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# The Impact of Short Papers on Clinical Decision Making Skills of Nursing Students

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The Impact of Short Papers on Clinical Decision Making Skills of Nursing Students

by

Tara R. Hayes

A thesis submitted to the faculty of  
Gardner-Webb University Hunt School of Nursing  
in partial fulfillment of the requirements for the  
Master of Science in Nursing Degree

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## Abstract

Clinical decision making and critical thinking are fundamental skills to ensuring the success of undergraduate nursing students. Nursing faculty, and specifically clinical nursing faculty, are responsible for encouraging the development of these types of skills as students work in direct patient care. Traditional methods of clinical evaluation include lengthy case studies, concept mapping, and discussion board participation. While these methods have been in effect for some time, clinical short paper assignments are a fresh, innovative way to challenge students as they refine their critical thinking and clinical decision making abilities. No statistically significant difference was found between the perceived level of clinical decision making before and after the implementation of short written assignments; however, the overall mean score of clinical decision making abilities did increase following the implementation of clinical short papers.

*Keywords:* Clinical decision making, clinical nursing education, short written assignments, clinical short papers, undergraduate nursing education, critical thinking, Clinical Decision Making in Nursing Scale

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## **CHAPTER I**

### **Introduction**

Over the past several years, researchers, educators, and students have grown to recognize the significance of critical thinking and clinical decision making skills in undergraduate nursing education (Carter, Creedy, & Sidebotham, 2015; Oermann, 1997; Walsh & Seldomridge, 2006). With the growing popularity of high-fidelity simulation and increased focus on direct patient care, it is imperative that students are equipped with tools to aid in the development of critical thinking and clinical decision making skills as they address complex healthcare situations. However, the time students get to interact in simulation and clinical is often limited and this, coupled with the fact that the clinical environment is becoming more and more intricate, can create difficult situations for students and faculty alike (Nielsen, 2013).

The nursing faculty assumes great responsibility to plan assignments for students that encourage this knowledge expansion, creativity, and critical thinking within time-constrained clinical experiences. Members of the clinical nursing faculty utilize a variety of measures to assess and evaluate student performance in the clinical setting as well as supplement their classroom instruction and improve critical thinking and clinical decision making abilities. Several renowned nursing educators are suggesting and investigating new ways of approaching these clinical assignments like short written assignments as opposed to extensive case studies, post-clinical online discussions, and concept mapping (Oermann, 2006; Oermann et al., 2015).

Findings have shown that only around 35% of new graduate nurses are meeting their expectations for critical thinking and clinical judgment (Del Bueno, 2005). This is

an astounding statistic that needs to be addressed starting in the nursing curriculum, and especially with hands-on patient care. The clinical nursing courses are often the setting where students begin to feel competent and confident in their abilities to provide complete, quality patient care. This requires knowledge from the classroom and practice from the skills laboratory to come together and cohesively create a student nurse who is eager and prepared for hands-on care. Throughout the nursing curriculum, students are introduced to and begin integrating the nursing process into their patient interactions and learn to critically and carefully work through this progression of ideas in providing overall safe, effective, and quality patient care (Papathanasiou, Kleisiaris, Fradelos, Kakou, & Kourkouta, 2014a).

### **Problem Statement**

While critical thinking and clinical decision making skills are taught and refined in the classroom, skills laboratory, and clinical setting, there is no substitute for direct patient interaction and experience for undergraduate nursing students who are being prepared to function independently as a nurse and member of a collaborative healthcare team. Lengthy case studies, concept mapping, and discussion boards currently serve as tools of evaluation for student learning and comprehension in the clinical setting. While these traditional methods have proven true over time, there are new, innovative ways to capture the attention of students, engage their critical thinking and clinical decision making skills, and improve general clinical functioning. Unfortunately, the area of research on the utilization of short papers to improve critical thinking and clinical decision making skills in undergraduate nursing education clinical courses is lacking.

Researching and testing are needed to solidify the value and encourage the implementation of short paper assignments in clinical nursing courses.

### **Justification of the Research**

Many researchers rationalize the fact that critical thinking and clinical decision making are imperative to nursing students' repertoires so that when they enter the field they will be prepared to recognize and solve problems, make decisions, complete thorough assessments, and apply appropriate interventions (Papathanasiou et al., 2014a). Critical thinking and clinical decision making skills should be acquired throughout classroom education, time in a skills laboratory, and clinical experiences. Unfortunately, there is often not enough emphasis on the development of these skills in the clinical setting and students are not given opportunities to explore and learn. Researchers suggest that assignments should be planned and structured to gradually build critical thinking skills throughout the undergraduate coursework (Walsh & Seldomridge, 2006). Del Bueno (2005) discusses the fact that there is perhaps an increasing emphasis on teaching content but less attention to the actual application of the knowledge. Papathanasiou, Tsaras, and Sarafis (2014b) suggest a reorganization of the clinical environment and opportunities to be innovative within a controlled environment. While research abounds on the topics of critical thinking and clinical decision making and their importance to undergraduate nursing students' success, there are only a handful of published works that discuss how short written assignments in the clinical setting can stimulate critical thinking and clinical decision making. Oermann (2006) notes that short assignments encourage critical thinking rather than students' summaries of other work and provides an unconventional type of clinical assignment. There is a gap in the research regarding the

implementation and effectiveness of short papers versus the longer assignments of traditional case studies. Oermann et al. (2015) discusses the need for research within nursing education that compares different writing tasks to help develop the best curriculum and assignments. It is necessary that researchers and educators examine short papers as a possible tool to aid in the transfer and expansion of critical thinking and clinical decision making skills to students within clinical nursing education.

### **Purpose**

Nursing students should be equipped with appropriate tools, armed with confidence, and provided with opportunities to acquire and polish critical thinking and clinical decision making skills. It is the responsibility of nurse educators to evaluate their students within the scope of the clinical environment to help students prepare to function independently as nurses and build confidence in their critical thinking and clinical decision making. Traditionally, this evaluational feedback has resulted from lengthy case studies, concept mapping, and discussion. Nurse educators, and specifically those in the clinical setting, should be aware of the literature that is published regarding clinical assignments and seek to implement the best practice for their students to develop their critical thinking and clinical decision making skills. The purpose of this Master of Science in Nursing Education thesis was to examine the use of short papers and their impact on the clinical decision making skills of students in the undergraduate nursing clinical setting. The researcher sought to discover the effectiveness of short written assignments to improve clinical decision making, especially in opposition to traditional evaluational tools utilized in clinical nursing courses.

### Research Question or Hypothesis

This research study aimed to answer the following research question:

What is the effect of short written clinical assignments on undergraduate nursing students' perception of their clinical decision making abilities within direct patient care?

