaching techniques in a time that was uncertain in nursing

education. As pandemic learning continues, nurse educators must use this study to implement new strategies for teaching in a blended learning environment. The use of virtual learning and online applications are necessary as nursing educators continue in the new normal of clinical teaching.

Each participant spoke of student challenges. They noted that although rural nursing students face challenges with work-home-school life balance, the challenges of the pandemic compounded student needs. Students were homeschooling children, attending classes in their cars, and having to juggle the new normal of online education.

Although there was much focus on the pandemic and the new normal of nursing education, participants were also asked to explore their teaching methods in bedside clinical reasoning three years prior. Faculty expressed that there were challenges present even when students were allowed to be at the bedside and practice in-person patient care. Educators spoke of the need to use Socratic questioning, multiple forms for conceptual exploration, meaningful feedback via conferencing and evaluation, and how they were able to teach students to manage their time as a novice nurse. These findings should help educators to develop creative methods to produce strong clinical thinkers, using positive reinforcement to help students organize thoughts and learn to prioritize care.

The primary themes of *Traditional Teaching Methods* and *Collaborative Teaching Practices* overlapped in many ways. Although a challenge in the wake of the COVID-19 pandemic, faculty are still seeking best practices in the teaching of bedside clinical reasoning, yielding a third primary theme, *Pandemic Teaching*. There were clear delineations as themes were identified but the most important of all things discovered was the passion that faculty shared in creating strong clinical reasoners. Nurse educators in this study gave many examples of

the methods they used to elicit the critical thinking and reasoning skills necessary to make a safe and effective nurse graduate. This study should be used to change the way clinical reasoning education is delivered and shape the way nurse educators define safe effective care.

Finding Related to Literature

The literature review in this study focused on models and frameworks used for teaching clinical reasoning, quantitative and qualitative assessment tools and clinical judgment rubrics, and virtual learning environments all in use in the teaching of a concept-based curriculum in nursing education. The findings in this study remain supportive of the idea that no one agreement exists in the best practices of teaching bedside clinical reasoning.

Collaborative Practices: Clinical Models, Scope of Practice, and Concept Based Teaching

Faculty continue to research ways to elicit safe reasoning skills in nursing students worldwide. Henderson (1982) explored the use of one prescribed clinical model for student teaching, while other articles revealed that faculty deployed a combination of models. The use of the nursing process of assessment, diagnosis, outcome identification, planning, implementation, and evaluation (ADOPIE) was identified by each faculty participant in this study (Henderson, 1982). The other models that were reviewed in Chapter Two; outcome present state model (OPT), problem-based learning (PBL), and Tanner's model of effective noticing and reflection (Henderson, 1982; Pesut & Herman, 1999; Tanner, 2006; Wosinski et al., 2018) were mentioned in the interview sessions. However, faculty did not report these specific models in use as one chosen clinical teaching model. Various elements of each model existed in the shared teaching practices of these faculty participants. This study explored these clinical models. However, the findings further support the need for the development of a common clinical model for teaching at the bedside.

Several times in the interview process faculty described practices in Socratic questioning and concept mapping "to bring concepts forward from the classroom and laboratory setting" in agreement with the method, problem-based learning (PBL) (Wosinski et al., 2018, p. #). The Outcome Present State Model (Pesut & Herman, 1999) uses a given situation and asks students to identify how a patient could safely and effectively be cared for in the clinical setting. Various faculty described methods that provided students with scenarios to help them ascribe to safe decision making for the patients in their care. Tanner (2006) uses the principles of effective noticing, responding, and reflecting in the student nurse seeking provision of safe care. Faculty in this study all identified how asking students to *reflect in real time on what they saw* was a sound method to develop clinical reasoning. Each of these models, although indirectly spoken, were noted as underpinnings of teaching methods discussed in the interview responses. The idea sharing in the interview sessions should be used to further enhance the teaching of bedside reasoning. The activities of learning described in this study should provide new and innovative methods for nurse educators in the VCCS and nationwide.

Students that progress in a nursing program also must understand the importance of scope of practice as defined by the Nurse Practice Act in their governing organization (Virginia Board of Nursing, 2022). Faculty in this study all identified the need for students to explore delegation principles and effective ways to manage the soft skills of nursing. They all discussed the importance of developing an understanding of scope of practice in each element of the nursing education program while using the final clinical experiences to solidify this important skill. These findings demand the need for educators to produce strong thinkers that can delegate patient care safely and effectively when they are a novice nurse.

Another important idea in the teaching of bedside clinical reasoning skills was the final clinical experience where students work one-on-one with a nurse preceptor in the role of the novice practitioner. Kim (2006) identifies that the preceptorship, often thought to be the final culminating experience in clinical reasoning education, as both the time and place to develop a strong understanding of the nurse's role. Students reported the guidance received from nursing faculty in each of these experiences as an important element of the nursing education (Herron et al., 2016). This is an important finding because nursing as a profession cannot afford the elimination of this final culminating experience. Student nurses must have the ability to attend this experience to be prepared to produce quality health care outcomes in the workplace.

Interviewees cited the importance of the bedside clinical experiences in the development of a student's clinical reasoning and the literature supported this important finding. The use of higher-level questioning in these experiences helps to morph the nursing student into that of a novice nurse. Higher-level questioning is important to elicit nurse-like thinking and the use of multimodal clinical experiences is a must (Hege et al., 2018; van Wyngaarden et al., 2019). An understanding of the nurse's role and scope of practice is essential to produce a safe and effective nursing graduate.

In the development of the primary theme of overall findings, a subsequent secondary theme *Concept Based Teaching* emerged. Faculty participants discussed various ways to encourage the concepts of the classroom to come alive in the clinical setting. They described using reflective journaling, focusing on a given concept, to forge the connections necessary for patient care. Nurse educators understood the importance of the common concept-based curriculum (CBC), adopted by the VCCS in 2016, and its use in the classroom, laboratory, and

clinical settings. This research should be used to begin important work in the creation of a common clinical model for student teaching at the bedside.

