A RANDOMIZED CONTROL STUDY COMPARING OUTCOMES IN STUDENT NURSES WHO UTILIZE VIDEO DURING SIMULATION DEBRIEFING AS COMPARED TO THOSE WHO UTILIZE TRADITIONAL DEBRIEFING

by

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ABSTRACT OF THE DISSERTATION

A Randomized Control Study Comparing Outcomes in Student Nurses Who Utilize Video During Simulation Debriefing as Compared to Those Who Utilize Traditional Debriefing

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Clinical placement sites for nursing students have become limited around the country. An alternative teaching strategy must be employed to allow for students to gain valuable knowledge and skills. High fidelity human patient simulation is one such strategy that allows students to safely practice nursing interventions in a controlled environment using a scenario. Students participate in groups and may be video recorded for replay during the debriefing session, the most essential learning element of the simulation session. Students watching a video recording of their participation in the scenario allow them to reflect on their own actions to identify their own strengths and weaknesses. The research question for this study was the following: what are the effects of video assisted debriefing as compared to traditional oral debriefing on student outcomes (clinical judgment, self-confidence, learner satisfaction scores with simulation and learner satisfaction scores with the simulation facilitator) of associate degree nursing students in their second year of nursing school? A randomized control design was employed to test the research question using a sample of 74 students. Students were

randomized into either a video assisted debriefing group and an oral assisted debriefing group. The debriefing sessions were structured for each group with the only difference being the video assisted debriefing group watched the recording of their videotaped simulation session. Results included higher self-reported clinical judgment, learner satisfaction scores with the simulation, and learner satisfaction with the debriefing facilitator. Findings from this study support the use of video assisted debriefing as compared to traditional oral assisted debriefing after a simulation session. Debriefing should be a highly structured part of simulation allowing for students to learn and develop important cognitive and behavioral skills. Video debriefing is an important component of simulation that allows for improved student outcomes.

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Chapter I

Introduction

The American Association of Colleges of Nursing (AACN) (2008) and National League for Nursing (NLN) (2008) believe clinical judgment is a core competency for nursing education. Additionally, the AACN states that self-confidence is a core competency for new graduates. Both clinical judgment and self-confidence are developed primarily in the clinical setting (Billings & Halstead, 2009). However, student placement in the clinical setting is becoming increasingly difficult because of competition among schools (Feingold, Calauce, & Kallen, 2004; Henneman & Cunningham, 2005; Oldenburg, Maney, & Plonczynski, 2013). Furthermore, there are concerns about unequal clinical experiences among students in the traditional clinical setting (Oldenburg, Maney, & Plonczynski, 2013). Thus, there is difficulty meeting the core competencies of undergraduate education given the shortage of clinical sites and the inequality of student clinical experiences. High fidelity human patient simulation (HFHPS) has helped alleviate this problem. Fidelity is defined as the degree to which the clinical simulation approaches reality. Fidelity is dependent on the environment, resources, participants, and instructor-student motivation (Meakim, Boese, Decker, Franklin, Gloe, Lioce, Sando, & Borum, 2013).

There is organizational support for the use of simulation in nursing programs. The Institute of Medicine (IOM) (2011) in their report, The Future of Nursing: The Focus on

Nursing Education, states that simulation can be used as a way to transform nursing through new models for clinical practice. In general, the IOM (2003) reports six aims for improvement of health care systems (1) safety, (2) effectiveness, (3) patient-centered care, (4) timeliness, (5) efficiency, and (6) equitability. All six of these aims can be practiced, measured, and assessed using a human patient simulator and guided exercises.

The AACN suggests the use of simulation in nursing programs to augment clinical learning (2008). Additionally, sixteen Boards of Nursing in the United States currently give permission to nursing programs to use simulation in the place of clinical hours; however, most do not specify the amount of simulation that can be substituted (Nehring, 2008). Furthermore, Benner, Sutphen, Leonard, and Day (2011) discuss simulation as a way to connect classroom learning to clinical practice. While the authors do not state that simulation can replace clinical experience, they stress the importance of further research in this growing area.

In an effort to fill this gap in the literature, The National Simulation Study, conducted by the National Council of State Boards of Nursing (NCSBN), is evaluating simulation within nursing curricula throughout the United States (Hayden, Jeffries, Kardong-Edgren, & Spector, 2012). Specifically, the amount of simulation time allocated to replace clinical time is being evaluated. Students are randomized to three groups, which include less than 10% simulation, 25% simulation, and 50% simulation replacement hours for clinical hours. Outcomes of the study will compare these three groups on clinical competency, knowledge, and met learning objectives (Hayden, Jeffries, Kardong-Edgren, & Spector, 2012). The study is currently in progress and data collection will be completed in December 2014.

The use of HFHPS has grown in part because HFHPS meets the demands of younger students, members of the millennial generation, who are requesting interactive and "real life" gaming environments (Skiba, 2006). Simulation puts students in a realistic hospital room with interactive simulated patients, real equipment, and technology. This experience allows students to use their visual, auditory, and tactile senses in caring for a patient. Students utilize their classroom and laboratory knowledge and skills in a simulated hospital environment where the simulated patient reacts to nursing interventions. Most importantly, the simulated clinical setting provides a safe learning environment where no real harm can be done to the patient (Bradley, 2006; Bearnson & Wiker, 2005; Haskvitz & Koop, 2004).

Simulation can be used to teach, practice, and evaluate student learning in nursing programs. There are many nursing interventions and skills that can be practiced using HFHPS. Students can carry out nursing interventions, including medication administration, and perform nursing assessment. Also, students can insert a nasogastric tube or place a urinary catheter into a simulated patient to practice these skills. This is vital to their education, as students may not have a single opportunity to do so with a real patient in the clinical setting. Moreover, students in a simulation laboratory can practice on a patient, which would be unrealistic in the traditional clinical environment. Simulations test students' knowledge and their synthesis of that knowledge (Billings & Halstead, 2009; Bradley, 2006; Nehring et al., 2002). Repetitive nursing skills can be practiced through HFHPS. Based upon the students' performance, expected or unexpected reactions may occur (Bradley, 2006; Bradshaw & Lowenstein, 2007).

Simulation can provide students with the opportunity to learn nursing skills and also to become acclimated to the role of the nurse (Jeffries & Rogers, 2007). Simulations can be designed so that students can interact with not only the patient, but with family members, other nurses, and other members of the health care team. During simulation, students can play the role of the primary nurse, secondary nurse, nursing assistant, family member, physician, respiratory therapist, or nurse manager, to name a few of the roles. Students gain understanding of different perspectives or roles in the health care setting. Their performances tie into the psychomotor, cognitive, and affective domains of learning.

Simulation may also be used as both a formative and a summative evaluation tool (Billings & Halstead, 2009). HFHPS can use similar scenarios for all students for purposes of evaluation (Billings & Halstead, 2005; National Council of State Boards in Nursing, 2005; Seropian, Brown, Gavilanes, & Driggers, 2004). Additionally, Decker, Sportsman, Puetz, and Billings (2008) suggest the use of simulation to evaluate competency. At the end of a course, clinical, or program, this technology tool can be used to evaluate learning based on clinical judgments and reactions to a specific scenario.

Studies have shown that HFHPS enhances the outcome of clinical judgment (Bambini, Washburn, & Perkins, 2009; Blum, Borglund, & Parcells, 2010; Cato, Lasater, & Peeples, 2009; Dillard, Sideras, Ryan, Hodson Carlton, Lasater, & Siktberg, 2009; Lasater, 2007). Research has also demonstrated that self-confidence improves with the use of HFHPS (Brown & Chronister, 2009; Childs & Sepples, 2006; Harder, 2010; Peterson & Bechtel, 2000; Kaplan & Ura, 2010; Weaver, 2011). Last, studies have shown that students are satisfied with simulation (Bearson & Wiker, 2005; Feingold, Calaluce,

& Kallen, 2004; Sinclair and Ferguson, 2009, Wagner, Bear, & Sander, 2009). In summary, simulation can be used to teach, practice, and evaluate learning in nursing schools related to clinical judgment, self-confidence, and learner satisfaction.

The International Nursing Association for Clinical Simulation and Learning (2011) states that debriefing is an important part of simulation in that it "enhances learning, heightens self-confidence for learning, increases understanding, promotes knowledge transfer, identifies best practices, promotes safe, quality patient care, and promotes lifelong learning" (p. s16). According to Jeffries (2007), debriefing includes both reflective thinking and a discussion of content. In Dreifuerst's (2009) concept analysis of debriefing, she notes that the debriefing process allows for student expression and faculty input on the simulation performance and an opportunity to link essential actions and plans for future events in nursing practice.

Within the nursing literature, debriefing is viewed as the most essential part of the simulation process (Dreifuerst, 2009; Gordon & Buckley, 2009; Jeffries, 2007; Nehring & Lashley, 2004; Waxman, 2010). Decker (2007) states that reflection, through debriefing, is crucial to the learning process in simulation. Reflection includes awareness, critical analysis, and new perspectives (Scanlon & Chernomas, 1997). During debriefing, the facilitator guides the discussion with questions as students reflect on the simulation experience. There is no set guideline for questions as each scenario's objectives and outcomes may be different. Neill and Wotton (2011) conducted a literature review in which common debriefing questions were reviewed. Open ended, probing, and cueing questions were most often used in nursing. Debriefing offers students opportunity for

self-analysis and reflection. They may also gain new perspectives from faculty members or from their peers.

Cant and Cooper (2011), in their review of the literature between 1990 and 2010, report that there is a lack of published research articles focusing on effective debriefing techniques. Moreover, in a review of the past 40 years of simulation, Nehring and Lashley (2009) report that debriefings are undervalued and typically reduced in time or canceled.