### Theoretical or Conceptual Framework

The theoretical framework guiding this Master of Science in Nursing Education was David Kolb's Theory of Experiential Learning (1984). Kolb explains four distinct stages in the learning cycle that the student works through to demonstrate effective learning. Critical thinking develops as students work through the steps of experience, observation, conceptualization, and experimentation (Kolb, 1984). See Figure 1.

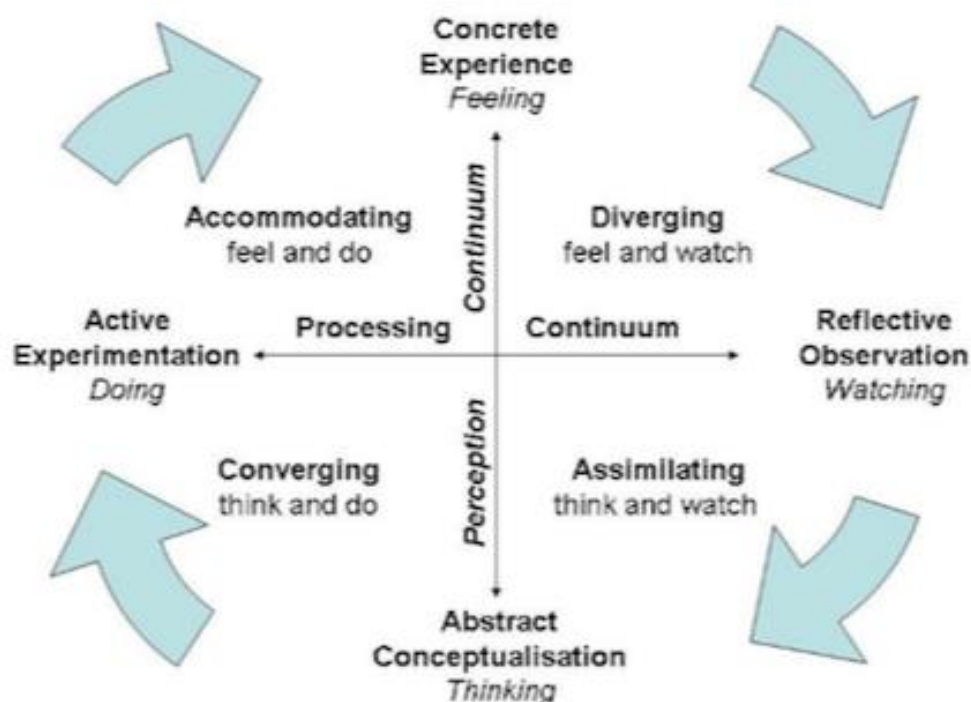


Figure 1: Experiential Learning Theory

The Theory of Experiential Learning guided this research as short papers were implemented into clinical nursing courses to improve the clinical decision making skills of undergraduate nursing students. When integrated into the clinical nursing courses, short written assignments allow students to flow through Kolb's Experiential Learning Cycle. The initial phase of concrete experience occurs when learners encounter a new situation within patient interaction or nursing skill implementation (McLeod, 2013). Once the concrete experience occurs, learners should progress in the learning cycle by observing and reflecting on the new experience. This can clear up discrepancies that exist as the learner evolves from a simple experience to understanding (Kolb, 1984). The third step of the cycle results from the observation as the learner begins to form new ideas or build onto an existing concept (McLeod, 2013). Finally, the learners engage in active experimentation where they put into practice the new knowledge, skills, and/or thinking they have developed (Kolb, 1984). This is not the culmination of the learning process, but a continuous cycle in which the learner is able to continuously investigate, grow, and refine learning, and in the specific case of this research, the critical thinking skills of the students.

Learning styles differ from student to student. Being self-aware about one's individual learning style can help that person to understand their weak points and capitalize on their strengths. Kolb (1984) describes different learning along two continuums, the processing continuum and the perception continuum. When the aforementioned learning cycle intertwines along these two continuums, the resulting learning styles are labeled as diverging, assimilating, converging, and accommodating (McLeod, 2013). Learners who fall in the diverging category are open-minded observers,

while those who learn by the accommodating style are very hands-on and function by instinct rather than analysis (Kolb, 1984). However, both styles depend a great deal on the aspect of feeling. On the other hand, the styles of assimilating and converging rely more on thinking and analyzing as opposed to feeling. Those who learn through assimilating rely on logical, clear explanations while those of the converging learning style like technical tasks and problem solving (McLeod, 2013).

Kolb's Theory of Experiential Learning (1984) involves various learning styles and a learning cycle making it an ideal framework for the development of critical thinking and clinical decision making skills of undergraduate nursing students in the clinical setting. This research measured the level of clinical decision making that nursing students possessed following the implementation of short written assignments into the clinical setting. The short assignments presented students with an experience in which they could then reflect on, conceptualize, and experiment with as they advanced their clinical decision making and expertise and applied the advancement to future situations and scenarios.

### **Definition of Terms**

For the purpose of this Master of Science in Nursing thesis, clinical decision making is "defined as a conscious, cognitive impression of how one goes about making decisions" (Jenkins, 1985, p. 222). Many years after the recognition and acknowledgement of the role of clinical decision making, researchers across the scientific fields began to expand and build upon this idea as it pertains to critical thinking and problem solving, especially in various healthcare settings. "Critical thinking in nursing is a purposeful, self-regulatory judgment associated in some way with clinical decision

making” (Turner, 2005, p. 276). Locsin (2001) and Turner (2005) have described clinical decision making as a synonymous term with critical thinking since it is a resulting product of proficient critical thinking skills. For the purpose of this paper, the terms may be used interchangeably. Short written assignments for clinical included those short in length (a paragraph for faculty-administered assignment and several paragraphs to two pages maximum for student response), not included in the evaluational grading for the course, specific to the outcomes of the course objectives, and designed in a way that avoids summarization but encourages individual, innovative thinking (Oermann, 1997; Oermann, 2006). These could be individual or group assignments. Clinical nursing education, for the purpose of this thesis, includes patient care and interaction in hospital-based or community health care settings.

### **Summary**

By way of this study, a group of undergraduate nursing students were followed as short written assignments were incorporated into their clinical coursework. This thesis delved into the clinical component of nursing education intertwined with addressing the need to develop and polish the critical thinking and clinical decision making skills of undergraduate nursing students. Kolb’s Theory of Experiential Learning (1984) was the guiding framework to implementing short papers into the clinical component of an undergraduate nursing program to evaluate their effectiveness in improving clinical decision making skills. The purpose of this Master of Science in Nursing Education was to investigate the impact that the implementation of short written assignments has on the development of clinical decision making skills of students in the clinical setting of undergraduate nursing. As important as critical thinking and clinical decision making



skills are to ensuring safe, quality, and complete patient care, it is necessary that the literature explore the use of short written assignments in the clinical settings of undergraduate nursing students.