The CBC was a way for students and faculty to explore nurse-like thinking that made sense to those practicing nurses at the patient bedside. Students were encouraged to think like a nurse as they replaced the traditional terminology of ineffective airway clearance to that of gas exchange or oxygenation (e.g., nanda.org, vccs.edu). These terms represented the way nurses think, focusing on the priority problem for patients in their care. This is an important change that impacts nursing education as a whole and the findings in this current study supported the need for this change in the way nurses think and process complex information. Nursing education in the VCCS is delivered conceptually and each participant in this study understands the value of concept-based learning in their bedside teaching practices. The findings of this study should begin the conversation at the VCCS level and beyond on the development of a common teaching model that will provide a guide for clinical reasoning education.

Pandemic Teaching: Clinical Placements, Application, Priority, and Virtual Teaching

Nursing faculty in this study spent significant time addressing the challenges of the new normal in nursing education in the rural horseshoe of Virginia. Many students experienced challenges not foreign to rural students but compounded by the stressors of the COVID-19 pandemic. These important findings should help educators to develop online and blended learning platforms that allow students to develop clinical thinking skills. It is imperative that these pathways are developed as a result of the findings in this study.

Challenges with clinical placements led to trouble with application of content and priority of care. The pandemic gave way to new learning modalities and faculty had to find ways to teach bedside principles across a computer screen (Raoufi et al., 2020). When I began the literature

review for this study the pandemic had just begun, and the research was limited. However, many of the principles discussed in the current research are present in the teaching methods of my participants. The literature review and the current study both spoke to the need to develop new and innovative teaching methods.

Faculty in this study also cited the importance of real time face-to-face instruction in the development of clinical reasoning skills. Raoufi et al., (2020) and Liaw et al., (2017) all noted that nursing students were being asked to make complex patient care decisions in an e-learning environment. The findings in this study attest to the same problem during the COVID-19 pandemic, as nursing students are shut out of clinical experiences limiting their ability to make decisions in real time. Local area healthcare organizations should use this information to develop clinical mentorships as new graduates are entering the workforce. As students graduate into practice following the pandemic challenges, it will be important that healthcare administrators respond to the challenges with programs for support in the first year of a graduate's nursing career. Failure to provide these graduates with adequate support can be detrimental to the safety of patients in their care.

The interview participants also explored how to get students to think like a nurse and apply the content they learned in the classroom. They used online learning platforms and virtual simulations to continue in the clinical thinking processes when they were not allowed at the bedside. The virtual environments used by clinical faculty in the VCCS were from common nursing resource publishers, ATI, and Lippincott. The faculty all reported using discussion boards, online applications, and recorded video assessments to continue to grow their students. This further supports the need for collaborative practices that utilize new online platforms and learning modalities that can be supported online and in blended learning environments.

Each participant discussed the challenges of being in a primarily virtual setting directly correlating with the findings in Chapter Two on blended learning environments. In a study at Duquesne University, researchers used an information literacy course to analyze the differences between online and face-to-face offerings (Rapchack, 2019). Findings in this study revealed that students struggled with connections and motivation in the online environment often prevalent in the face-to-face offerings (Rapchack, 2019). Likewise, Thi Thai et al. (2019) were able to compare learning environments with a sample of undergraduate students (n = 106) and identified the need for a blended learning environment to promote the best learning outcomes. Nursing faculty in the VCCS faced similar challenges and noted difficulty in getting students to prioritize safe effective patient care in this new environment. This important finding should be used to further encourage the use of collaboration among VCCS nurse educators as they seek to develop new clinical teaching methods.

Although the use of online education has now shifted to a blended learning environment, nursing scholars still face pandemic challenges. In this study, many ideas were shared on how to deliver online content and the attempts at eliciting nurse-like thinking in this milieu. Faculty do appear to be using evidence-based practices in the blended learning environment during COVID-19 and many of the teaching practices discovered at the onset are still in use today. The link to the literature, past and present, should allow educators to use this current study to make positive practice changes in the way they deliver clinical reasoning education.

Traditional Teaching Methods: Forms, Feedback, and Time Management

Although the current study was overshadowed by the COVID-19 pandemic challenges as mentioned above, faculty were asked to describe their teaching practice prior to the change. Time and space were allowed for the discussion of current circumstances. However, after redirection

faculty passionately shared many tried and true teaching methods in bedside clinical reasoning teaching. Each participant spoke of the use of formative and summative assessments, using concept mapping, evaluation forms, and reflective journaling to explore patient care principles. These findings should promote idea sharing and help educators to create a comprehensive tool kit of best practices to guide the nursing student to think critically.

In Chapter Two, I explored methodological issues with a focus on both qualitative and quantitative assessment tools. The use of the CREST assessment tool and the Lasater Clinical Judgment Rubric is widely supported in much of the research (Lasater, 2007; Liaw et al., 2017). These tools help the nurse educator in the evaluation of student learning while asking the student to identify categories of clinical thought.

In the current study, faculty discussed the use of multiple forms to help students "make connections on paper". Students are asked to use rubrics and a prescribed evaluation tool developed in the VCCS to report their findings and link to common concept-based priorities of care. Faculty reported using pieces of these evidence-based assessment rubrics to formulate their Socratic questioning of students and to challenge them in organized thought. Each of these forms mentioned should be considered in the development of a common teaching model.

Quantitative rubrics cannot stand alone in nursing education in the evaluation of a student's ability to critically reason. The use of reflective journaling was a common finding in the interview sessions. Faculty spoke of using journaling to allow the student to explore patient care principles and to authentically self-evaluate. Students and faculty rely heavily on the open communication techniques hallmark of nursing interaction and feedback for clinical guidance (Herron et al., 2016). As a result of these findings, a trial of reflective journaling in two core nursing courses at Rappahannock Community College has been implemented. At the time of

writing, this is proving to be a positive change bringing results for students in the nursing program. The journals give the students a voice and are helping them to be authentic in their self-evaluation.

Faculty participants also reported the use of conferencing in the provision of feedback and idea sharing. Conferencing is a tool used by most clinical educators to get on the spot feedback from nursing students as they move throughout their clinical day. A look at pre-, mid-, and post-conference techniques by Gonzalez (2018) revealed that students do well when faculty provide verbal feedback to help guide their thinking during the clinical experience. Each participant in this study described some form of conferencing in the assessment process of student understanding. They all collectively agreed that conferencing was a time to provide on the spot feedback and correct things that were misunderstood in the clinical day.