Debriefing techniques can be in the form of verbal or written feedback. Most often verbal feedback is used because it is immediate. Some verbal techniques for debriefing include advocacy inquiry, good cop/bad cop, plus/delta, GREAT (Owens & Follows, 2006), Ee-Chats (Overstreet, 2010) and 3D Model of Debriefing (Zigmont, Kappus, & Sudikoff, 2011). Advocacy inquiry is when the faculty member is highly supportive. Facilitators ask the students to help them understand the rationale behind their actions. Good cop/bad cop is a method where two faculty members lead the discussion, one being a student advocate and the other being highly critical. Plus/delta is a way for students to highlight the correct behaviors performed and also identify behaviors that they would like to change. Plus/delta can also be used as an evaluation tool for faculty. The mnemonic GREAT stands for Guidelines for best practices in the simulation, Recommendations published in the literature, Events that are reflected on by participants, Analysis and comparison to best practices, and Transfer of knowledge to clinical practice (Owens & Follows, 2006). The technique addresses the importance of reflection and the translation of skills into real world practice. The mnemonic Ee-Chats stands for emotion, experience, communication, higher thinking, accentuating positive, time, and structure. It

allows for the facilitator or educator to remember key components of debriefing. The 3D Model of Debriefing is composed of five steps including pre-briefing, defusing, discovering, deepening, and summary. Students are asked to reflect on the simulation experience and refine their mental models (Zigmont, Kappus, & Sudikoff, 2011). Schon (1987) suggests that a strategically planned learning experience motivates student reflection, in general. However, the debriefing component of simulation remains typically unstandardized and unstructured (Neill & Wotton, 2011).

One way to standardize debriefing is by using the classroom assessment technique of Think-Pair-Share (Angelo & Cross, 1993). With this technique, first students "think." The "think" aspect is more meaningful as the experience can be relived after viewing the video taped recorded session. Next, the students "pair" off and discuss their observations with a classmate. Finally, they "share" their thoughts with the larger group, which allows the facilitator to provide feedback, both positive and negative.

Debriefing shapes clinical judgment and clinical-decision making skills (Dreifuerst, 2009). These skills are important to nursing students so that they may function independently as a registered nurse once they graduate. The expected outcome of debriefing is that nursing students will apply their experiences in the simulated environment to future events within nursing school and as practicing nurses. Consequently, debriefing will allow students to explore best nursing practices and prepare them for their roles as new graduates.

Video assisted debriefing can enhance debriefing when students view a video of their simulation session and then reflect on their thoughts and insights. They are also able to observe their peers' performance, a perspective unknown until now.

The use of video as a tool for self-reflection during the debriefing process is recommended but not common. In a 2012 International Nursing Association for Clinical Simulation and Learning (INACSL) membership survey, the majority of respondents used video assisted debriefing, with the international sample reporting more use of the teaching strategy as compared to those in the U.S. (Gore, Van Gele, Ravert, & Mabire, 2012). Moreover, the U.S. sample reported that students were not required to watch their video recordings. A few studies have noted the advantages of using video during the debriefing process. Savoldelli, Naik, Park, Joo, Chow, and Hamstra (2006) found that students immediately recognize behaviors that require change after viewing themselves or colleagues on video following a simulation session. Chronister (2008) found that students value the use of video during debriefing. According to Chronister, the video is shown during the debriefing session, and instructors can ask questions to stimulate discussion. Rutledge, Barham, Wiles, and Benjamin (2008) reported video assisted debriefing allows students to view peer performance, evaluate actions, and improve clinical thought processes.. To summarize, there is some theory and limited empirical research related to the process of debriefing and the use of video debriefing. The effect of this teaching strategy on clinical judgment, self-confidence, and learner satisfaction remains unclear and was the focus of the present study.

Statement of the Problem

While preliminary effects of high fidelity human patient simulation in nursing have been reported, there is little evidence supporting the use of video assisted debriefing to improve clinical judgment, self-confidence, and learner satisfaction. Thus, the effects of a video during simulation debriefing on student outcomes remain ambiguous. The use

of HFHPS has grown, but there is a lack of understanding of the structured debriefing process using video assisted debriefing and its impact on student outcomes. The present study addressed the following research question: What are the effects of video assisted debriefing as compared to traditional oral debriefing on student outcomes of associate degree nursing students in their second year of nursing school?

Sub-Problems

The study addressed the following sub-problems:

1. What are the effects of video assisted debriefing as compared to traditional debriefing on clinical judgment of associate degree nursing students?
2. What are the effects of video assisted debriefing as compared to traditional debriefing on associate degree nursing student self-confidence?
3. What are the effects of video assisted debriefing as compared to traditional debriefing on learner satisfaction of associate degree nursing students?
4. What are the effects of video assisted debriefing as compared to traditional debriefing on learner satisfaction with the facilitator of associate degree nursing students?
5. What is the relationship between roles of the nursing student and clinical judgment, nursing student self-confidence, and learner satisfaction?

Definition of Terms – Conceptual and Operational

Independent variables.

1. Debriefing

a. Conceptual: Debriefing is defined as the crucial element of simulation consisting of student reflection, faculty evaluation, and a discussion of the experience (Dreifuerst, 2009).

b. (Traditional) Oral Assisted Debriefing

    i. Traditional (oral) debriefing is a reflection period where students and faculty converse to establish connections between the simulated environment and future nursing practices. It is a process designed for students to discuss events, share feelings, and sort out their interpretations to make informed decisions in the future (Lederman, 1992).

c. Video Assisted Debriefing

    i. Video-assisted debriefing is a structured reflection period, including all components of traditional debriefing, where students and faculty converse after viewing a replay of their video-taped simulation session (Chronister, 2012).

2. Simulation

    a. Conceptual: Simulation is defined as "an activity that mimics the reality of a clinical environment and is designed to demonstrate procedures, decision-making, and critical thinking through techniques such as role-playing and the use of devices (e.g., interactive videos, mannequins)" (National Council of State Boards of Nursing, 2005, p.2).

b. Operational: Simulation consisted of a modified scenario produced by the National League for Nursing on adult asthma care and adult post-op care. The modified scenarios are specific to pediatric patients.

3. High Fidelity Human Patient Simulation
    a. Conceptual: High Fidelity Human Patient Simulation is defined as the use of mannequins, in a safe learning environment, to create learning similar to an encounter in the acute care setting (Billings & Halstead, 2009).
4. Nursing Student
    a. Operational: Nursing Students are defined as second year, first semester, associate degree students enrolled in a pediatric clinical nursing course.

Dependent variables.

1. Clinical judgment
    a. Conceptual: Clinical judgment is defined as "the art of making a series of decisions in situations, based on various types of knowledge, in a way that allows the individual to recognize salient aspects of or changes in a clinical situation, interpret their meaning, respond appropriately, and reflect on the effectiveness of the interventions" (INASCL, 2011, p. S3-S4).
    b. Operational: Clinical judgment is operationalized as a score on the Lasater Clinical Judgment Rubric.

2. Nursing Student Self-Confidence

c. Conceptual: Self-confidence is defined as assurance in one's own abilities (Jeffries, 2007) and belief in oneself (INASCL, 2011) to function as a nurse.

d. Operational: Self-confidence is operationalized by scores on the Self-Confidence subscale of the Student Satisfaction and Self-Confidence in Learning scale (SSSL).

3. Learner Satisfaction

e. Conceptual: Learner Satisfaction is defined as enjoyment of learning using simulation (Jeffries, 2007) and contentment with the debriefing facilitator and process (Simon, Raemer, & Rudolph, 2010).

f. Operational: Learner satisfaction is operationally defined by scores on the Student Satisfaction subscale of the Student Satisfaction and Self-Confidence in Learning scale. It is also operationally defined through scores on the Debriefing Assessment for Simulation in Healthcare Student Version (DASH) related to the debriefing facilitator.

Delimitations

The sample was delimited to associate degree nursing students in the second year of their pre-licensure program at a community college. Additional delimitations were that the students must be able to read English and be computer literate. They must be able to access the survey instruments online and input their responses using the mouse and keyboard.

Significance

HFHPS is student-centered and involves active learning through many diverse, realistic ways of learning, incorporating all domains of learning. Simulations and debriefings are interactive learning tools geared towards promotion of the Institute of Medicine's (IOM) patient safety initiative (IOM, 2003). Ultimately, schools of nursing desire graduates with skills in patient care, who promote patient quality and safety.

Video assisted debriefing may promote identification of critical interventions and skills in nursing through self-reflection. Students can view their own and their peers' performance in the simulation video to identify both positive and negative behaviors. Video debriefing may also promote higher order thinking such as clinical judgment. The nursing literature lacks research regarding the student outcomes achieved through video assisted debriefing. This study added to the nursing simulation literature by exploring the effects of video assisted debriefing on student outcomes, specifically clinical judgment, self-confidence, and learner satisfaction.

Chapter II. Review of the Literature

This chapter presents descriptive theories of debriefing in HFHPS. An assumption of this dissertation is that debriefing is an important component of the simulation process. In much of the simulation literature, the focus of research encompasses the entire simulation process, which includes orientation, scenario, and debriefing. Nursing researchers have studied the relationship between HFHPS and student outcomes, but rarely focus on the individual component of debriefing. Thus, inferences are made from the studies presented below regarding the impact of debriefing on clinical judgment, self-confidence, and learner satisfaction with the simulation experience and including the facilitator. Empirical studies linking HFHPS, including the independent variables oral assisted debriefing and video assisted debriefing, to the dependent variables (a) clinical judgment, (b) learner satisfaction, and (c) self-confidence will be presented. The theoretical rationale and hypotheses conclude the chapter.