## **CHAPTER II**

### **Literature Review**

Throughout the undergraduate nursing school curriculum, students are prepared and challenged to develop their critical thinking skills. When these students enter the nursing profession, they will be confronted with situations every day in which they will be required to critically think through high-energy, fast-paced, and difficult situations. The clinical environment, where students have an opportunity to be a part of “real-world” patient care experiences under the direct supervision of a nursing faculty member, is one of the best avenues for students to sharpen and refine their critical thinking skills. Nurse educators in these settings need to be aware of creative and unique assignments that can be given to students to aid in the expansion of their critical thinking skills surrounding patient interactions. This Master of Science in Nursing Education thesis sought to examine the impact that short written assignments within the clinical setting can have on the critical thinking skills of undergraduate nursing students.

### **Review of Literature**

The researcher conducted a thorough and investigative review of the literature to ensure a substantial knowledge base regarding the topics of interest and to justify the need for additional research regarding a specific branch of the subject areas. An electronic search of the University’s library database was conducted and the main sources utilized were EBSCO host and Cumulative Index for Nursing and Allied Health Literature (CINAHL) Plus. The researcher also conducted a search on the web-based search engine Google to further assess current literature. The search terms included: critical thinking, nursing, clinical, undergraduate, nursing education, clinical nursing

education, short assignments, short written assignments, short papers, Experiential Learning Theory in nursing education, clinical decision making, short papers AND nursing education, short papers AND critical thinking, clinical short papers, critical thinking AND nursing education, clinical decision making AND nursing education. This search was completed in order to determine the gaps that exist in the literature regarding clinical assignments and their effect on the critical thinking skills of undergraduate nursing students. Also, current literature was evaluated to examine if others have explored this topic and what the current findings include. The literature was classified into four categories including literature related to critical thinking and clinical decision making in nursing education, literature related to clinical assignments in nursing education, literature related to the theoretical framework, and literature related to instrument validity and reliability. Resulting from the search described above, there were six articles related to critical thinking and clinical decision making in nursing education, three related to clinical assignments in nursing education, two related to the theoretical framework, and two related to instrument validity and reliability. The additional sources were retrieved from reputable websites, university-level textbooks, and published reports.

### **Literature Related to Critical Thinking and Clinical Decision Making in Nursing Education**

Many researchers have examined the concept of critical thinking throughout healthcare settings and several have specifically analyzed the value of critical thinking skills during the years of nursing education and preparation for entry into nursing practice. Marchigiano, Eduljee, and Harvey (2011) piloted a study looking into the perceived confidence of students in regards to using their critical thinking skills when

developing a clinical care plan and journal. Fifty-one nursing students in the third year of a four-year program at a small liberal arts college in the northeastern United States made up the population for this descriptive, cross-sectional design study (Marchigiano et al., 2011). The authors constructed the instrument utilized, taking the constructs for critical thinking from Facione's (1990) earlier report on critical thinking in order to ensure content validity (Marchigiano et al., 2011). The study yielded that students felt significantly more confident in their critical thinking abilities when using a journal format as opposed to a care plan format. Students also reported that the journal format required significantly less time than the care plan format, recognizing the journal as a valuable and resourceful clinical assignment. The limitations of the study by Marchigiano et al. (2011) include a small, and largely female, sample selection, an instrument lacking testing for reliability, and data collection at a single time instead of over the course of the students' educational journeys. This opens the door for future research to examine various populations, different evaluational instruments for critical thinking, and more data regarding written clinical assignments in the undergraduate nursing setting.

In 2005, Dorothy Del Bueno published an article pertinent to nursing education and challenging to educators and students alike. In this article, Del Bueno (2005) reports no change from her previous findings in the 1990's that only a small portion of nursing graduates entering the profession meet employer expectations for critical thinking and clinical judgment. Data was collected over about a 10-year period from inexperienced and experienced (defined as working more than one active year) Registered Nurses. The Performance Based Development System was utilized as the instrument of data collection and is well tested across hundreds of health care agencies across the United States

producing valid and reliable results (Del Bueno, 1990, 1994). Findings show that for the 65% to 76% of inexperienced nurses who do not meet employer expectations for clinical decision-making, safety issues resulted from the inability to synthesize and clinical data as well as identify the primary focus problem (Del Bueno, 2005). Del Bueno (2005) does not cast blame on clinical nursing educators but does recognize that the emphasis in nursing education is on lecture curriculum and not enough focus is on the application of the learning. It is also recommended that while written assignments and multiple-choice testing are valid avenues of assessment and evaluation, they should be a consistent supplement to real-world interactions (Del Bueno, 2005).

Following up with Del Bueno (2005) and stressing the importance and value of critical thinking skills to the field of nursing, Papathanasiou et al. (2014a) sought to highlight critical thinking as an essential skill for nursing students. The authors identified and explained 10 characteristics that coexist with the development of critical thinking skills including: independence of thought, impartiality, perspicacity into personal and social factors, humble cerebration and deferral crisis, spiritual courage, integrity, perseverance, confidence in the justification, interesting thoughts and feelings for research, and curiosity (Papathanasiou et al., 2014a). Nursing education programs should adopt assignments, attitudes, and experiences that integrate the skills of critical thinking so students may refine these skills as they build and broaden their knowledge base. Papathanasiou et al. (2014a) also advise “the assessment of the reliability of information is an important stage of critical thinking, where the nurse needs to confirm the accuracy of this information by checking other evidence and informants” (p. 284). Feeding from this recommendation, short written clinical assignments should be evaluated as they

allow students to individually and critically think about the posed problems and scenarios, *then* have the opportunity to explore and investigate the current literature and best evidence-based practice.

Oermann (1997) explored different ways to evaluate critical thinking in clinical practice as the skills of critical thinking allow students to make logical and safe decisions while caring for their patients. Observation of students in practice, questions for critical thinking (higher-level questions), conferences for critical thinking, problem solving strategies, and written assignments are all ways that the development and mastering of critical thinking can be evaluated in the clinical setting (Oermann, 1997). It is also evident that the use of several of these strategies together could be of the most benefit to nursing students within the clinical environment as critical thinking is a skill that develops and improves over time, requiring frequent evaluation. As a tool to evaluate critical thinking, Oermann (1997) suggested written assignments should be short and focused as to avoid summarization of others' works. They should also be planned and organized in a series as to provide opportunities for growth and expansion and can include a comparison of data sets, explore nursing interventions and evaluations, analyze current issues, and/or compare clinical decisions and consequences (Oermann, 1997).