While faculty all agreed that an understanding of self- and concept-based curricula were important they also stressed the importance of time management as students learn to be a safe novice nurse. The Lasater Clinical Judgment Rubric (2007) discussed in Chapter Two, defines the core principles of effective nursing practice as the ability to notice, interpret, respond, and reflect. Each faculty participant spoke to the student's need to complete an initial assessment (notice), gather more data to provide care (interpret and respond), and utilize data to (reflect) upon how they can provide safe effective care. The current study consistently supported the need for students to be authentic in their reflection to keep patients safe. It is important to use these findings as faculty and health care organizations work to provide safe patient care outcomes. A nurse that cannot reflect, cannot effectively care for others.

In each interview, faculty explored the holistic principles thought necessary to become a novice nurse. They noted how time management was an essential element to produce strong

reasoning and priority setting in clinical situations. In a review of concept-based learning at the College of Southern Maryland, Gonzalez (2018) was able to use the Lasater tool and Tanner's clinical model to define weekly activities that support teaching and learning in a concept-based method. Gonzalez (2018) adapted learning activities to support the nurse-like thinking necessary for safe effective care. Faculty in this study reported the need to be prescriptive in the beginning outlining the activities of patient care but then expressed that over time they expected students to begin to develop their own plans. The development of nursing skills is essential to the safety of our population. As the nursing shortage continues it will be important to use this research for educators to develop safe practitioners to answer the call for nurses nationwide.

Summary

Whether pre or post pandemic faculty all agreed that there was a combination of techniques to produce strong clinical reasoning skills in the novice nurses at their rural schools. They agreed with the use of current research to drive teaching practices in bedside clinical reasoning. The freedoms of various clinical opportunities and face-to-face learning prior to the COVID-19 pandemic forced nurses to be creative when things were forced to change.

Each emergent theme in this study aligns with the current literature review in Chapter Two. The findings in this study further support the need for future research on clinical teaching practices. Faculty still cannot agree on one teaching method, but all collectively agree that a common model would be helpful to produce strong nurse graduates in the rural VCCS nursing programs and beyond. Academic leaders and healthcare administrators should use these important findings to enhance their organization’s ability to procure safe novice nurses that pride themselves on a culture of safety and quality care outcomes.

Discussion, Implications, and Conclusion

The development of strong nurse graduates is a passion of mine that continues to be a topic of importance in nursing education, both in the VCCS and worldwide. Nursing educators in the VCCS have two years of college leading to an associate degree student to guide them in nurse-like thinking to increase patient safety in the communities where they live and work. In this study, the passion of nurse educators in rural community colleges to develop graduates that provide safe effective care is evident. The nursing faculty participants in this study consistently reported a strong desire to impact the profession through the teaching of bedside clinical reasoning.

In Chapter Four, I reported the findings of this study on faculty perceptions of teaching bedside clinical reasoning. The themes identified in this research provided new ideas for the teaching of clinical education at the patient bedside. Nursing faculty should use this study to create a common clinical teaching model that produces strong thinkers. Administrators and health care leaders should use this work to produce quality patient care outcomes in their communities of interest.

There are a limited number of faculty in the VCCS rural programs and the nursing shortage continues. Currently there is ten nurses for every one thousand patients in the state of Virginia ("The U.S. Nursing shortage: A state-by-state breakdown", 2022). Rural horseshoe community colleges in Virginia continue in their quest to offer educational opportunities beyond high school. Healthcare is a growing field in need of nursing graduates who can care for an aging population (Herron et al., 2016). Rural communities already struggle with lower income, fewer employment opportunities, lower educational attainment, and a less access to health care for an aging population. Many facilities have experienced the loss of experienced nurses to larger

urban areas that offer a higher rate of pay. As a result, rural community college nursing programs continue to face multifaceted challenges as the new normal of nursing education is ever changing in the COVID-19 era.

Nursing faculty in this study clearly identify the need to produce safe effective novice nurses. They discuss the use of various models to teach clinical reasoning and they all agree that a common model would be effective. My hope is that this study will begin conversations that will help identify a common clinical teaching model which can help to ease the nursing shortage as new graduates are entering the workforce. It is probable that the development of this model will help provide a comprehensive approach in the teaching of clinical reasoning at the patient bedside. Nursing scholars should be encouraged to use this clinical teaching model to guide critical reasoning skills that will produce quality care outcomes for patients in their rural communities. This model should be open to interpretation of how to deliver the details of the individual nursing education. Nurse educators should be able to determine how to best meet their individual student needs as they use the model to guide nurse-like thinking.

The development of a common model would not only allow for conformity and commonality in nursing education, but it would provide new faculty with a guide for producing nurses who are strong clinical thinkers. Many times, registered nurses enter into teaching understanding the concepts of nursing education, yet they struggle to teach a topic comprehensively. New faculty have a hard time teaching students to think like a nurse. As novice faculty are hired into the profession, guidance on how to teach at the bedside is needed. The development of a comprehensive clinical teaching model linked to the concept-based curriculum would provide guidance to new educators. This study has a wealth of information for teaching practices that have proven to be comprehensive in clinical reasoning. Each participant

in this study shared ideas and methods used in the teaching of clinical studies at the bedside. However, no one agreement has been reached by nurse educators. This further supports the original purpose for this study.

Nurse educators do, however, agree that a model is needed for clinical teaching but still cannot agree on any one method. But is one method best? What makes it best? Perhaps the reality is that many *best practices* exist and a combination of activities, assessments, rubrics, and authentic self-reflection tools, compiled by the educator to address their students' needs on an individual level is *best*. Nursing scholars agree that not all students are created the same. Each student has diverse learning needs and faculty must be able to adjust bringing the student to their full potential. This important work highlighted multiple methods of teaching clinical practice that can help produce strong graduates if nurse educators can meet students where they are.