Theories of Debriefing

Dreifuerst (2009) defines debriefing as the process of reexamining the simulated clinical encounter by students and faculty, commonly through oral feedback, discussion, and reflection. Dreifuerst (2009) describes the defining attributes of debriefing as (a) reflection, the reexamination of the encounter (b) emotion, the emotional response to the encounter (c) reception, openness to feedback (d) integration, development of a conceptual framework, and (e) assimilation, the transferring of knowledge to practice.

According to Lederman (1992), debriefing involves experiential learning. Lederman proposes three phases of debriefing, (a) Phase 1, a systematic reflection and analysis; (b) Phase 2, intensification and personalization; and Phase 3, generalization and

application. The addition of a video during debriefing may enhance Phases 1 and 2 of the debriefing process and influence Phase 3 or application of information or knowledge. Lederman (1992) also states that there are seven elements to the debriefing process, which include the: (a) facilitator, (b) students, (c) simulation experience,(d) impact, (e) recollection of the experience, (f) mechanisms for reporting the experience and, (g) time to process it.

Overstreet (2010) describes seven components to the nursing debriefing process: (a) reflecting on learner emotions, (b) stating patient experiences, (c) verbal and non-verbal communication, (d) higher order thinking, formulation of problems with application to the future, (e) accentuating strengths, (f) providing time for learner reflection, and (g) structure, focusing on learner actions. In order to promote higher order thinking, which in turn can enhance clinical judgment, video assisted debriefing may be an ideal method for debriefing.

Zigmont, Kappus, & Sudikoff, 2011) describe a 3D Model of Debriefing, composed of five steps including pre-briefing, defusing, discovering, deepening, and summary. Students reflect on the simulation experience and refine their mental models.

Debriefing has also been described relative to environment, structure, and time. Kuiper, Heinrich, Matthias, Graham, & Bell-Kotwall (2008) state that the environment for debriefing should be open, non-judgmental, and safe. Schon (1987) suggests that a strategically planned and structured reflection experience allows students to learn freely. However, the debriefing component of simulation is not typically standardized and remains unstructured (Neill & Wotton, 2011). Structure to the debriefing session may include a series of questions. Focusing on reflection in general, Johns (1995) emphasizes

posing questions based on Carpers (1978) ways of knowing including empirical, aesthetic, personal, ethical, and reflection.

Neill and Wotton (2011) state that immediate feedback for debriefing is the preferred method following a HFHPS session. The debriefing is recommended to last twice (Jeffries, 2007; Waxman, 2010) or four times (Nehring & Lashley, 2004) as long as the actual simulation session.

Rhoads and Curran (2005) propose that video assisted debriefing fosters self-evaluation as well as peer evaluation. Feedback through video assisted debriefing, through self examination, allows for higher levels of thinking (Parker & Myrick, 2010).

The addition of a video to the "recollection of events" may add positively to the learning process, especially for visual (spatial) learners. A video replay of their actions, conversations, and patterns of behaviors are analyzed. Also, video recordings allow for a creation of an event log of nursing interventions completed during the scenario (Leigh & Hurst, 2008).

Debriefing's goal is described as connecting theory with practice through reflective learning (Scanlan, Care, & Udod, 2002). Through video assisted debriefing, students systematically reflect and analyze their own simulation sessions (Dreifuerst, 2009). Facilitators may not be able to remember the entire process or sequence of events perfectly. It is helpful for them to review the video recording in order to evaluate all students who participated. When students are participating in simulation, they may not pay attention to the roles and actions of other students (Rhoads & Curran, 2005). Generally, novice students focus on the task at hand and may not see the entire scene

(Rhoads & Curran, 2005). The video recording may allow for students self-reflection of actions, other students' actions, and the simulated patient's reactions.

Empirical studies. Debriefing following a human patient simulation session is an essential part of the learning process. However, the process of debriefing has been understudied in nursing research (Dreifuerst, 2009; Henneman & Cunningham, 2005).

Coolen et al. (2012) investigated the effectiveness of video-assisted real time simulation (VARS) on level of knowledge, self-efficacy, and clinical performance in pediatric emergencies. The sample of 45 fourth-year medical students was randomly assigned to the VARS group, a problem-based learning group, or a scenario training group. All of the groups participated in 3 pediatric emergency simulation scenarios. Knowledge was assessed by the MCQ test; the Visual Analogue Scale was used to evaluate self-efficacy and; a check list, based on an ABC-structured approach and guidelines for pediatric life support, assessed clinical performance. A repeated measures ANOVA demonstrated that knowledge scores improved significantly (p <.001) for the three groups, but there was no significant differences between the groups. There was also an overall improvement in self-efficacy, but no significant difference between the three groups. The mean scores on clinical performance increased significantly for the three groups from pre-training to post-training (p < .001). There was a significant difference between the three groups, whereby the VARS demonstrated the best improvement on clinical performance when compared to the other two groups (p < .05). The researchers concluded that VARS is an effective educational method in teaching care of acutely ill children.

Sawyer, Sierocka-Castraneda, Chan, Berg, Lustik, and Thompson (2012) studied neonatal resuscitation skills and knowledge following simulation in a sample of 30 medical residents, divided into 15 teams. The participants were randomized into an oral debriefing group and a video debriefing group. Each team participated in three neonatal resuscitation simulations followed by a debriefing session, which included three phases: (a) reaction, (b) analysis, and (c) summary. The Neonatal Resuscitation Performance Evaluation tool was used to measure student performance. The results demonstrated that neonatal resuscitation performance improved in both groups, oral pretest, 83% vs. oral posttest, 91%, ($p = 0.009$); video pretest, 81% vs. video posttest, 93%, ($p = 0.001$). The video-assisted debriefing group had higher improvement in overall resuscitation scores when compared to the oral debriefing group (video, 12% vs. oral, 8%), however, the difference was not statistically significant. This study examined the variables of resuscitation performance skills and knowledge and not the variables of interest in the current study. The researchers reported that further research is needed relative to video assisted debriefing's impact on student learning outcomes.

In a qualitative study, McKenna, Innes, French, Streitberg, and Glimour (2011) explored the use of video recording following a simulated patient experience among nine baccalaureate nursing students in the final year of nursing school. Content analysis was used to analyze each recording. The three main themes that emerged were: interpersonal skills, questioning, and missed cues. Students then sat with an instructor to debrief the simulation. The instructor highlighted areas of improvement related to history taking and assessments. Students reported that video-debriefing was a positive experience.

McKenna, Innes, French, Streitberg, and Glimour stated that the use of video-debriefing enhances skill development and facilitated review.

Chronister and Brown (2011) conducted a comparative, cross over study to investigate critical care knowledge and skills in a sample of 37 undergraduate nursing students in a critical care course. Students were randomly assigned to a verbal debriefing group or a video assisted verbal debriefing group. Students participated in two simulation sessions. Faculty recorded student outcomes including assessment (airway, vitals), psychomotor (oxygen applied, called for help, and chest compressions), response time to initiate CPR, and knowledge retention skills. The Emergency Response Performance Tool was used to evaluate skills. The results showed that the verbal debriefing group had higher knowledge retention rates than the video debriefing group ($p = .008$). The video debriefing group had higher response times ($p < .042$), and had greater improvement in nursing skills (total time to resuscitate) when compared to the verbal debriefing group ($p < .028$). Video debriefing improved critical care nursing interventions of response time, and improved nursing skills.

Grant, Moss, Epps, Watts (2009) conducted a pilot study to evaluate the effectiveness of video debriefing on clinical performance in a sample of nursing students ($N = 34$) and nurse anesthetist students ($N = 4$). Students were assigned to a video-assisted debriefing group ($N = 20$) or a control group ($N = 20$). Five faculty members scored students behaviors on a modified version of the Clinical Simulation Tool. The results showed that there was no significant difference between the two groups on total performance; however, the mean scores of the video assisted group were significantly

higher than the control group on patient identification ($p < .01$), team communication ($p < .013$), and assessment of vital signs ($p < .047$).

Husebo, Dieckmann, Rystedt, Soreide, and Friberg (2013) conducted an exploratory qualitative study based on 24 video recordings of debriefings. The sample consisted of 81 students and 5 faculty members. Two researchers were asked to rate the facilitator's questions and student responses using Gibbs stages of reflection (Descriptive Questions and Responses, Emotional Questions and Responses, Evaluative Questions and Responses). Results showed facilitators asked mostly evaluative and few emotional questions. Nursing students had mostly evaluative and analytic responses and fewest emotional responses. Twenty percent of questions asked by facilitators were analytic questions; 35% of student responses were analytic. Thus, facilitator questions promote similar type responses from students.

Elfrink, Ninger, Rohig, and Lee (2009) performed a formative process evaluation using video debriefing and focus group evaluation in a sample of 114 senior pre-licensure nursing students. The results demonstrated that students had negative feelings about being videotaped. Anecdotally, students stated videotaping was stressful and they were not able to focus on the care of the simulated patient. Thus, the researchers eliminated the video assisted debriefing from the second simulation based on negative feedback from students.

Cantrell (2008) explored the use of videotaped debriefing following a traditional debriefing session in a sample of 11 baccalaureate nursing students. The students participated in an oral debriefing session following their simulation and also received an additional debriefing session reviewing their videotaped session one on one with an

instructor. Content analysis of student comments revealed three critical components that influenced learning: (a) adequate preparation, (b) demeanor of faculty, and (c) debriefing. This study highlights the importance of the role of faculty in the debriefing and the overall videotaped debriefing experience.