Oermann and Gaberson (2014) extensively discuss critical thinking and methods of evaluation. Being able to critically think allows students to competently work through the nursing process and keep quality care and patient safety as top priorities. Oermann and Gaberson (2014) focus specifically on the assessment of written assignments and parts of clinical evaluation. Clinical assignments should have different objectives and aims than assignments within the classroom education, as they should focus on bridging

the gap between classroom education and clinical practice (Oermann & Gaberson, 2014). Short papers serve well in this scenario because they are specifically focused on certain objectives and allow faculty to provide prompt feedback to students (Oermann, 2006; Oermann & Gaberson, 2014). Clinical evaluation also needs to be looked at differently than simply grading assignments, as the term evaluation lends itself to constructive feedback, suggestions for future growth, and comparison against set standards (Oermann & Gaberson, 2014).

The topic of clinical decision making in clinical nursing education is one that has also been recognized and examined in a study by the National League for Nursing conducted in 2009. With the responses of the 2,386 participants using a convenience sample, the second most reported challenge to teaching within the clinical setting of nursing education was difficulty “teaching students to ‘think on their feet’ and make clinical judgments” (Ironside & McNelis, 2010, p. 18). Faculty respondents identified questioning, simulation, case studies, and learning activities outside clinical as strategies used to address this issue (Ironside & McNelis, 2010). Learning activities outside of the clinical setting can include simulated experiences, role playing, debriefing, concept mapping, and care plans. The authors recommend that investigation be conducted to find the gap between the “where” and the “what” of students learning to create a congruent approach to nursing education from classroom to clinical (Ironside & McNelis, 2010). Short written assignments may provide a filler for this gap to encourage students’ critical thinking abilities while providing faculty with a tool of assessment and evaluation that is less time consuming when compared to current alternatives.

### **Literature Related to Clinical Assignments in Nursing Education**

Michelle Bussard (2015) looked at the impact of reflective journaling on clinical judgment for prelicensure nursing students but this research was conducted within the context of high-fidelity simulation, not clinical experiences. Tanner's clinical judgment model was utilized to examine four components of developing clinical judgment including noticing, interpreting, responding, and reflecting (Bussard, 2015). The study utilized a sample of 30 junior diploma nursing students who were in the medical-surgical course, submitting a total of 120 journals and a qualitative, interpretive, descriptive design used. The author suggests further study to investigate the impact of reflective journaling in settings other than high-fidelity simulation and the impact post-nursing school in the workforce (Bussard, 2015). Reflective journaling has been identified as an effective teaching-learning strategy in high-fidelity simulation and should be looked at within the clinical environment. Oermann et al. (2015) also contributed to this topic by examining different educational programs and strategies that are used by educators to help develop the writing skills of nursing students. However, while journaling, reflective writing, and short clinical assignments were used frequently, they do not contribute to the overall formal writing abilities of nursing students (Oermann, 2006; Oermann et al., 2015). Nursing educators should investigate and compare various writing assignments and interventions to determine the best fit into the nursing curriculum and courses (Oermann et al., 2015).

Oermann (2006) has been a research pioneer regarding the topic of short written assignments, especially within the clinical environment. Short written assignments should be brief in length, a few paragraphs to two pages at the most, aimed toward



meeting curriculum objectives, promote individual, innovative thinking instead of summarization of others' works, and sequenced throughout the nursing curriculum (Oermann, 2006). Sequencing of assignments allows for growth and expansion of critical thinking and clinical decision making skills and abilities as mastery of knowledge and expertise occurs. Oermann (2006) offers several examples of short written assignments to help guide nursing educators as they implement these into their curriculum. Short written assignments lend themselves well to the clinical environment because of their adaptability and various uses. Faculty can evaluate the papers promptly to provide students with feedback to implement in future assignments or the papers can be utilized in post-conference for student team collaboration and critique (Oermann, 2006; Oermann & Gaberson, 2014). There is great benefit to the information provided here as future educators seek to build upon and refine tools to help students improve critical thinking and decision making skills before they enter the workforce to function independently as a nurse.

The clinical learning environment is one that should be constantly evaluated. Student opinions, as well as evaluations of performance in clinical and clinical assignments, should be collected in order to improve and advance the clinical learning environment and direct-patient care experience for nursing students. A study performed by Papathanasiou et al. (2014b) looked into almost 200 nursing students as they interacted in the clinical environment. The cross-sectional, descriptive study collected data by way of a questionnaire developed from the Clinical Learning Environment Inventory which has been previously well-tested, used worldwide, and contributed to by nursing experts after thorough research studies were examined (Papathanasiou et al.,

2014b). The study revealed that the topics of individualization and innovation were deemed inadequately covered by the students in the clinical environment of the Greek Educational System. The Greek System of clinical education is similar to that of the United States in which there is a clinical instructor present to guide and monitor students' tasks closely. In this case, the results were self-reported by the participants and this could have influenced answers; however, it is suggested that educators should focus their efforts on reorganizing clinical education and providing more opportunities for students to be innovative and creative (Papathanasiou et al., 2014b). Short written assignments seek to give students these experiences during their time in the clinical environment.

### **Literature Related to Theoretical Framework**

Sewchuk (2005) utilized Kolb's Theory of Experiential Learning to guide the implementation of a new educational program for new nurses with no experience in the perioperative area. The study identified conceptual areas to help students achieve educational objectives set for the course, each of which was developed using Kolb's theory so the student transformed through concrete experience, guided reflection, abstract conceptualization, and active experimentation (Sewchuk, 2005). These conceptual areas helped to provide a framework through which the nurse had a concrete experience followed by reflection upon the experience with the guidance of an educator. Then, the nurses increased learning through abstract conceptualization by way of assigned readings, research, concept mapping, and quizzes. Lastly, the nurses further incorporated the concepts into their practice through the experimentation phase where they used their new understanding to progress in their expertise (Sewchuk, 2005). By integrating the renowned Theory of Experiential Learning by Kolb (1984) to guide student learning,

there was a reported increase in satisfaction regarding the quality of the learning experience by the students involved (Sewchuk, 2005). An instrument test and final examination were administered to the nurses after the six-week program but results showed no change in knowledge acquisition but an improvement in the satisfaction of the quality of learning (Sewchuk, 2005). Kolb's theory should be used to promote "critical thinking by creating an opportunity for new RNs to reflect on experiences and identify strengths and areas that need improvement" (Sewchuk, 2005, p. 1318). The implementation of this theory should be examined outside of the perioperative setting and specifically within the prelicensure educational setting.