A common clinical model should be developed within the VCCS. Each of the 19 nursing programs should gather to discuss a framework for clinical teaching. Although the model will be common, much like that of the concept-based curriculum (CBC), faculty in each school should be free to deliver the model on an individual and program level. A rigid set of guidelines is not necessary for a foundational model to enhance clinical teaching. Each school should have a voice and the faculty teams should not be boxed in to a specific method. As is the premise of the CBC, faculty should be free to deliver this model as they see fit for their student body and healthcare demographics.

Nursing faculty at rural Virginia community colleges are helping students learn life skills as much as they are clinical reasoning and patient care skills. The students often have well-documented challenges with food and housing insecurity, childcare issues, and financial aid

constraints. Nursing faculty in community colleges are merely seeking a way to a better quality of life for their students.

Becoming a nurse in one's community can be life changing. It is the responsibility of the community college nurse educator to produce graduates who can impact their communities for the greater good and each of the educators in this study shared a passion for changing lives. These faculty work hard to help students overcome these obstacles and the teaching of nurse-like thinking is often overshadowed by socioeconomic challenges. The VCCS is committed to providing students an opportunity to better their lives. Nursing faculty want these students to succeed.

This study advances efforts of nursing educators to continue to produce graduates to fill the workforce as compassionate healthcare professionals that can think critically and respond to a deteriorating patient condition (Liaw et al., 2017). This study contributes to the development of critical reasoning models in nursing education programs for the teaching of bedside clinical practice. This study should not only affect local communities but impact the nursing profession as a whole as educators and policy makers work to provide an answer to the national nursing shortage. To fix the shortage of nurses is to produce graduates that enter the workforce ready to impact the culture of care hallmark to the nursing profession.

Implications for Action

The national nursing shortage is more severe than ever, ranking nursing as the third most in demand job in the United States in 2019 ("The U.S. Nursing shortage: A state-by-state breakdown", 2022). Nursing professionals should be interested in this research because the development of strong clinical teaching practice leads to the development of a safe practitioner

needed to fill a void in the nursing profession. This study contributes to addressing the nursing shortage and healthcare professionals should listen.

It is important for educators to understand how to teach clinical reasoning. If colleges and universities are not able to produce strong nursing graduates, health care will continue to suffer the perils of staffing shortages; there will not be enough nurses to care for the aging population. A strong clinical education gives graduates the confidence to make life altering decisions in a matter of moments. Nurses are the backbone of many health care organizations and if more nurses are not educated to fill the void our communities will continue to be at risk.

As educators seek to fill the shortage with capable graduates it is important for academic leaders to evaluate teaching methods for clinical reasoning. In the wake of COVID-19 new teaching modalities in clinical reasoning education are needed to meet the changing world of education. This study asserts that a combination of online and blended learning platforms can be used to teach this important skill. Nursing education is changing and nurse educators must be creative in the delivery of clinical education. This study should be used to develop online learning applications for critical pathways necessary in the provision of safe care. These findings should allow educators to create new and innovative methods to teach nursing across a computer screen.

Nursing program leaders should use this study to create a common clinical model for teaching bedside thinking. A common clinical model easily pairs with the Concept Based Curriculum and should provide a framework for clinical teaching while promoting freedom in the way faculty choose to deliver this at their individual school. In conferences and peer group meetings faculty are always seeking best ways to elicit clinical reasoning thought necessary to provide safe effective patient care. This study explored many facets used to produce strong

clinical reasoning skills and nurse educators should look at these themes to enhance their method of bedside teaching.

Community college nurse educators should act upon these findings by creating an interinstitutional partnership and collaborate to create this common conceptual model. As the pandemic continues into the current academic year, it is imperative that nurse educators work to grow the profession producing associate degree nurses ready to enter the workforce as strong candidates to impact their communities of interest. This study provides a basis to encourage community college educators to form a task force to begin work on a collaborative teaching project that can be used by educators nationwide.

There is not an agreement on the best way to teach clinical reasoning and although this study does not seek to solve a problem it should help start a conversation on progressive educational practices in the teaching of bedside clinical reasoning. Regular meetings of the Deans and Directors in the VCCS should be instituted to encourage collaboration to form a common conceptual clinical model. A task force of VCCS nurse educators should be formed to continue this important work. This study should help change the way clinical education is delivered making a difference in health education and henceforth the nursing profession.

Recommendations for Further Research

Although this study begins the important work necessary for the advancement of clinical reasoning education, it is important to consider further research opportunities. This study was delimited to include only rural schools in the VCCS. This study could be replicated among all VCCS schools as well as community colleges in other states. I also believe that a study with focus groups of nurse educators will produce more information and rich conversation on shared practices.

Community college leaders would benefit from additional research focused on how a common clinical model could be applied in nursing education programs. I would also explore how using a blended learning environment affects the first-time pass rates of community college nursing students on the National Council for Licensure Exam (NCLEX). The difficulties shared by these faculty participants with teaching during the pandemic support the need for this type of work as blended learning is now the new normal of nursing education. The NCLEX measures whether the novice nurse is ready to practice, and I believe that more research is needed on clinical judgment education to define nurse preparedness.

Chapter Summary

This study on the faculty perceptions of teaching clinical reasoning at the patient bedside has yielded a rich exploration of things that faculty find value in as they seek to produce safe graduates in their communities of interest. Nurse educators are passionate about teaching students to critically reason and think like a nurse. Whether during the pandemic or before, these faculty have worked tirelessly to find the best methods to stretch their students' thinking to a new element providing safe effective patient care.

Nursing faculty in rural Virginia programs have a rare opportunity to lead students to nurse-like thinking in new and innovative ways. The nursing graduate in the rural community college is asked to emerge with strong clinical skills that will quickly allow them to fill shortages faced by an aging population. The graduate must be able to think, adjust, and self-evaluate as every day on the job remains unknown. The passion shared by the faculty in this study should be an inspiration to nurse educators everywhere as these nurses seek to impact the world, one student, one patient, at a time.

REFERENCES

Alfayoumi, I. (2019). The impact of combining concept-based learning and concept-mapping pedagogies on nursing students' clinical reasoning skills. *Nurse Education Today, 72,* 40-46. doi: 10.1016/j.nedt.2018.10.009

Bartlett, R., Bland, A. R., Rossen, E., Kautz, D., Benfield, S., & Carnevale, T. (2008). Evaluation of the outcome-present state test model as a way to teach clinical reasoning. *Journal of Nursing Education, 47*(8)*,* 337-344. doi: 10.3928/01484834-20080801-01

Benner, P. (1984). *From novice to expert*. Addison-Wesley. doi:10.1002/nur.4770080119

Campbell, E. (2008). Gaining insight into student nurses' clinical decision-making process. *Aquichan, 8*(8)*,* 19-32.