Chronister (2008) studied nursing students who were enrolled in critical care courses. Four to five students in each group were videotaped during a mock code simulation. Immediately following the simulation, students watched the video during the debriefing session. The students described an increase in confidence levels and clinical decision skills following the video assisted debriefing.

Savoldelli, Naik, Park, Joo, Chow, and Hamstra (2006) studied non crisis management skills after debriefing in a sample of 42 medical residents. The participants' non crisis management skills were evaluated using the Anesthesia Non-Technical Skills (ANTS) instrument. Participants were randomized into a control group, an oral debriefing group, and a video and oral debriefing group. On the pretest, there were no significant differences in scores on the ANTS among the groups ($F_{2,39} = 1.12$, $p > 0.05$). An ANOVA revealed the change in skill improvement was significant among the three groups ($F_{2,39} = 6.10$, $p < 0.005$). However, differences in improvement in the total ANTS score were not statistically significant between the oral and video group. The researchers attributed lack of significant findings to immediate testing following the simulation session stating that "one could argue that the benefit from videotape feedback may take some time to become apparent and may only have appeared after repeated sessions" (p. 284). Another limitation was the small sample size (Savoldelli, Naik, Park, Joo, Chow, & Hamstra).

Byrne et al. (2002) investigated crisis management skills in a sample of 32 medical students randomized into a traditional debriefing group and a video assisted debriefing group. The second group viewed their performance on videotape before the second simulation session. The results showed that crisis management performance was greater in the video group as compared to the traditional group; however the difference was not statistically significant. The video group also had less charting errors than the traditional group, but the difference was not statistically significant. The researchers attributed the lack of significant findings to poor record keeping, the fact that the participants were tested immediately following the simulation session, and that they were unable to process the highly complex crisis management protocols. The researchers reported that they still value the importance of video assisted debriefing despite their lack of significant findings.

In summary, theory suggests that debriefing connects theory to practice through reflective learning (Scanlan, Care, & Udod, 2002) and that debriefing leads to higher order thinking (Overstreet, 2010) through feedback (Parker & Myrick, 2010). Rhoads and Curran (2005) propose that video assisted debriefing fosters self and peer evaluation.

Four qualitative studies (Chronister, 2008; Cantrell, 2008; Elfrink et al., 2009; Mckenna et al., 2011) and six quantitative studies (Bryne, 2002; Coolen et al.,2012; Chronister & Brown, 2011; Grant et al., 2010; Salvodelli et al., 2006; Sawyer et al. 2012) provide empirical evidence examining the use of video assisted debriefing. Descriptive evidence supports video debriefing as a method of increasing clinical skills (Chronister, 2008; Mckenna, 2011) and influencing learning (Cantrell, 2008). The results of quantitative studies are equivocal. Chronister and Brown (2011) found that video

debriefing improved critical care nursing students' knowledge retention, response time, and nursing skills. Grant, Moss, Epps, Watts (2009), in a sample of nursing students and anesthetist students, found no difference in clinical performance between the control group and the video debriefing group. However, Coolen et al. (2012) found that medical students in a video-assisted simulation group had significantly better clinical performance than those in a problem focused or scenario-training group. Three additional studies using medical students, with small sample sizes, showed no significant improvement in performance skills (Byrne et al., 2002) or knowledge (Sawyer et al., 2012; Savoldelli, et al., 2006). The studies above did not test clinical judgment, nursing student self-confidence, and learner satisfaction, the key concepts and variables of the present research study. Thus, a gap in the literature exists in the understanding of the influence of video assisted debriefing on clinical judgment, self-confidence, and learner satisfaction in nursing students. This study tested the effects of video debriefing longitudinally over the course of a semester. The purpose of this present study was to examine the relationship of video assisted debriefing on clinical judgment, self-confidence, and learner satisfaction.

Theories of Clinical Judgment

Clinical judgment skills are important for nursing faculty to develop in undergraduate nursing students. Benner, Tanner, and Chesla (1996) define clinical judgment as "ways in which nurses come to understand the problems, issues, or concerns of clients/patients, attend to salient information, and respond in concerned and involved ways" (p.2). These skills allow students to identify patient problems and respond

accordingly. Benner (2004) adds an additional perspective stating that clinical judgment is derived from theory, knowing the patient, and human understanding.

Tanner (2006) describes four key components of clinical judgment (1) noticing, (2) interpreting, (3) responding, and (4) reflecting. Tanner states that clinical judgment involves analytic processes, intuition, and narrative thinking. According to Tanner, thinking is highlighted as an important element of clinical judgment. Dreifuerst (2009) proposes that the debriefing process promotes clinical judgment through reflection.

Empirical studies. The literature is sparse relative to studies on the effect of HFHPS and debriefing on clinical judgment. Four studies have found a relationship between HFHPS and clinical judgment.

Lindsey and Jenkins (2013) investigated the effect of a clinical simulation on clinical judgment in the management of rapidly deteriorating patients. The sample consisted of 118 nursing students in their last semester of their educational program. The participants were randomized into an intervention group *(N* = 79) and a control group *(N* = 39). The control group received traditional education in rapid response, while the intervention group participated in the simulated experience. Students responded to an 11-item instrument developed by the researchers to measure knowledge and clinical judgment. The results demonstrated that students who received the simulation intervention had significantly higher posttest scores than did the nursing students who had not received the intervention (t (77) = 7.65, $p < .001$). The researchers concluded that simulation improves nursing students' clinical judgment in rapid response situations.

Mariani, Cantrell, Meakim, Preito, and Dreifuerst (2013) conducted a mixed method quasi experimental design to test clinical judgment of students who participated

in a structured debriefing (Debriefing for Meaningful Learning) as compared to those who participated in an unstructured debriefing. A sample of 86 participants responded to the Lasater Clinical Judgment Rubric (LCJR). There were no significant differences in mean scores on the LCJR between the intervention or control group. Seven participants were asked to take part in a focus group. Students reported that the simulation helped them increase their nursing skills, interpreting orders, and laboratory information. Students in the structured debriefing group stated that the debriefing fostered student focused learning, whereas, it was the perception of the students in the unstructured debriefing stated that the debriefing fostered instructor focused learning.

Dillard, et al. (2009) studied clinical judgment in a sample of 68 students in a junior adult health course using the Lasater Clinical Judgment Rubric and a reflective journal following a simulation session. Based on the student's score on the rubric, they fell into one of four categories (a). *Beginning*, (b). *Developing,* (c). *Accomplished*, (d), and *Exemplary*. Novice students' self reported scores were lower than the other groups. These students did not make connections during the simulation session and thus had lower scores. Those students categorized as *Exemplary* scored higher on the rubric. Clinical judgment scores increased based on performance in the simulation. A limitation of this study is that it did not document a correlation between student self-report and faculty evaluation of clinical judgment.

In a qualitative study, Cato, Lasater, and Peeples (2009) introduced the rubric to 48 junior nursing students. Students participated in a simulation experience followed by traditional debriefing. The students performed a self-assessment using the Lasater Clinical Judgment Rubric and added anecdotal information to each category via an online

journal entry. Students also commented on the influence of simulation on clinical judgment. For example, one student wrote "learned so much from this scenario about priorities because I had them completely wrong (Cato, Lasater, and Peeples, 2009, p. 107)." Faculty then responded twice during the semester via an online platform to each student in order to promote clinical judgment skills. This study demonstrates the use of the rubric for student self-evaluation. Cato, Lasater, and Peeples' (2009) study builds on Lasater and Nielsen's (2009) work using the same rubric and discussing the use of reflective journaling.

In summary, theoretically, debriefing influences clinical judgment through self-awareness and self-reflection. Tanner's (2006) model of clinical judgment aligns itself well with the process of debriefing since it involves noticing, interpreting, responding, and most importantly reflecting. Empirical support is lacking on the direct relationship between video assisted debriefing and clinical judgment. Both students and faculty have used the Lasater Clinical Judgment Rubric to evaluate clinical judgment. In a pilot study by Lasater (2007b), faculty evaluated students' clinical judgment levels. However, students have used the Lasater Clinical Judgment Rubric to evaluate their performance following traditional debriefing (Cato et al., 2009; Dillard et. al., 2009; Mariani et al., 2013). Clinical judgment may increase after simulation and debriefing, but the exact relationship of video assisted debriefing remains unclear. Based on the theoretical literature, simulation, and, specifically, debriefing may have an effect on clinical judgment.

Theories of Learner Self-Confidence and Learner Satisfaction

Self-confidence is defined as belief in oneself and one's abilities to care for patients safely (Jeffries, 2007). Partin, Payne and Slammons (2011) propose that simulation enhances student self-confidence. Jeffries (2007) defines learner satisfaction with simulation as enjoyment of the learning process. Simulation includes the scenario, the process, including roles, debriefing, and the instructor. Jeffries suggests that students are satisfied with simulation.

Empirical studies. Schlairet (2011) studied the influence of simulation across an undergraduate curriculum. The evaluation was done using variables from the NLN/Jeffries Simulation Framework (Jeffries, 2005). The sample consisted of 150 undergraduate nursing students in the junior and senior years of the curriculum. All of the students were exposed to high-fidelity simulation throughout the curriculum. Qualitative analysis showed that students were confident and satisfied with the simulation experience. The students responded to the Student Satisfaction and Self-Confidence in Learning scale to measure student confidence and satisfaction. Overall, students had positive confidence and satisfaction scores. Multiple regression analysis found that after high-fidelity simulation junior students had higher confidence and satisfaction scores than did senior students ($p < .05$).