### **Strengths and Limitations of Literature**

Fortunately, there is enough literature available to provide a thorough background and framework for this Master of Science in Nursing thesis. Many authors have published works related to the concepts of critical thinking and clinical decision making, while others have addressed short written assignments as an effective tool in the clinical setting. Unfortunately, however, there is no literature that delves into the specific topic of examining the impact of short written assignments in the clinical setting on the critical thinking and clinical decision making of undergraduate nursing students. Current literature suggests that short written assignments may impact critical thinking and clinical decision making in a positive way, but no research has been conducted to fully investigate this hypothesis (Oermann, 2006). Also, there is evident validity and reliability for the instrument employed in this study but it has not been utilized for the purpose of assessing clinical decision making after the implementation of short written assignments (Jenkins, 2001; Sedgwick, Awosoga, Grigg, & Durnin, 2016).

### **Summary**

It is evident that there is ample literature surrounding the various topics contributing to this Master of Science in Nursing Education thesis, however; there was a need for exploration into the gap that exists regarding the use of short written assignments in the clinical setting and their impact on the clinical decision making skills of undergraduate nursing students. Critical thinking skills are vital to students' abilities to handle complex healthcare situations, seek answers and research on topics that are not well understood, as well as compare different positions, problems, and consequences. As healthcare evolves and changes, nursing education must stay current by implementing the best evidence-based practice guidelines and providing students with the most realistic and relevant curriculum, especially when it comes to assignments within the clinical setting.

## **CHAPTER III**

### **Methodology**

Critical thinking and clinical decision making are vital elements within the realm of prelicensure clinical nursing education. Nursing educators need to be well versed in the current literature that exists regarding *how* to incorporate and improve the critical thinking skills of undergraduate nursing students. Unfortunately, there is not a great deal of literature that addresses the use of clinical short papers to increase and refine these skills. The author sought to examine the implementation of clinical short papers and their impact on the critical thinking skills of undergraduate nursing students.

### **Research Design**

This study utilized a comparison, pre-test/post-test design as the research looked into the effect of short written clinical assignments on the critical thinking and clinical decision making skills of undergraduate nursing students. The groups examined were pre-existing, determined by the college. The independent variable was the short written clinical assignments, with the dependent variable being the measure of critical thinking and clinical decision making skills.

### **Setting**

This study was conducted in the undergraduate nursing program of a rural community college. The community college operates as part of a consortium with two other community colleges in local, rural settings. The total enrollment of the community college is around 1,000 students. The total enrollment for the nursing program is between 130 and 140 students across the first and second years.

### **Sample**

The target population for this study included undergraduate nursing students currently enrolled in the second-year clinical courses of the Associate Degree in Nursing program at the nursing consortium (N=13).

### **Instrumentation**

The Clinical Decision Making in Nursing Scale (CDMNS) was utilized for the purpose of measuring the level of critical thinking and clinical decision making which the nursing students possess at different intervals during the course (Appendix A). This tool was selected for measurement of clinical decision making skills, as the development of these skills are a product and demonstration of proficient critical thinking (Locsin, 2001; Turner, 2005). The CDMNS was administered at the beginning of the research period prior to the implementation of the short written clinical assignments, where current assignments involve in-depth case studies and concept mapping. Students were assigned a short written clinical assignment each week and the CDMNS was administered at the end of the research period to note any change in the level of clinical decision making among the participants.

### **Literature Related to Instrument Validity and Reliability**

For the purpose of this Master of Science in Nursing Education thesis, the Clinical Decision Making in Nursing Scale (CDMNS) was utilized to measure students' clinical decision making abilities with the use of short written assignments in the clinical setting. The Clinical Decision Making in Nursing Scale, originally developed in 1983 by Dr. Helen M. Jenkins, provides a tool to examine student perception of clinical decision making abilities as she discovered the lack of tools to evaluate students in the clinical

setting (Jenkins, 2001). The validity of the CDMNS was initially established in three ways: items created from literature on decision making in nursing, preliminary testing of the tool to refine specific items, and an expert panel of educators to help exclude items that were not appropriate (Jenkins, 2001). Following this initial establishment of the test items, 111 students were administered the test to establish reliability using Cronbach's alpha which was 0.79 and after dropping the four lowest coefficient items, the test resulted as a forty item test with a Cronbach's alpha of 0.83 (Jenkins, 2001). The Scheffe test was conducted to assess any statistically significant differences between means across the groups of students including seniors, juniors, and sophomores. There were no differences found in the total scores across groups which led the author to suggest that students may not recognize themselves as decision makers while under the close, watchful eye of clinical educators and may, unintentionally, have limited opportunities to really apply decision making skills (Jenkins, 2001). Nurse educators are responsible for incorporating objectives, opportunities, and activities that encourage the growth and development of critical thinking skills and clinical decision making.

Sedgwick et al. (2016) also utilized the CDMNS, along with the Clinical Effectiveness and Evidence Based Practice Questionnaire, to survey the impact of applications through smartphones on the clinical decision making and critical thinking abilities of nursing students. Sedgwick et al. (2016) utilized a pretest-posttest approach for 30 nursing students who were in the senior-level practicum experience. There was no significant impact on the students' level of critical thinking and decision making abilities with the use of new technology applications on their mobile devices for use during the clinical experience (Sedgwick et al., 2016). Cronbach's alpha for the 40-item CDMNS

within this study was 0.83 and the questions were administered using a 5-point Likert scale (Sedgwick et al., 2016). Nursing educators need to find different ways to incorporate assessment and evaluational strategies that encourage critical thinking skills, as well as a desire by the students to search and acquire new knowledge and skills (Papathanasiou et al., 2014a; Sedgwick et al., 2016).

Following the death of Dr. Helen M. Jenkins, the tool became public domain and continues to be utilized currently to help further research and expand the understanding of critical thinking and clinical decision making among nursing students (Appendix B).

### **Protection of Human Subjects**

Prior to the implementation of this research, approval was obtained from the Dean of the Nursing Consortium and the Institutional Review Board (IRB) of the academic institution attended by the researcher. The Clinical Decision Making in Nursing Scale (CDMNS) was administered with a statement of voluntary participation as well as an instruction sheet. Completion of the scale implied consent to participate. The surveys were immediately collected by the researcher as to maintain confidentiality. Once collected, the completed scales were kept in a locked drawer within a locked office and the data was entered and analyzed on a computer that is password protected. There was no apparent risk to the research participants.