Carlson, L., Crawford, N., & Contrades, S. (1989). Nursing student novice to expert – Benner's research applied to education. *Journal of Nursing Education, 28*(4)*,* 188-190.

Carvhalo, E., Oliveira-Kumakura, A., & Morias, S. (2017). Clinical reasoning in nursing: Teaching strategies and assessment tools. *Revista Brasileira de Enfermagem*,*70*(3). doi: 10.1590/0034-7167-2016-0509

Chang, H. S. (2020). Online learning in pandemic times. *Revista Romeneasca Pentru Educatie Multidimensionala. 12*(2)*,* 111-117. https://doi.org/10.18662/rrem/12.2Sup1/296

Dahlberg, H., & Dahlberg, K. (2020) Open and reflective lifeworld research: A third way. *Qualitative Inquiry. 26(5)* 458-464. doi: 10.1177/1077900419836696

Dahlberg, H., & Dahlberg, K. (2019). The question of meaning – A momentous issue for qualitative research. *International Journal of Qualitative Studies on Health and Wellbeing. 14*, 1-7. https://doi.org/10.1080/17482631.2019.598723

Gerog, C., Walin, E., Jirwe, M., Karlgren, K., & Ulfvarson, J. (2019). Psychometric properties of the virtual patient version of the Lasater clinical judgment rubric. *Nurse Education in Practice, 38*, 14-20. https://doi.org/10.1016/j.nepr.2019.05.016

Gonzalez, L. (2018). Teaching clinical reasoning piece by piece: A clinical reasoning concept-based method. *Journal of Nursing Education 57*(12)*,* 727-735. doi:10.3928/01484834-20181119-05

Guerrasio, J., & Aagaard, E. (2014). Methods and outcomes for the remediation of clinical reasoning. *Journal of General Internal Medicine*, *29*(12), 1607-1614. doi: 10.1007/s11606-014-2955-1

Harmon, M. M., & Thompson, C. (2015). Clinical reasoning in pre-licensure nursing students. *Teaching and Learning in Nursing. 10*, 63-70. https://doi.org/10.1016/j.teln.2014.12.001

Hays, D., & Singh, A. (2012). *Qualitative inquiry in clinical and educational settings*. The Guilford Press.

Hege, I., Kononowicz, A., Berman, N., Lenzer, B., & Kiesewetter, J. (2018). Advancing clinical reasoning in virtual patients-development and application of a conceptual framework. *GMS Journal for Medical Education, 35*(1) doi: 10.3205/zma001159

Heidegger, M. (1927/2011). *Being and time*. Harper Collins Publishers, Inc.

Heilferty, C. (2018). Weathering the perfect storm: A multifaceted strategy to improve nursing

student retention. Presented at the Nursing Education Research Conference 2018. Philadelphia. PA. https://www.reflectionsonnursingleadership.org/themes/NERC2018

Henderson, V. (1982). The nursing process –Is the title, right? *Journal of Advanced Nursing, 7*, 103-109. doi:0.0309.2402/82/0300-0000$02.00

Herron, E., Sudia, T., Kimble, L., & Davis, A. (2016). Prelicensure baccalaureate nursing students' perceptions of their development of clinical reasoning. *Journal of Nursing Education, 55*(6)*,* 329-335.

Huckabay, L. (2009). Clinical reasoned judgment and the nursing process. *Nursing Forum, 44*(2), 72-78.

Kautz, D., Kuiper, R., Pesut, D. Knight-Brown, P., & Daneker, D. (2005). Promoting clinical reasoning in undergraduate nursing students: Application and evaluation of the Outcome Present State Test (OPT) model of clinical reasoning. *International Journal of Nursing Scholarship*. doi: 10.2202/1548-923X.1052

Kaya, H., Senyuva, E., & Bodur, G. (2018). The relationship between critical thinking and emotional intelligence in nursing students: A longitudinal study. *Nurse Education Today, 68*, 26-30. doi: 10.1016/j.nedt.2018.05.024

Kim, K. (2006). Perceived competency of senior nursing students after their clinical preceptorship programs. *In The 17th International Nursing Research Congress Focusing on Evidence-Based Practice.* doi: 10.1016/j.profnurs.2007.01.019

Koch, J., Ramjan, L., Everett, B., Maceri, A., Bell, K., & Alamonson, Y. (2019). "Sage on the stage or guide on the side" –Undergraduate nursing students' experience and expectations

of bioscience tutors in a blended learning curriculum: A qualitative study. *Journal of Clinical Nursing, 29*, 863-871. doi: 10.1111/jocn.15140

Koharchik, L., Caputi, L., Robb, M., & Culleiton, A. (2015). Fostering clinical reasoning in nursing students: How can instructors in practice settings impart this essential skill? *American Journal of Nursing, 115*(1), 58-61. doi: 10.1097/01.NAJ.0000459638.68657.9b

Leedy, P., & Ormrod, J. (2019). *Practical research planning and design.* 12th ed. Pearson Education Inc.

Liaw, S., Rashasegaran, A., Wong, L., Deneen, C., Cooper, Levett-Jones, T., Goh, H., & Ignacio, J. (2017). Development and psychometric testing of a clinical reasoning evaluation simulation tool (CREST) for assessing nursing students' abilities to respond to clinical deterioration. *Nurse Education Today, 62,* 74-79. doi: 10.1016/j.nedt.2017.12.009

Meriser, S., Larue, C. & Boyer, L. (2018). How does questioning influence nursing students' clinical reasoning in problem-based learning? A scoping review. *Nurse Education Today 2018*(65), 108-115. https://doi.org/10.1016/j.nedt.2018.03.006

Moawad, R. A. (2020). Online learning during the COVID-19 pandemic and academic stress in university students. *Revista Romeneasca Pentru Educatie Multidimensionala, 12*(1Sup2), 100-107. https://doi.org/10.18662/rrem/12.1sup1/252

Noon, E. (2018). Interpretative Phenomenological Analysis: An appropriate methodology for education research? *Journal of Perspectives in Applied Academic Practice, 6 (1*). 75-83.