In a systematic review of 23 articles, Harder (2010) found that 91% of studies using simulation reported students rating their self-confidence levels higher than those who did not use simulation. There were two studies in the review that showed no difference in self-confidence levels.

Bambini, Washburn, and Perkins (2009) investigated self-efficacy and confidence levels following a HFHPS session on post partum exams in a convenience

sample of 112 undergraduate, first semester students. The researchers used a self-developed tool to measure self-confidence. The results demonstrated that there was a significant increase ($t = -20.878, p < .01$) in self-confidence after the simulation experience.

In a descriptive study, Wagner, Bear, and Sander (2009) investigated confidence in performance of post-partum and newborn teaching after a simulation experience in a sample of 64 students. The results showed that after the simulation, students responded positively to both confidence in performing postpartum and newborn teaching, and learner satisfaction with the simulation experience.

Brown and Chronister (2009), in a comparative correlational study, evaluated self-confidence following an EKG scenario in a sample of 140 senior level students, divided into a control group ($N = 70$) and a treatment groups ($N = 70$). The control group received weekly lectures during weeks 2 to 5; during weeks 6 to 7, they received lecture and 40 hours of simulation and debriefing. The treatment group participated in lecture and weekly simulations, including debriefings. The participants responded to a 5 item, 5 point Likert Scale, developed by the researchers that measured self-confidence. The results showed that there was no significant difference in self-confidence between the groups. A paired t-test demonstrated that there was an increase in the control group following simulation from the pre-test to the post test scores on each self-confidence question ($t = 3.92$, $p < .05$), ($t = 3.98$, $p < .05$), ($t = 4.04$, $p < .05$), ($t = 3.84$, $p < .05$), and ($t = 4.07$, $p < .05$). Brown and Chronister concluded that self-confidence increased following a simulation and debriefing session. Students demonstrated increased self-

confidence following simulation compared with self-confidence reported following lecture alone.

Bremner, Aduddell, Bennett, and VanGeest's (2006) descriptive study assessed the effectiveness of human patient simulators as a teaching strategy in a sample of 41 beginning baccalaureate nursing students in a health assessment course. Sixty-one percent of students felt that the experience gave them confidence on a self-report instrument. The majority of students felt that self-confidence increased after a high fidelity human patient simulation session.

Brannan, White, and Bezanson (2008), in a quasi experimental study, investigated confidence in a sample of 107 junior-level students enrolled in an adult health course. Students were divided into two groups. One group attended a traditional lecture and the other group participated in a simulation session on the cardiovascular system. Participants responded to items on a 34-item confidence level scale. There was no significant difference in confidence levels between groups. Confidence scores did not increase following simulation and debriefing.

Feingold, Calaluce, and Kallen's (2004) studied the effectiveness of the human patient simulator on satisfaction and confidence in a sample of 65 students. An independent t-test showed differences in students with higher GPAs than lower GPAs on the value of skills taught in the course ($t = 2.002$, $p = 0.048$). Thus, GPA may influence student outcomes. Younger students ($M = 3.05$) "believed the 'pace and flow' of the simulation were more realistic" than older students ($F = 4.43$, $p < .016$) did (p. 161). Thus, age may influence learning satisfaction related to simulation. Also, over half the students felt that simulation increased their self-confidence.

A multi-site study compared 110 students in two randomized groups to examine differences in self-confidence using two teaching strategies. One group had a case study and another group engaged in a simulation using a high fidelity human patient simulator. In the executive summary, the simulation group reported significantly higher confidence skills on the Student Satisfaction and Self-Confidence in Learning scale as compared to the case study group. Additionally, students in the simulation group reported greater satisfaction with simulation on the Student Satisfaction and Self-Confidence in Learning scale (Jeffries & Rizzolo, 2006).

In summary, theoretically, debriefing influences nursing student self-confidence following a simulation session. Students are also satisfied with simulations (Jeffries, 2005; Partin, Payne, & Slammons, 2011; Schlairet, 2011). Empirically, the results for self-confidence scores are equivocal, with self-confidence increasing in some studies (Bambini, Washburn, & Perkins, 2009; Bremner et al., 2006; Brown & Chronister, 2009; Jeffries & Rizzolo, 2006; Schlairet, 2011) and in one study self-confidence scores were similar in both the control and intervention group (Brannan, White & Bezanson, 2008). Therefore, the exact effect of simulation on self-confidence remains unclear based on the review of the literature. In the reviewed studies, students were satisfied with simulation (Jeffries & Rizzolo, 2006; Wagner, Bear, & Sander, 2009) and the debriefer promoted analytic responses from students (Husebo et al., 2013). Based on theory and previous research, simulation, and specifically video assisted debriefing, may have an effect on self-confidence and learner satisfaction, but more research needs to be done in this area. The present study examined the relationship between video assisted debriefing and self-confidence and learner satisfaction as compared to traditional oral debriefing.

Clinical Judgment, Self-Confidence, and Satisfaction in Roles of Participants

Lasater's (2007a) exploratory pilot study tested a rubric to assess clinical judgment in a sample of 48 undergraduate nursing students. As part of the study, Lasater investigated the role of primary nurse in HFHPS and clinical judgment in a sample of 26 nursing juniors enrolled in a seven-week adult health course. One student acted as the primary nurse, responsible for management of care and delegation to other team members. All of the participants had a chance to act as the primary nurse. Participants were asked to respond to the Lasater Clinical Judgment Rubric, a 44 item instrument. In this descriptive study, the mean clinical judgment score was *22.98* (SD=6.07), with a range of 5 to 33 for those in the primary nurse role. Lasater found improvements in clinical judgment after HFHPS. There was no statistically significant difference in days of the week, time of day, scenario ordering, group relationships, or group size relative to clinical judgment. A limitation of this study was the small sample size, resulting in low power. Upon completion of the clinical judgment rubric, the researchers reported that students were better prepared for the debriefing session. Students reflected on the simulation experience and responded to open ended questions quickly.

Jeffries & Rizzolo (2006), in a NLN National study, investigated knowledge, self-confidence, and learner satisfaction in a sample of 403 student nurses. The participants were assigned to the following roles during simulation of a post-operative adult patient: (a) nurse 1, (b) nurse 2, (c) significant other, or (d) observer. The researchers found that there were no significant differences in knowledge gained, self-confidence, or satisfaction among students in the four different roles. However, students who assumed the nurse 1 and the significant others roles reported significantly higher judgment scores on the

judgment performance scale as compared to nurse 2. There was no difference in judgment levels between nurse 1 and significant others. Students who were in the observer roles reported significantly lower judgment levels as compared to nurse 2.

Gaps in Literature

The current body of nursing knowledge in simulation is limited. The first, and most recognizable, gap is the lack of a large number of research studies focusing on debriefing with adequate research designs. Many are descriptive studies (Bremner et al., 2006; Feingold, Calaluce, & Kallen, 2004). The second gap is the lack of research studies focusing on clinical judgment, nursing student self-confidence specific to debriefing or the simulation process, including roles of the student in the simulation. There are a number of nursing research studies that support the use of simulation (Cato, Lasater, & Peeples, 2009; Dillard et al., 2009; Harder, 2010; Jeffries & Rizzolo, 2006). Many studies use instruments/tools that are developed by the researchers and may not be valid and reliable (Brown & Chronister, 2008; Chronister, 2008; Wagner, Bear, & Sander, 2009). Based on the theoretical literature and empirical literature, clinical judgment increases with simulation but the specific effects of debriefing are unknown (Cato, Lasater, & Peeples, 2009; Dillard et al. 2009). In the majority of research studies examined, self-confidence scores increased (Bambini, Washburn, & Perkins, 2009; Bremner et al., 2006; Chronister, 2008; Harder, 2010; Jeffries & Rizzolo, 2006; Wagner, Bear, & Sander, 2009). However, one study showed no difference in self-confidence scores (Brannan & Bezanson, 2008). The true effects of debriefing on self-confidence remain unknown. Learner satisfaction with simulation is well studied and supported by the empirical literature; however, specific aspects of the simulation session have not been studied,

including the scenario, the process, debriefing, and the instructor. It was the purpose of this present study to examine the relationship of video assisted debriefing on clinical judgment, self-confidence, and learner satisfaction.

Theoretical Framework

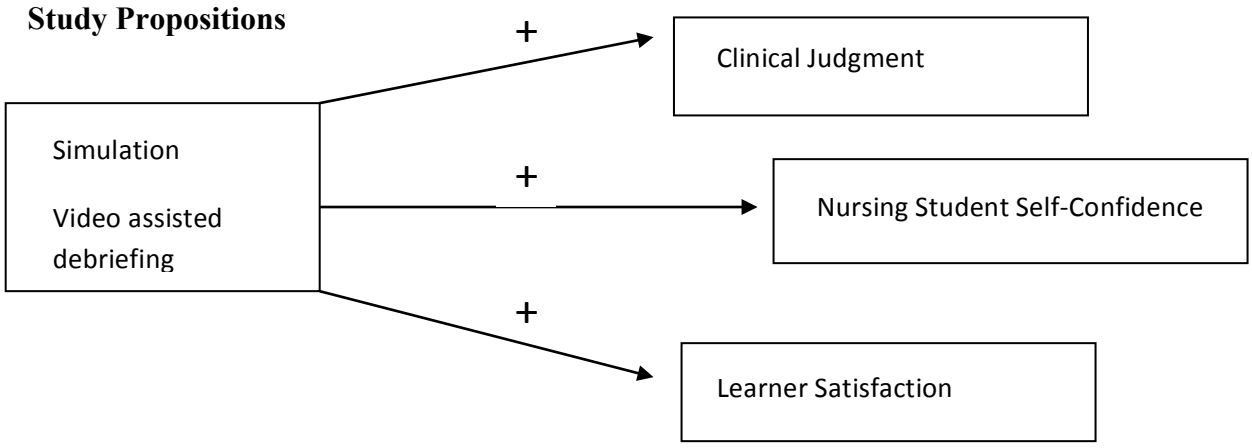
The theoretical framework for this study is the NLN/Jeffries Simulation Framework developed by Pamela Jeffries for the National League for Nursing as part of a study, funded through the Laerdal Medical Corporation (Jeffries, 2005). It was designed to implement simulations and examine the student outcomes (Jeffries, 2005). P. Jeffries (personal communication, 2010) developed the framework based on three different learning theories. These theories include constructivism, social development, and experiential learning theories. Constructivism is derived from Piaget who states that knowledge emerges from interactions between experiences and one's own ideas (Billings & Halstead, 2009). Social development theory includes the concepts of social interaction in cognitive development (Vygotsky, 1978). Kolb (1984) describes experiential learning as having the learner taking part in the experience and then reflecting on it.