### **Data Collection**

Clinical instructors were given information regarding the research that would take place among the clinical courses prior to the start of the mini-mester. All students within the participating clinical groups were given an information sheet detailing participation in the research study, the length of data collection, the voluntary nature of the study, and



address any concerns of confidentiality (Appendix C). An instruction sheet was also included to guide those who choose to participate in the completion of the CDMNS (Appendix D). A debriefing statement was administered to the students upon completion of the research (Appendix E). Students did have the option to participate in the research and completion of the CDMNS but all students were required to complete the short written assignments on a weekly basis as the college implemented a curriculum change. If the students voluntarily participated in the study, they completed the CDMNS at the beginning of the research period prior to the implementation of the short written assignments in the clinical setting. Short written assignments were then administered weekly during the allotted clinical time over a three-week period for a total completion of three assignments. Students were given one hour to work on and complete the short written assignment at the end of each clinical day. The short written assignments were not graded for accuracy but only for participation and completion. The clinical instructor provided feedback on the use of creativity, the application of current evidence-based practice, and alternative approaches. The intention of the short written assignments was to allow students the opportunity to be creative, expressive, and expand their clinical decision making skills within the clinical setting. The CDMNS was administered again at the culmination of the research period as to recognize change in clinical decision making skills after the implementation of short written clinical assignments. The researcher provided the short written clinical assignments to the clinical instructors and student participation was monitored and recorded by the clinical instructors and the researcher. The scale completion was entirely anonymous, including no identifiers or demographic information. Data was collected over a span of three weeks and the

researcher collected the scales immediately upon completion from the participants. The scales were collected immediately and stored in a locked drawer within a locked office until analyzed by the researcher.

### **Data Analysis**

The CDMNS consists of 40 items of which 22 of the items are written as positive and 18 items are written as negative. The answers are evaluated on a 5-point Likert scale as follows: 5=Always, 4=Frequently, 3=Occasionally, 2=Seldom, 1= Never. The 18 items written as negative are inversely scored. The maximum score is 200 and the minimum score is 40. The higher the score, the higher the perception of clinical decision making skills. Data was analyzed using aggregate scores and an independent samples t-test. The responses of the scale were then converted to a Likert-scale ranging from 1 (always) to 5 (never) and analyzed using descriptive statistics by way of SPSS Version 22.0 by the researcher. Any additional comments or open-ended responses were examined and no additional themes identified. With the help of the nursing department, the researcher collected demographic data regarding the facility of interest. This included information on the student population, instructor population, number of students currently enrolled in the nursing program, number of students currently enrolled in a clinical course, and number of instructors currently teaching in the clinical setting.

### **Summary**

The researcher sought to examine, investigate, and report findings discovered through empirical investigation regarding the use of short written clinical assignments and the effect on clinical decision making skills of undergraduate nursing students. Through preparation, data collection, data analysis, and the publication of results, the

relationship between these two variables was examined in-depth. Maintaining the highest standard of integrity and consistency were of the utmost importance to this research study and it's yielding of valid and reliable results.

## **CHAPTER IV**

### **Results**

This Master of Science in Nursing thesis explored the impact of short written clinical assignments on the clinical decision making skills of undergraduate nursing students. Students were administered the Clinical Decision Making in Nursing Scale (CDMNS) prior to and after completing several weeks of short written clinical assignments within the clinical post conference (Jenkins, 1985). The following chapter will present the statistical resulting data from student responses to the scale administered.

### **Sample Characteristics**

Students at a community college within a local rural setting have been evaluated in the clinical setting by way of lengthy clinical case studies, discussion posts, and concept mapping. Due to the increasing demand on undergraduate nursing students to sharpen their critical thinking and clinical decision making skills, it is necessary to examine evaluational measures to improve these skills such as short written clinical assignments. Two clinical groups were asked to participate and 13 second-year students in the Associate Degree in Nursing (ADN) program were administered the CDMNS (N=13) pre- and post-implementation of the short written clinical assignments. Thirteen students completed the questionnaire producing a 100% response rate. This chapter will explain the analysis of the student responses and scores on the CDMNS.

### **Major Findings**

Completed questionnaires were collected by the researcher and statistics were analyzed using SPSS Version 22.0. An independent-samples *t* test was calculated comparing the mean score of student responses in clinical decision making *before* the

implementation of short written clinical assignments to the mean score of student responses in clinical decision making *after* the implementation of short written clinical assignments. No significant difference was found ( $t(2) = .213, p > .05$ ). The mean of the pre-implementation scores ( $m = 145.85, sd = 9.109$ ) was not significantly different from the mean of the post-implementation scores ( $m = 151.62, sd = 13.457$ ), although there was an overall improvement in the mean score resulting after the implementation of short written assignments in the clinical setting.

### **Summary**

Full participation for this study helped to yield results to be analyzed by the researcher. Quantitative statistical results for this study did not reveal a significant difference in the mean scores of the second-year ADN students' responses to the CDMNS before and after the implementation of short written assignments in the clinical setting. No qualitative data was collected as a part of this study.

## **CHAPTER V**

### **Discussion**

The purpose of this Master of Science in Nursing research was to examine the impact of short written assignments administered in the clinical setting on undergraduate nursing students' clinical decision making and critical thinking skills. Current literature suggests the demands on clinical nursing educators and nursing students continue to heighten as the value and importance of time and experience in the clinical setting is better understood (Marchigiano et al., 2011; Oermann, 2006; Sedgwick et al., 2016). The researcher recognizes a need for continual advancement and improvement in clinical nursing education in order to mirror the constant change and progression in healthcare. Sedgwick et al. (2016) suggested "nurse educators need to infuse critical thinking into their daily, ongoing instructional contexts ...[which] will not only help nursing students develop their critical thinking skills but nurture a spirit of critical inquiry as well" (p. 5). Short written clinical assignments are an innovative and creative way to challenge undergraduate nursing students in the development of their clinical decision making and critical thinking skills throughout their educational journey.

### **Implication of Findings**

The participants of this research study included 13 undergraduate nursing students (N = 13) in the second year of the Associate Degree in Nursing program at a rural community college. After the administration of several weeks of short written clinical assignments, there was no statistically significant improvement seen in the level of clinical decision making exhibited by the undergraduate nursing students. However, there was an improvement seen in the overall mean score of student performance in

clinical decision making after the completion of the short written clinical assignments, as opposed to pre-implementation scores. This suggests that while the short written clinical assignments are not necessarily *more* beneficial, they could be used interchangeably with current clinical assignments as they are another, equally effective tool for teaching and evaluation in the undergraduate nursing educational setting. Also, while no qualitative data was collected for this study, feedback to the researcher from the participants was positive and encouraging as students expressed satisfaction in and appreciation for the learning they received by way of this experience. Students explained the impact that discussion of the short written assignments regarding current, complex patient situations has on their learning and professional development. There was also feedback received by the clinical instructors involved that was also encouraging as they appreciated the open-dialogue opportunity with the students in post-conference and the reduction of grading time required outside of the clinical setting.