Pesut, D. J., & Herman, J. (1999). *Clinical reasoning: The art and science of critical and creative thinking.* Cengage Learning.

Poole, N. M. (2018). Looking inward: Philosophical and methodological perspectives on

phenomenological self-reflection. *Nursing Science Quarterly*, *31*, 245-252. https://doi.org/10.1177/0894318418774912

Raoufi, S., Manoochehri, H., Zarifsanaiey, N., & Nikravanmofrad, M. (2020). Developing an e-learning model for nursing education. *Journal of Clinical and Diagnostic Research, 14*(1), LC11-LC16. doi: 10.7860/JCDR/2020/43134.13451

Suddick, K. M. Cross, V., & Vuoskoski, P. (2020). The work of hermeneutic phenomenology. *International Journal of Qualitative Methods*. 1-14. https://doi.org/10.1177%2F1609406920947600

Tanner, C. A. (2006). Thinking like a nurse: A research-based model of clinical judgment in Nursing. *Journal of Nursing Education, 45,* 204-211.

Thi Thai, N., De Wever, B., & Valcke, M. (2019). Face-to-face, blended, flipped, or online learning environment? Impact on learning performance and student cognition. *Journal of Computer Assisted Learning, 36,* 397-411. doi:10.1111/jcal.12423

Theobold, K. A., & Ramsbotham, J. (2019). Inquiry-based learning and clinical reasoning scaffolds: An action research project to support undergraduate students' learning to 'think like a nurse'. *Nurse Education in Practice, 38*, 39-65. https://doi.org/10.1016/j.nepr.2019.05.018

Turner, G. W., & Crane, B. (2016). Teaching and learning qualitative methods through the dissertation advising relationship: Perspectives from a professor and a graduate. *Qualitative Social Work*, *15*, 346-362. https://doi.org/10.1177/1473325015626260

The U.S. Nursing Shortage: A State-by-state breakdown. (2022, March 2) In NurseJournal. https://nursejournal.org/articles/the-us-nursing-shortage-state-by-state-breakdown/

Vagle, M. (2018). *Crafting phenomenological research*. 2nd ed. Routledge.

Vagle, M., Hughes, H., & Durbin, D. (2009). Remaining skeptical: Bridling for and with one another. *Field Methods. 21*(4), 347-367. doi: 10.1177/1525822X09333508

van Wyngaarden, A., Leech, R., & Coetzee, I. (2019). Challenges nurse educators experience with development of student nurses' clinical reasoning skills. *Nurse Education in Practice.* doi: 10.1016/j.nepr.2019.102623

Wosinski, J., Belcher, A.E., Durrenberger, Y., Allin, A., Stormacq, C., & Gerson, L. (2018). Facilitating problem-based learning among undergraduate nursing students: A qualitative systematic review. *Nurse Education Today. 2018*(60), 67-74. https://doi.org/10.1016/j.nedt.2017.08.01

Wuryanto E., Rahayu G. R., Emilia O., & Harsono, O. A. P. (2017). Application of an outcome present test-peer learning model to improve the clinical reasoning of nursing students in the intensive care unit. *Annals of Tropical Medicine and Public Health, 2017*(10), 657-653. doi:10.4103/ATMPH.ATMPH_201_17

Yusoff, M. S. B., Hadie, S. N. H, Mohamad, I., Draman, N., Ismail, M. A. A., Wan Abdul Rahman, W. F., Mat Pa, M. N., & Yaacob, N. A. (2020). Sustainable medical teaching and learning during the COVID-19 pandemic: Surviving the new normal. *Malaysian Journal of Medical* Sciences*, 27*(3)*,* 137–142. https://doi.org/10.21315/mjms2020.27.3.14

APPENDICES

Appendix A: Survey Instrument

Domain	Question
Faculty Demographics	How long have you been a nurse educator? Less than 5 years 5-10 years Greater than 10 years
	How many days a week do you teach clinical? 0 1 2 >2
	On average how many students are in your clinical group each semester? (Raw Number)
	What percentage of students enrolled in your nursing program are rural? <20 21-40 41-60 61-80 81-100
	Are you willing to participate in two 20-to-30-minute interview sessions between September and November of 2021?

Yes
No

Thank you for taking the time to complete this questionnaire. Are you willing to share your email, so I may collect a consent form for your participation in this study? You contact information is confidential to me only and will be destroyed.

Appendix B: Email Correspondence

Dear Fellow Nurse Educator,

I am requesting participation in a research study concerning teaching practices in clinical education. I propose to complete a phenomenology of faculty perceptions in the Virginia Community College System (VCCS) associate degree programs as they relate to bedside teaching practices. As a fellow nurse educator in the VCCS, I am hoping to explore practices and personal experiences in teaching clinical reasoning at the patient bedside to begin a conversation amongst nurse educators. As we gather in conference and peer groups, one question I often hear is "How do you do clinical?" This study will help promote idea sharing and allow a voice for all methods and frameworks founded in our programs.

Many things have changed during the COVID-19 pandemic in nursing education. Therefore, I also hope to explore the effect the COVID-19 pandemic has had on your ability to provide clinical reasoning education. This study will be guided by the following research questions:

1. What are the experiences of clinical nurse educators in the Virginia Community College System (VCCS) who directly supervise nursing students at the patient bedside?
2. How do nurse educators describe safe judgment and clinical reasoning of students in their bedside clinical teaching practices?
3. How do the restrictions of the COVID-19 pandemic affect the nurse educator's ability to teach clinical reasoning?

I believe the exploration of this topic will help nurse educators begin to develop a comprehensive plan for teaching clinical reasoning and thusly creating strong nurse graduates in our communities.