The NLN/Jeffries Simulation Framework has five components: (a) student, (b) faculty, (c) educational practices, (d) the simulation experience, and (e) outcomes of simulation. The NLN/Jeffries Simulation Framework proposes that student and faculty characteristics and educational practices directly influence the simulation experience. The simulation design characteristics/intervention includes the following components: objectives, fidelity, complexity, cues, and debriefing. The last component of the framework is the student outcomes of simulation that include learning (knowledge), skill performance, learner satisfaction, critical thinking, and self-confidence. Simulation

design characteristics, including debriefing, directly influence student outcomes. Thus, the framework proposes that debriefing directly influences student outcomes in simulation.

There are currently studies testing the relationships within the NLN/Jeffries Simulation Framework to advance the science of nursing simulation. The NLN/Jeffries Simulation Framework postulates that simulation design characteristics influence student outcomes. Student outcomes include any outcome expected of nursing students (Jeffries, 2007; M. Rizzolo, personal communication, October 20, 2011). In this study, clinical judgment is the student outcome of interest. Debriefing captures "reflective thinking" following the simulation session (Jeffries, 2007, p. 29). Based on the NLN/Jeffries Simulation Framework, the relational proposition to be tested in this proposed study is the following: Video assisted debriefing increases clinical judgment, self-confidence, and learner satisfaction. Further, the propositions proposed from this model are (1) debriefing influences the student outcome of clinical judgment, (2) debriefing influences the student outcome of self-confidence, and (3) debriefing influences the student outcome of learner satisfaction. The student outcomes of clinical judgment, self-confidence, and learner satisfaction were chosen as important concepts of interest to measure in nursing students in the simulated learning environment related to video assisted debriefing.

Figure 1. Study Propositions



Hypotheses

1. There will be higher self-reported clinical judgment scores of associate degree nursing students in the video assisted debriefing group as compared to the traditional debriefing group.
2. There will be higher self-reported self-confidence scores of associate degree nursing students in the video assisted debriefing group as compared to the traditional debriefing group.
3. There will be higher self-reported learner satisfaction scores with the simulation of associate degree nursing students in the video assisted debriefing group as compared to the traditional debriefing group.
4. There will be higher self-reported learner satisfaction scores with the simulation facilitator of associate degree nursing students in the video assisted debriefing group as compared to the traditional debriefing group.
5. The roles of the student are related to clinical judgment, self-confidence, and learner satisfaction with the simulation.

Chapter III. Methods

This chapter presents the methodology used to examine differences in the student outcomes of (a) clinical judgment, (b) self-confidence, and (c) learner satisfaction between nursing students engaged in video assisted debriefing as compared to those participating in traditional oral debriefing. A randomized control experimental, research design to assess differences across two to three time periods, was employed. The chapter is organized into five sections: (a) setting, (b) equipment, (c) sample, (d) instruments, and (e) data collection procedures.

Research Setting

The setting for the study was a community college located in a suburb in Southern New Jersey. The study was conducted in a simulation laboratory where nursing students practice skills and learn new skills. The lab contained 10 beds with a variety of simulators ranging from infants to adults. There were also different types of simulators in the laboratory, from Vital-Sims® to birthing simulators. A Laerdal child simulator, named SimJunior®, was set up on a working pediatric hospital bed in the learning lab. In addition to the child simulator, there was a monitor, patient chart, crash cart, intravenous solutions, simulated medication area, white board, computer, charts, vital sign machines, and additional nursing supplies.

Equipment

Video equipment was set up to record the session. Specifically, the Flip MinoHD Video Camera 4 GB model was set up on a tripod capturing the entire simulation area. The camera remained stationary throughout the simulation. Once the simulation scenario

ended, the camera was plugged into a Dell laptop for viewing the recorded video. An InFocus projector displayed video from a Dell laptop computer.

Sample

The randomized sample was comprised of associate degree nursing students from a community college in the State of New Jersey. Of the 90 participants approached, all met the delimitations of the study as assessed by the researcher. The 90 students were provided with an explanation of the study and given an informed consent. All 90 participants agreed to participate in the study; however, 16 were unable to participate because of withdrawal from the nursing program due to weather emergencies from Hurricane Sandy. The final sample consisted of 74 participants with 37 participants in the oral debriefing group and 37 participants in the video debriefing group for time 1 and time 2. At time 3, attrition occurred leaving a sample of 56 students for time 3, 29 in the oral group and 27 in the video group. The age of the participants ranged from 20 to 56 years, with an average age of 31.7 years; the majority of participants were female (90.5%), White (79.7%), and had a G.P.A. between 3.0-3.4 (58.1%) on a 4.0 scale. For the majority of the sample, it was their first degree (68.9%), they had worked in the health care setting for 2 or more years (50%), and were very comfortable with technology (61%). Table 1 summarizes selected demographic data related to sex, age, race, and GPA. Participants were third semester pre-licensure nursing degree students in a pediatric clinical course. This population was chosen because of their experience with simulation within the curriculum. These students have had simulation in their previous courses and have been videotaped while engaged in simulations.

Table 1

Frequency Distribution of Selected Demographic Variables

Characteristics	*N*	*Percentage*
Sex		
Male	7	9.5
Female	67	90.5
Age		
20-31	42	56.8
32-43	26	35.1
44-56	6	8.1
Race		
Asian	7	9.5
Black	8	10.8
White	59	79.7
G.P.A.		
3.5-4.0	18	24.3

(continued)

3.0-3.4	43	58.1
2.5-2.9	12	16.2
2.0-2.4	1	1.4

end.

Each of the participants was ensured confidentiality and signed an informed consent form. Randomization into the control group (traditional oral debriefing) and the experimental group (video assisted debriefing) occurred with the use of a table of random numbers before the implementation of the intervention.

Sample size for testing the proposed differences in means was based on the use of an ANOVA. Previously reported empirical findings considered small to medium effect sizes. An approximate sample size of 44 subjects was determined for each group, with power of .80, a medium effect size (Cohen's d^b = .60), and an alpha of .05 (Cohen, 1988). A total of 88 subjects were needed for this study.

The final sample of 74 participants slightly affected the study's power. A post-hoc analysis using G-power 3 (Faul et al., 2007) for a sample size of 74, a medium effect size (d=.60), and a significance of .05, determined the actual power of this study to be .72.

Instruments

Four instruments were used in this study: (a) The Demographic Survey, (b) the Lasater Clinical Judgment Rubric (LCJR), (c) the Student Satisfaction and Self-Confidence in Learning scale (SSSL), and (d) Debriefing Assessment for Simulation in Healthcare (DASH).

Demographic survey. The researcher developed the Demographic Survey and asked participants to identify their age, gender, grade point average (G.P.A.), race, healthcare-related work experience, comfort with technology, previous simulation experience, and prior degrees obtained. Students also self- identified their role in the simulation following both simulations. The primary nurse was differentiated from all other roles using a code of 0 (primary nurse) and 1 (others) (See Appendix A).

Lasater Clinical Judgment Rubric. The Lasater Clinical Judgment Rubric (LCJR), based on Tanner's (2006) clinical judgment model is a self-report 11-item scale designed to measure perceived clinical judgment. The summated scale uses a 4 point response format from 1 (*beginning*), 2 (*developing*), 3 (*accomplished*) and, 4 (*exemplary*). An example of an item is level of skill. An exemplary student "shows mastery of necessary nursing skills." An accomplished student "displays proficiency in the use of most nursing skills, could improve speed or accuracy." A developing student "is resistant or ineffective in utilizing nursing skills." A beginning student "is unable to select and/or perform the nursing skills." Scores range from 11-44, the higher the score, the higher the levels of clinical judgment (Tanner, 2006). There are no reports of content, construct, or criterion validity of the scale. Jensen (2013) reported an alpha reliability of .95 for the total scale in a sample of first year 62 associate degree and 26 baccalaureate nursing students. Jensen also reported alpha reliabilities for the four subscales of the LCJR: .88 for the subscale noticing, .88 for interpreting, .88 for responding, and .86 for the subscale reflecting. Blum, Borglund, and Parcells (2010) reported alpha reliabilities of the subscales, ranging from .88 to .93 among 53 entry-level baccalaureate nursing students. Research studies support the use of the scale by nursing faculty to rate the

student (Cato, Lasater, & Peeples, 2009; Dillard et al., 2009; Lasater, 2007). Both Jensen (2013) and Cato, Lasater, and Peeples (2009) found no significant difference in faculty and student ratings of clinical judgment on the LCJR. Based on previous research, it was assumed that students were able to self-assess their clinical judgment skills (Cato, Lasater, Peeples, 2009; Jensen, 2013).