#### **Application to Theoretical/Conceptual Framework**

Implementing short written assignments into the clinical setting and curriculum allows students the opportunity to learn and develop their clinical decision making and critical thinking skills through the process recommended in Kolb's Experiential Learning Theory (1984). The increase in the mean score plus the positive feedback received exhibit satisfaction in the learning process and encouraging results for the improvement of clinical decision making skills. The application and success of this research proves the strength of this guiding theoretical framework as students achieve effective learning through the steps of experience, observation, conceptualization, and experimentation through a variety of short written clinical assignments.

### **Limitations**

With the small sample size, this research may not include adequate data to make broad generalizations. It is also possible that more specific data could be collected if individual students were identified and individual scores were evaluated through a paired-samples *t* test; however, this was not performed in order to maintain confidentiality and anonymity with the small sample size. This research study targeted upper-level undergraduate nursing students but this may have limited the impact of the findings since all levels of nursing students were not investigated.

### **Implications for Nursing**

To positively impact nursing students' clinical experiences and sharpen their clinical decision making and critical thinking skills, it is imperative that nursing educators explore the use of short written assignments in their clinical curriculum. The results of this research can add a tool for nurse educators and students alike to utilize in the clinical setting that will enhance critical thinking and clinical decision making skills while reducing the workload and stress on students and instructors outside of the allotted clinical time. The evidence shows that the assignments and discussions did help encourage critical thinking and clinical decision making and should be utilized as a creative tool in the settings of clinical nursing education. With the constraints on time in the clinical setting, educators need tools that will maximize student learning experiences and short written assignments can do exactly that (Oermann, 2006). Short written assignments create a process that encourages student development in the clinical setting. Through this experience and results, the research has developed a process model that depicts the development of individual thinking skills, interpersonal relationships, and an



expansion of knowledge base and potential impact through the use of short written assignments in the clinical setting.

### **Recommendations**

The researcher recommends that this research be conducted on a larger scale and possibly both in a rural and urban setting to see if there is a difference which could be attributed to other factors. Further research could also compare a control group of students who do not complete the short written assignments and those results be compared to students who do complete the short written assignments in the clinical setting. More education is needed to ensure that clinical instructors are aware of the benefits that short written assignments can have for their students and the proper way to integrate these assignments into their curriculum.

### **Conclusion**

Critical thinking and clinical decision making skills have evolved as a crucial part of the foundation for successful and impactful nurses today. These building blocks begin as an integral part of their nursing education. Papathanasiou et al. (2014b) explained that nursing students “be trained as effectively as possible in a real-time clinical environment, and gain theoretical and practical knowledge in an interpersonal way, where the synergy of academic values and professional realities is anew fundamental” (p. 58). Short written clinical assignments help to achieve this charge, as they marry current clinical experiences with theoretical background knowledge and look ahead to constructive change and improved critical thinking and clinical decision making skills for future impact.

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## APPENDIX A

## The Clinical Decision Making in Nursing Scale

*Circle* whether you would likely behave in the described way:

A – Always: What you consistently do every time.

F – Frequently: What you usually do most of the time.

O – Occasionally: What you sometimes do on occasion.

S – Seldom: What you rarely do.

N – Never: What you never do at any time.

*Sample statement:* I mentally list options before making a decision.

*Key:*            A            F            O            S            N

The circle around response F means that you usually list options before making a decision.

*Note:* Be sure you respond in terms of what you are doing in the clinical setting *at the present time*.

1. If the clinical decision is vital and there is time, I conduct a thorough search for alternatives.

A            F            O            S            N

2. When a person is ill, his or her cultural values and beliefs are secondary to the implementation of health services.

A            F            O            S            N

3. The situational factors at the time determine the number of options that I explore before making a decision.

A            F            O            S            N

4. Looking for new information in making a decision is more trouble than it's worth

A            F            O            S            N

5. I use books or professional literature to look up things that I don't understand.

A                      F                      O                      S                      N

6. A random approach for looking up options works best for me.

A                      F                      O                      S                      N

7. Brainstorming is a method I use when thinking of ideas for options.

A                      F                      O                      S                      N

8. I go out of my way to get as much information as possible to make decisions.

A                      F                      O                      S                      N

9. I assist clients in exercising their rights to make decisions about their own care.

A                      F                      O                      S                      N

10. When my values conflict with those of the client, I am objective enough to handle the decision making required for the situation.

A                      F                      O                      S                      N

11. I listen to or consider expert advice or judgment, even though it may not be the choice I would make.

A                      F                      O                      S                      N

12. I solve a problem or make a decision without consulting anyone, using information available to me at the time.

A                      F                      O                      S                      N

13. I don't always take time to examine all the possible consequences of a decision I must make.

A                      F                      O                      S                      N

14. I consider the future welfare of the family when I make a clinical decision which involves the individual.

A                      F                      O                      S                      N

15. I have little time or energy available to search for information.

A                      F                      O                      S                      N

16. I mentally list options before making a decision.

A                      F                      O                      S                      N

17. When examining consequences of options I might choose, I generally think through "If I did this, then..."

A                      F                      O                      S                      N

18. I consider even the remotest consequences before making a choice.

A                      F                      O                      S                      N

19. Consensus among my peer group is important to me in making a decision.

A                      F                      O                      S                      N

20. I include clients as sources of information.

A                      F                      O                      S                      N

21. I consider what my peers will say when I think about possible choices I could make.

A                      F                      O                      S                      N

22. If an instructor recommends an option to a clinical decision making situation, I adopt it rather than searching for other options.