If you are willing to participate in this study, please complete the following Google Form to declare your interest.

https://docs.google.com/forms/d/1rZMKehWxu10QmlpxvZeVZefwzE-by2F-XOfhoHct0gQ/edit

Faculty participants must have at least five years of clinical teaching experience. I plan to complete two interview sessions. These sessions will last approximately sixty minutes and will be recorded on Zoom for transcription and data collection purposes. Any information shared in the interviews will be confidential and used only for the purpose of completing my doctoral study for the Community College Leadership Program at Old Dominion University. For your participation I will provide a ten-dollar Starbuck's gift card.

If you have any questions, please do not hesitate to contact me at the email or phone number below.

Best regards,
Becky White, MSN, RN, CNE
Associate Professor of Nursing, Rappahannock Community College
Doctoral Candidate, Old Dominion University
804-815-9381
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Appendix C: Interview Protocol

First Interview Protocol

Considerations prior to sessions: Zoom interview sessions will be scheduled as participants are available and faculty will be emailed a consent form prior to beginning the session. They will be asked to return the consent form as they schedule their interview session. Cameras of both the interviewer and interviewee will be on if the participant has agreed.

Begin Interview session: I am going to press record. My name is Rebecca White. I have your informed consent that you sent in email form. Will you please verify that you did sign and return your informed consent document to me? Do you agree to participate in this interview session and be recorded?

Thank you for agreeing to interview for my dissertation project. The purpose of my study is to explore faculty perceptions of bedside teaching practices in the clinical setting. I plan to study nursing faculty within the Virginia Community College System (VCCS). With the onset of the concept-based curriculum adopted in 2016, the ability to teach clinical reasoning and judgment may or may not have changed. Faculty have often met in peer group and conference setting to discuss these practices and the faculty perceptions about these practices are important to

understand. This interview is open for you to share anything that you feel is important in the teaching of bedside clinical reasoning. As a reminder, I will use pseudonyms to protect your identity and interview responses. All data will be kept on the cloud and accessible only through my password protected ODU Google Account. Your time is valuable, and I appreciate your support.

Again, thank you for your time. We will now begin the interview. Please think back to the last 2 years of your teaching experience beginning with March 2019 when the pandemic was identified. The following questions will be from that time frame.

- What constitutes strong clinical reasoning skills and behaviors in associate degree nursing students and graduates?
- What were your experiences with developing students clinical reasoning during the COVID-19 pandemic?
- What were your experiences helping students develop clinical reasoning in a virtual clinical environment if you used them?
- Is there anything else about helping students develop clinical reasoning at the bedside during the COVID 19 pandemic that you would like to discuss or add?

Thank you for reflecting on the past two years. The next part of the interview will address your personal clinical teaching experiences pre-pandemic. I invite you to think back to the 3 years prior to the onset of COVID-19. This series of questions seeks to explore your personal experiences with bedside clinical teaching.

- What worked best for you in your teaching practice to develop clinical reasoning skills in your students? How is that different or not during the pandemic?

- What has worked best for you in evaluating a student's ability to demonstrate clinical reasoning and judgment?
- What do you think is the most important aspect of clinical reasoning at the patient bedside and how do we best evaluate the student?
- What works best for you to give meaningful feedback to the students in evaluation of their clinical reasoning and judgment?

I do not intend to reveal your identity in the reporting of findings and will use pseudonyms to protect your anonymity. This final question is merely to help me consider context as I analyze the data for common themes.

- How many years of nurse educator experience have you had?

Thank you for your time.

- Do you have anything you would like to add that may be of value to this study?

Appendix D: Second Interview Protocol

Considerations prior to sessions: Zoom interview sessions will be scheduled as participants are available and faculty will be emailed a consent form prior to beginning the session. They will be asked to return the consent form as they schedule their interview session. Cameras of both the interviewer and interviewee will be on if the participant has agreed.

Begin interview sessions: (Press record) Thank you for agreeing to a second interview to explore faculty perceptions of bedside teaching practices in the clinical setting. As you know, the purpose of this study is to explore faculty perceptions of best teaching practices at the patient bedside in VCCS nursing schools with a rural student population. Thank you for the written consent that I received in advance via email for this follow up session. As a reminder, I will use pseudonyms to protect your identity and interview responses. All data will be kept on the cloud and accessible only through my password protected ODU Google Account. I will be recording this Zoom session and will use the recording for transcription purposes. Do you agree to the recording, and would you be willing to verify the transcripts of this session?

- How many years of nurse educator experience have you had?
- Since the time of our original interview, is there anything you would like to add or clarify?

- I would like to clarify…..

Appendix E: Informed Consent

INFORMED CONSENT DOCUMENT

OLD DOMINION UNIVERSITY

PROJECT TITLE: Faculty Perceptions of Teaching Clinical Reasoning at the Patient Bedside

INTRODUCTION
The purposes of this form are to give you information that may affect your decision whether to say YES or NO to participation in this research, and to record the consent of those who say YES. The title of this research project is Faculty Perceptions of Teaching Clinical Reasoning at the Patient Bedside. Subjects will participate in one-on-one interviews conducted through Zoom video-conferencing. Digital voice recorders will also be used to ensure the data are captured and maintained.

RESEARCHERS
Responsible Principal Investigator: Dr. Mitchell R. Williams, Associate Professor, Darden College of Education and Professional Studies, Educational Foundations and Leadership
Investigator: Rebecca G. White, PhD Candidate, Darden College of Education and Professional Studies, Educational Foundations and Leadership

DESCRIPTION OF RESEARCH STUDY
The purpose of this phenomenological study will be to explore the faculty experience of teaching clinical reasoning at the bedside to community college nursing students in level one or two of an associate degree nursing program in colleges in the Virginia Community College System (VCCS) with at least a 50% rural student body, using a blended online and face-to-face environment. Clinical reasoning is defined as the ability of the nursing student to make safe practice decisions on behalf of the patient in varying degrees of context from simple to complex processes. For this study, faculty experience will be explored using open-ended questions focused on educational practices in teaching clinical reasoning. Online delivery of clinical reasoning experiences will also be explored with nurse educators that have encountered a change in delivery methods of clinical teaching during the COVID 19 pandemic.