Student Satisfaction and Self-Confidence in Learning Scale. The Student Satisfaction and Self-Confidence in Learning Scale (SSSL) was developed for the National League for Nursing multi-site study on simulation design and implementation (Jeffries & Rizzolo, 2006; Jeffries, 2007). The SSSL has 13 items and two subscales, satisfaction and self-confidence; five items on the scale measure satisfaction and eight items measure self-confidence. Participants respond to all 13 questions on a 5-point Likert scale ranging from 1 (*strongly disagree*) with the statement to 5 (*strongly agree*) with the statement (Jeffries, 2007).

Student Satisfaction with simulation subscale is measured with 5 items on the SSSL (Jeffries, 2007). An example of an item on the satisfaction subscale is "the teaching methods used in this simulation were helpful and effective." The scores range from 5 to 25, with higher scores indicating higher the participants' satisfaction with simulation. Jeffries (2007) reported that nine clinical experts established content validity for the SSSL. There are no reports of construct or criterion related validity. Alpha reliability for the SSSL was reported to be .94 among 403 nursing students enrolled in a medical surgical course (Jeffries, 2007). Of the total sample, 62% were enrolled in a baccalaureate program, and 28% were enrolled in an associate degree program (Jeffries, 2007.)

The Self-Confidence in Learning following simulation subscale is 8-items on the SSSL, measuring how confident students feel after the simulation and debriefing session (Jeffries, 2007). An example of an item is "I am confident that I am developing the skills and obtaining the required knowledge from this simulation to perform necessary tasks in a clinical setting." The scores range from 8 to 40, with higher scores indicating greater levels of self-confidence. Content validity was established by nine clinical experts (Jeffries, 2007). There are no reports of construct or criterion related validity. Jeffries (2007) reported an alpha reliability of .87 among 403 nursing students enrolled in a medical surgical course for the satisfaction subscale of the SSSL. Of the total sample, 62% were enrolled in a baccalaureate program, and 28% were enrolled in an associate degree program (Jeffries, 2007.)

Debriefing Assessment for Simulation in Healthcare (DASH). The Debriefing Assessment for Simulation in Healthcare (DASH), developed by Simon, Rudolph and Raemer (2010) at Harvard University, is a self-report assessment instrument to rate student satisfaction with simulation debriefing, specifically focusing on the facilitator's skills and behaviors called "elements" (Simon, Rudolph, & Raemer, 2010). There are six overall "elements" or questions, each defined by two to five behaviors for each element. An example of an element is "The instructor helped me see how to improve or how to sustain good performance." An example of an underlying behavior for this element is "The instructor helped me learn how to improve weak areas or how to repeat good performance." Students are asked to rate each element and behavior of the debriefing and of the facilitator on a Likert scale of 1 (*extremely ineffective*) to 7 (*extremely effective*). The total scores for the six elements range from 7-42, the higher the score, the higher the

level of satisfaction with the debriefing facilitator. Each behavior rates the instructor, ranging from 1-7 on a Likert scale of 1 (*extremely ineffective*) to 7 (*extremely effective*). The scoring guide and instrument both state that these behaviors are not to be summed for a total score, but rather looked at individually under each higher ranked element. For this study, students were only asked to score the facilitator using the elements and did not score individual behaviors. Simon, Rudolph and Raemer (2010 reported that criterion and content validity have been established through peers at Harvard who debriefed medical students for over 20 years. An alpha reliability of .82 has been established for the instrument among medical students (Simon, Rudolph, & Raemer, 2010). There is no report of construct validity of the DASH. To date, this instrument has not been reported as being used in nursing research but the creator, Simon, supported its use among nursing students via email in the current study. This instrument was previously used in the medical student population following a high fidelity human patient simulation, and it was thought that it could also be used for nursing students following a high fidelity human patient simulation.

Procedures for Data Collection

This study was conducted in a Southern New Jersey community college. Participants were second year, first semester, pre-licensure nursing students enrolled in a pediatric clinical course. Before data collection, approval was obtained from the Institutional Review Boards at Rutgers, The State University of New Jersey, Brookdale Community College, and Monmouth University.

Prior to conducting the study, the researcher met with the students and provided them with an explanation of the purpose of the study, an information sheet, the study

timeline, the rights of human subjects, and an informed consent. The informed consent was read aloud and student questions were answered by the researcher. After the participants reviewed and signed the informed consent form, they were enrolled in the study. Randomization of students into the video or oral debriefing groups, via a table of random numbers, took place after students signed the informed consent and prior to implementation of the intervention. Students in the video group were also asked to sign a video consent form before the start of the first simulation session in the same manner.

The students in both groups, oral and video, participated in two simulation sessions seven weeks apart. They used the same simulator and scenarios, followed by debriefing sessions. The oral group had 37 students and the video group had 37 students. Three to six students in each group participated in the simulation sessions until all the students in each group had participated. The purpose of the first simulation session was to re-socialize the students to the simulation experience and to videotaping for the video group. During the simulation session, a teaching assistant (TA) read a pre-printed sheet to orient the students to the experience and to the lab environment. The TA ran the simulation sessions, with the clinical faculty members participating in the simulation in the role of the physician.

The simulation scenarios were the same for both groups and were based on content from the pediatric course syllabus, course objectives, and learning outcomes. The 3 lead pediatric faculty members modified the scenarios from the Adult NLN/Laerdal Asthma simulation scenario and from the Adult NLN/Laerdal Hemorrhage and Post Operative Scenarios. The faculty modified the scenarios by identifying relevancy of content to coursework and to assure the four essential actions, (a) communication through

SBAR, (b) identification of critical events, (c) nursing management, and (d) collaboration with family and the healthcare team, were present in both the asthma and post-operative scenarios. The first scenario focused on 8 year old with asthma. The second scenario was a modified version of the first scenario focusing on crisis management related to airway management and hemorrhage of a 17 year-old. Therefore, the second simulation session reinforced the four essential actions from the first simulation session.

No revisions of the scenarios were completed as agreement on content validity was met with 100% agreement among 3 faculty members with a content validity index of 1.0. The two modified faculty-developed pediatric scenarios were tested previous to the current study by the pediatric faculty members over three semesters

Students in both groups, oral and video, participated in simulation sessions lasting 15 minutes followed by debriefing sessions lasting 30 minutes. Students were assigned roles as the primary nurse, family members, observers and other healthcare providers within the simulation session.

Each debriefing group, comprised of three to six students, was facilitated by the same teaching assistant (TA). Nine guided questions facilitated the debriefing process (See Appendix B). Sarver, Senczakowic and Murphy Slovensky (2010) suggested seven to ten questions during the debriefing process. The nine questions were based on NLN suggested debriefing questions (Jeffries, 2007) and the simulation literature (Dreifuerst, 2009; Neill Wotton, 2011; Waxman, 2010). Four faculty members at the community college reviewed the debriefing questions for clarity and appropriateness in order to assure that the objectives of the simulation scenario were met. The results showed that all

four faculty members were in agreement that the questions were clear, appropriate, and met the objectives of the scenario.

Prior to the onset of the study, the TA received training in debriefing through the NLN's Simulation Innovation Resource Center (SIRC) website (Anderson, 2012). The TA accessed the simulation online course called "Debriefing and Guided Reflection." This training was accessed via the internet in an asynchronous webinar format. A supplemental information packet on the DASH debriefing method and also a recommended 9 question debriefing guide aided the TA throughout the study.

Debriefing was conducted in a separate environment, removed from the simulation area. A structured debriefing session was used guided by the classroom assessment technique of Think-Pair-Share (Angelo & Cross, 1993). Students were asked to "think" after being asked the first two questions, "What did you do well during this simulation session?" "What would you change in your performance in the simulation?" Students reflected on their own thoughts and insights. Students took notes on a paper with a plus sign and a delta sign at the top of a two-column piece of paper (See Appendix C). Underneath the plus sign, students listed correct behaviors they performed during the simulation. Underneath the delta sign, students listed behaviors they would have modified.

Next, students were asked to "pair" off and discuss their observations with a classmate for five minutes. Finally, they were asked to "share" their thoughts with the larger group. The facilitator asked each group to share one behavior they performed correctly and one behavior they would change in the future. This classroom assessment technique was chosen to offer a structure for a typically unstructured process. The entire

simulation session, including the debriefing, lasted 45 minutes (simulation 15 minutes, debriefing 30 minutes).

Oral debriefing. The control group participated in a 15-minute simulation session, which included participation in the scenario. After the simulation session, students moved to the debriefing room and participated in a 30-minute debriefing using the Think Pair Share method (Angelo & Cross, 1993). The remaining time was spent answering additional debriefing questions led by the facilitator, using the debriefing question guide (Appendix B). The debriefing session for the control group was oral assessment and contained no video feedback. These steps were repeated for each simulation session conducted.