A                      F                      O                      S                      N

23. If a benefit is really great, I will favor it without looking at all the risks.

A                      F                      O                      S                      N

24. I search for new information randomly.

A                      F                      O                      S                      N

25. My past experiences have little to do with how actively I look at risks and benefits for decisions about clients.

A                      F                      O                      S                      N

26. When examining consequences of options I might choose, I am aware of the positive outcomes for my client.

A                      F                      O                      S                      N

27. I select options that I have used successfully in similar circumstances in the past.

A                      F                      O                      S                      N

28. If the risks are serious enough to cause problems, I reject the option.

A                      F                      O                      S                      N

29. I write out a list of positive and negative consequences when I am evaluating an important clinical decision.

A                      F                      O                      S                      N

30. I do not ask my peers to suggest options for my clinical decisions.

A                      F                      O                      S                      N

31. My professional values are inconsistent with my personal values.

A                      F                      O                      S                      N

32. My finding of alternatives seems to be largely a matter of luck.

A                      F                      O                      S                      N

33. In the clinical setting I keep in mind the course objectives for the day's experience.

A                      F                      O                      S                      N

34. The risks and benefits are the farthest thing from my mind when I have to make a decision.

A                      F                      O                      S                      N

35. When I have a clinical decision to make, I consider the institutional priorities and standards.

A                      F                      O                      S                      N

36. I involve others in my decision making only if the situation calls for it.

A                      F                      O                      S                      N

37. In my search for options, I include even those that might be thought of as "far out" or not feasible.

A                      F                      O                      S                      N



38. Finding out about the client's objectives is a regular part of my clinical decision making.

A F O S N

39. I examine the risks and benefits only for consequences that have serious implications.

A F O S N

40. The client's values have to be consistent with my own in order for me to make a good decision.

A F O S N

## APPENDIX B

## Permission to Use Tool

## Re: Request for Use of Clinical Decision Making in Nursing Scale

Carol Q Urban <curban@gmu.edu>

Sat 6/11/2016 8:30 PM

To: Tara Hayes <trobert1@gardner-webb.edu>;

Hello Tara,

Nice to hear from you!

I had the privilege of working with Dr. Jenkins during her time here at George Mason University (I have been here 25 years) but sadly, she passed away a number of years ago. She retired from Mason in her 70's in the early 1990's and upon the last communication we had with her family, they gave full rights to the use of her tool, providing appropriate citation was afforded to their mother. We have had requests such as this from time to time, and the last time we had contact with the family in the early 2000's, they requested that we not contact them further (none of the children were nurses). They were more than pleased that their mother's survey tool was still in use.

I have a copy of the text that her study and tool was published in, and it is still available through Amazon ([https://www.amazon.com/Measurement-Nursing-Outcomes-Measuring-Performance/dp/0826114172/ref=sr\\_1\\_1?ie=UTF8&qid=1465690655&sr=8-1&keywords=carolyn+waltz+Measurement+of+Nursing+Outcomes](https://www.amazon.com/Measurement-Nursing-Outcomes-Measuring-Performance/dp/0826114172/ref=sr_1_1?ie=UTF8&qid=1465690655&sr=8-1&keywords=carolyn+waltz+Measurement+of+Nursing+Outcomes)). We contacted the publisher in the early 2000's and the response was, that the tool belonged to Dr. Jenkins (since-deceased). Apparently, it is considered in the public domain at this point.

I'm sorry I can't help you any further than that. We have not had any communication with Dr. Jenkins' family since the early 2000's. At this point from both the last of our communications with the family and the publisher, it is free to use. I am encouraging all researchers to continue to refine the tool to address modern times and issues. I think Dr. Jenkins would be proud that her tool had proved so useful, but knowing Helen, she'd be even more proud that current researchers were improving upon her initial work from the 1970s.

Best to you in your research!

Carol Urban, PhD, RN  
Associate Professor  
Director, School of Nursing  
Associate Dean, College of Health and Human Services  
George Mason University  
Fairfax, VA 22030  
Office: 703-993-2991  
Fax: 703-993-1949

## APPENDIX C

## Information Sheet

Dear Student:

I, Tara Hayes, am collecting data for a research project entitled *The Impact of Short Papers on Clinical Decision Making Skills of Nursing Students*. This project helps to fulfill the requirements for the completion of the Master of Science in Nursing program at Gardner-Webb University. You, as a participant, are being asked to complete a scale that will take approximately thirty minutes of your time. The scale will be administered at the beginning of the research study and for four weeks following you will complete one short written assignment per week at the end of each clinical day within the allotted clinical time. The scale will then again be administered after all short assignments are completed. There are no foreseeable risks associated with your involvement in this research and no compensation will be given for participation. All students will be completing the short written assignments as a part of the curriculum but your participation in completing this research scale is strictly voluntary and you may elect to skip any parts of the scale that you do not feel comfortable completing. The researcher will administer the scale and the clinical instructor will provide feedback on assignments each week. The decision on whether or not to participate in this research study will have no effect on your course grade in any way. By completing the scale, you are giving your consent to participate and for your results to be included in the research data collection and findings.

All information associated with the scale will be kept confidential and anonymous. The researcher is the only person who will have access to the scales and they will be kept in a secure, locked location at all times. The information resulting from

the scales will be grouped and reported so that no individual information will be given. The project will run from September 2016 – October 2016.

Thank you for your time and consideration of participation in this research project. If you have any questions, want more information or have suggestions, please contact me, Tara Hayes, at trobert1@gardner-webb.edu. You may also contact my thesis advisor, Dr. Tracy Arnold at 704-406-4359 or at tarnold@gardner-webb.edu. If you have any concerns about your rights, how you are being treated, or complaints regarding this study, benefits, or risks associated with being in this study please contact Dr. Kelly Jones at 828-395-1741 or contact the Gardner-Webb University Institutional Review Board at 704-406-4724.

Sincerely,

Tara Hayes

## APPENDIX D

### Instruction Sheet

- The survey to be completed is attached to the back of this packet.
- Please answer the questions as posed to the best of your ability and as honestly as possible.
- Do not make any identifying marks or include any identifying information on the survey.
- Once completed, place the scale in the individual envelope attached to the packet.
- Seal the envelope and give to the researcher, Tara Hayes.
- As the scale completion is completely voluntary, if you choose not to participate, seal the blank survey in the envelope and give to the researcher, Tara Hayes.
- The researcher will be present to collect the scales at the clinical day assigned.
- Any questions, comments, or concerns should be directed to: Tara R. Hayes, RN, BSN via phone at 828-551-0764 or via email at trobert1@gardner-webb.edu.

## APPENDIX E

### Debriefing Statement

Thank you so much for participating in this study! Your participation is so valuable and I certainly appreciate that you took time out of your busy schedule to take part in this research.

This research was conducted to measure the critical thinking and clinical decision making abilities among undergraduate nursing students with the implementation of short papers in the clinical setting. Measurements of critical thinking and clinical decision making abilities were measured before and after the implementation of the short papers and comparisons were examined.

I hope this explains the purpose of this research project and helps you understand the importance of research in this area and the impact it could have on the future of nursing education.

Please do not discuss any details of this research until the study is complete so that no efforts are compromised. If you have any additional questions or concerns, please contact me, Tara R. Hayes, RN, BSN via phone at 828-551-0764 or via email at [trobort1@gardner-webb.edu](mailto:trobort1@gardner-webb.edu).

Again, thank you so much for your participation!