If you decide to participate, then you will join a study involving research on bedside teaching practices in the VCCS for clinical reasoning education. Your responses will allow researchers to determine ways for institutions to better understand the practices explored in nursing education and the models and frameworks you use. If you say YES, then your participation will last for no more than two 15-to-20-minute interview session through video-conferencing (Zoom) and digital voice recording. You will also agree to read the transcript of your interviews for accuracy. A minimum range of 10 clinical nurse educators with at least 5 years of bedside teaching experience will participate in separate interviews.

RISKS AND BENEFITS

RISKS: If you decide to participate in this study, then you may face a risk of being linked to your interview responses. Negative responses could be damaging to your professional status. To reduce these risks, the researcher will not identify participants, their respective job titles, or the community colleges. The researcher will use pseudonyms to maintain confidentiality and protect all identities. The names of the community colleges will be changed, and the geographic location will only be described as being located in one state in the United Sates.

BENEFITS: The main benefit to you for participating in this study is the opportunity to share teaching practices and perceptions on how to best provide clinical education. In addition, you may benefit from articulating learning outcomes for your program, a valuable skill for future educational and professional endeavor.

COSTS AND PAYMENTS

The researchers are unable to give you any payment for participating in this study. The researcher will provide a ten-dollar Starbuck's gift card for your completed participation in this study.

NEW INFORMATION

If we find new information during this study that would reasonably change your decision about participating, then we will give it to you.

CONFIDENTIALITY

We will take reasonable steps to keep private information confidential. We will remove identifiers from all identifiable private information collected. The results of this study may be used in reports, presentations, and publications; but the researcher will not identify you. Of course, your records may be subpoenaed by court order or inspected by government bodies with oversight authority. The recorded video-conferencing interviews will be destroyed after they are transcribed. All documentation pertaining to the study will be stored in a password-protected file in the researcher's office.

WITHDRAWAL PRIVILEGE

It is OK for you to say NO. Even if you say YES now, you are free to say NO later, and walk away or withdraw from the study -- at any time. Your decision will not affect your relationship with Old Dominion University, or otherwise cause a loss of benefits to which you might otherwise be entitled.

COMPENSATION FOR ILLNESS AND INJURY

If you say YES, then your consent in this document does not waive any of your legal rights. However, in the event of harm arising from this study, neither Old Dominion University nor the researchers are able to

give you any money, insurance coverage, free medical care, or any other compensation for such injury. In the event that you suffer injury as a result of participation in any research project, you may contact Dr. Mitchell R. Williams, the principal investigator for this study, at (757) 683-4344 or mrwillia@odu.edu, Dr. John Baaki, the current chair of the Darden College of Education and Professional Studies Human Subjects Review Committee at 757-683-7055 or jbaaki@odu.edu, and current IRB chair at Old Dominion University, or the Old Dominion University Office of Research at 757-683-3460 who will be glad to review the matter with you.

VOLUNTARY CONSENT

By signing this form, you are saying several things. You are saying that you have read this form or have had it read to you, that you are satisfied that you understand this form, the research study, and its risks and benefits. The researchers should have answered any questions you may have had about the research. If you have any questions later on, then the researchers should be able to answer them:

Dr. Mitchell R. Williams, (757) 683-4344
Rebecca G. White, (804) 815-9381

If at any time you feel pressured to participate, or if you have any questions about your rights or this form, then you should call Dr. John Baaki , the current IRB chair, at 757-683-7055, or the Old Dominion University Office of Research, at 757-683-3460.

And importantly, by signing below, you are telling the researcher YES, that you agree to participate in this study. The researcher should give you a copy of this form for your records.

Subject's Printed Name & Signature	**Date**

INVESTIGATOR'S STATEMENT

I certify that I have explained to this subject the nature and purpose of this research, including benefits, risks, costs, and any experimental procedures. I have described the rights and protections afforded to

Investigator's Printed Name & Signature	**Date**

Appendix F: Exempt Letter ODU

OLD DOMINION UNIVERSITY **OFFICE OF THE VICE PRESIDENT FOR RESEARCH** **Physical Address**

4111 Monarch Way, Suite 203
Norfolk, Virginia 23508
Mailing Address
Office of Research
1 Old Dominion University
Norfolk, Virginia 23529
Phone(757) 683-3460
Fax(757) 683-5902

DATE: September 2, 2021

TO: Mitchell R. Williams
FROM: Old Dominion University Education Human Subjects Review Committee

PROJECT TITLE: [1795845-1] Faculty Perceptions of Teaching Clinical Reasoning at the Patient Bedside

REFERENCE #:
SUBMISSION TYPE: New Project

ACTION: DETERMINATION OF EXEMPT STATUS
DECISION DATE:

REVIEW CATEGORY: Exemption category #2

Thank you for your submission of New Project materials for this project. The Old Dominion University Education Human Subjects Review Committee has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

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

If you have any questions, please contact John Baaki at (757) 683-5491 or jbaaki@odu.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Old Dominion University Education Human Subjects Review Committee's records.
- 1 - Generated on IRBNet

VITA

Rebecca White, MSN, RN, CNE
Gloucester, VA 23061
rwhit028@odu.edu

WORK EXPERIENCE

Associate Professor of Nursing Rappahannock Community College, 2013 - present

Faculty in leading edge state community college. Voted #1 in the state within the VCCS 2015/16. 100% Board Pass Rates 2017-2019 both LPN and ADN programs. TOPS certification for online instruction Summer 2016. Implementation of year one Concept-Based Curriculum in the state of Virginia 2016. Continued work on Concept-Based studies for Practical Nursing at the VCCS level. Continued development of course work to support concept-based learning, 2017- present.

Emergency Room Staff Nurse

Riverside Walter Reed Hospital - Gloucester, VA – 2019 - present

Experience in acute care and emergent needs in assessment, triage, safe patient care

Nursing Supervisor Williamsburg Sentara Regional Medical Center

Supervision of 126 bed hospital. Leadership and safe practice management.

EDUCATION

Ph.D. Doctoral Candidate, Old Dominion University, Community College Leadership

2018 - current

Certified Nurse Educator, National League for Nurses, 2018 to present

Certification in Concept-Based Curriculum Design and Pilot Implementation 2017

Decoding Clinical Judgment, ATI, 2020

Master of Science in Nursing, Leadership and Management, Walden University 2014

Registered Nurse, Riverside School of Professional Nursing 2004