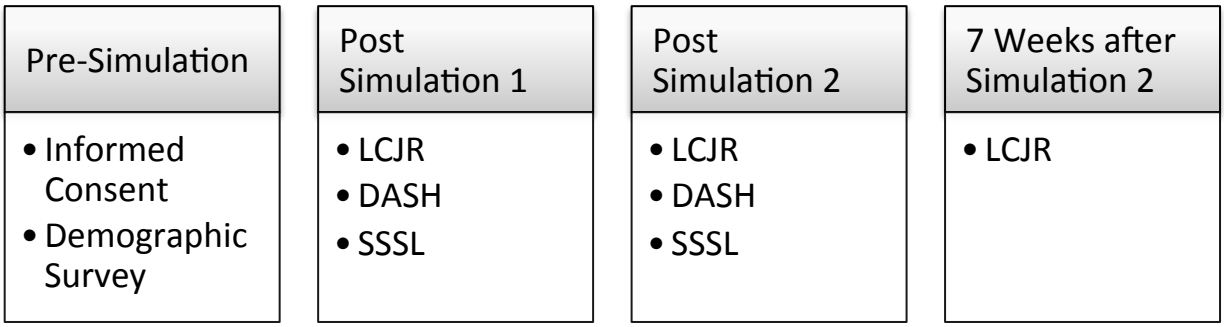
Video assisted debriefing. The intervention group participated in a 15-minute simulation scenario. Students in the video group had been videotaped during simulation at least once in previous semesters, so it was assumed that they had been desensitized to being video recorded. Students were video recorded during their simulation scenario by the TA. Following the simulation session, students moved to the debriefing room sitting in chairs in a semi-circle. Once complete, the recording device was connected to the laptop and projected onto a screen.

Students then participated in a 30-minute debriefing using the Think Pair Share method (Angelo & Cross, 1993), described above, with the use of a video. Students watched the entire video and took notes on a piece of paper. The remaining time was used to answer additional debriefing questions led by the facilitator using the debriefing question guide in Appendix B. These steps were repeated for each simulation session conducted.

To summarize, the key differences between the control group and video group during the simulation debriefing included the use of video assisted debriefing. The 30-minute debriefing session was divided into 15 minutes of "think" time with both groups using the worksheet provided to take notes. The oral debriefing group used this time to reflect independently on the simulation. The video debriefing group watched the recording of the videotaped simulation. Next, students had two to three minutes to "pair" with a partner to share their insights. Last, each pair was asked to "share" one insight from the simulation session for a total of three to five minutes. During the remaining time, the facilitator asked the debriefing questions found in Appendix B.

Study timeline. Before the first simulation, students were asked to complete the informed consent and demographic survey. Baseline assessment was done immediately following the first simulation session. Students were asked to complete the LCJR, DASH, and SSSL. Also, students were asked to identify their role (primary nurse or other) in the simulation. Seven weeks later, after the second simulation session, students were asked to complete the DASH, LCJR, and SSSL again. Again, students were asked to identify their roles within the simulation. Seven weeks later the students completed the LCJR (See Figure 2). This last assessment measured any longitudinal changes in clinical judgment. Last, students received a thank you email upon completion of the study instruments.

Figure 2. Study Timeline with Data Collection Points



Confidentiality was maintained throughout this research study. The videos were erased immediately following the conclusion of each simulation session. All student demographic information was kept confidential and presented in aggregate form after being compiled and analyzed using statistical measures. The data are stored on a password-protected personal computer and will be erased in five years from the last point of data collection.

Chapter 4. Analysis of the Data

The purpose of this present study was to examine differences in the student outcomes of (a) clinical judgment, (b) self-confidence, (c) learner satisfaction with the simulation, and (d) learner satisfaction with the debriefing facilitator between students engaged in video assisted debriefing as compared to those participating in traditional oral debriefing. Also, tested was the relationship between role of the student during the simulation and the dependent variables. Data were collected from 74 respondents using the Debriefing Assessment for Simulation in Healthcare (DASH), the Lasater Clinical Judgment Rubric (LCJR), the Student Satisfaction and Self-Confidence in Learning Scale (SSSL), which has two subscales, Student Satisfaction and Self-Confidence, and a demographic questionnaire. This chapter presents findings resulting from the analysis of data.

Statistical Description of the Variables

The final sample consisted of 74 participants, 37 in the oral debriefing group and 37 in the video debriefing group at time 1 and time 2 and 56 participants at time 3, 29 in the oral group and 27 in the video group. The total sample's scores, the oral debriefing group, and the video debriefing group scores on the DASH scale, LCJR scale, and SSSL subscales are summarized in Table 2.

The total sample's scores on the DASH ranged from 1 to 7 ($M = 6.28$, $SD = 1.17$) at time 1 and ranged from 4 to 7 ($M = 6.67$, $SD = 0.52$) at time 2. On the LCJR the scores ranged from 1 to 4 ($M = 2.76$, $SD = 0.75$) at time 1, ranged from 1 to 4 ($M = 2.85$, $SD = 0.67$) at time 2, and ranged from 1 to 3 ($M = 2.98$, $SD = 0.67$) at time 3. The respondents' scores on the Learner Satisfaction subscale of the SSSL ranged from 2 to 5 ($M = 4.54$, SD

= 0.57) at time 1 and ranged from 1 to 5 (*M* = 4.81, *SD* = 0.35) at time 2 and on the Student Confidence subscale, the scores ranged from 1 to 5 (*M* = 4.25, *SD* = 0.61) at time 1 and ranged from 1 to 5 (*M* = 4.59, *SD* = 0.38) at time 2.

The oral debriefing participants *(N* = 37) scores on the DASH ranged from 1 to 7 (*M* = 6.07, *SD* = 1.50) at time 1 and ranged from 5 to 7 (*M* = 6.43, *SD* = 0.61) at time 2. On the LCJR the scores ranged from 1 to 4 (*M* = 2.55, *SD* = 0.88) at time 1, ranged from 1 to 4 (*M* = 2.52, *SD* = 0.53) at time 2, and ranged from 1 to 3 (*N* = 29) (*M* = 2.62, *SD* = 0.55) at time 3. The respondents' scores on the Learner Satisfaction subscale of the SSSL ranged from 2 to 5 (*M* = 4.57, *SD* = 0.68) at time 1 and ranged from 4 to 5 (*M* = 4.66, *SD* = 0.41) at time 2. The participants' scores on the Student Confidence subscale ranged from 1 to 5 (*M* =4 .25, *SD* = 0.77) at time 1 and ranged from 1 to 5 (*M* = 4.46, *SD* = 0.39) at time 2.

The video debriefing participants' scores on the DASH ranged from 4 to 7 (*M* = 6.48, *SD* = 0.65) at time 1 and ranged from 6 to 7 (*M* = 6.91, *SD* = 0.22) at time 2. Participants' scores on the LCJR ranged from 1 to 4 (*M* = 2.97, *SD* = 0.53) at time 1, ranged from 1 to 3 (*M* = 3.18, *SD* = 0.55) at time 2, and ranged from 1 to 3 (*M* = 3.36, *SD* = 0.56) at time 3. The respondents' scores on the Learner Satisfaction subscale of the SSSL ranged from 4 to 5 (*M* = 4.50, *SD* = 0.43) at time 1 and ranged from 4 to 5 (*M* = 4.96, *SD* = 0.18) at time 2. The participants' scores on the Student Confidence subscale ranged from 3 to 5 (*M* = 4.26, *SD* = 0.40) at time 1 and ranged from 4 to 5 (*M* = 4.73, *SD* = 0.32) at time 2. These findings are summarized in Table 2.

Table 2.

Descriptive Statistics of Clinical Judgment, Self-Confidence, Learner Satisfaction, and Debriefing Assessment for Simulation Scores (*N* = 74)

Variable		*Range*	*M*	*Mdn*	*SD*
Clinical Judgment					
Total	Time 1	1-4	2.76	2.96	0.75
Oral	Time 1	1-4	2.55	2.55	0.88
Video	Time 1	1-4	2.97	3.00	0.53
Total	Time 2	1-4	2.85	2.91	0.67
Oral	Time 2	1-4	2.52	2.45	0.53
Video	Time 2	1-3	3.18	3.18	0.55

(continued)

Total	Time 3	1-3	2.98	2.91
	0.67			
Self Confidence				
Total	Time 1	1-5	4.25	4.25
	0.61			
Oral	Time 1	1-5	4.25	4.25
	0.77			
Video	Time 1	3-5	4.26	4.13
	0.40			
Total	Time 2	1-5	4.59	4.63
	0.38			
Oral	Time 2	1-5	4.46	4.38
	0.39			
Video	Time 2	4-5	4.73	4.89
	0.32			

(continued)

Learner Satisfaction				
Total	Time 1	2-5	4.54	4.70
	0.57			
Oral	Time 1	2-5	4.57	5.00
	0.68			
Video	Time 1	4-5	4.50	4.40
	0.43			
Total	Time 2	4-5	4.81	5.00
	0.35			
Oral	Time 2	4-5	4.66	5.00
	0.41			
Video	Time 2	4-5	4.96	5.00
	0.18			
Debriefing Assessment for Simulation				
Total	Time 1	1-7	6.28	6.68
	1.17			
Oral	Time 1	1-7	6.07	6.67
	1.50			

(continued)

Video	Time 1		4-7	6.48	6.81
	0.65				
Total	Time 2		4-7	6.67	7.00
	0.52				
Oral	Time 2		5-7	6.43	6.67
	0.61				
Video	Time 2		6-7	6.91	7.00
	0.22				
Oral	Time 3		1-3	2.62	2.55
	0.55				
Video	Time 3		1-3	3.36	3.45
	0.56				

Psychometric Properties of Instruments

Alpha reliabilities for all of the study instruments were calculated at time one using data from all students. The DASH had an alpha reliability of .99, which is higher than the reliability of .82 reported by Simon, Rudolph, and Raemer (2010) among medical students. The LCJR had an alpha reliability of .97, which is similar to .95 reported by Jensen (2013) among nursing students. The Learner Satisfaction subscale had an alpha reliability of .93, which is similar to .94 reported by Jeffries (2007) among nursing students. The Self-Confidence in Learning Using Simulation Scale had an alpha

reliability of .91, which is higher than .87 reported by Jeffries (2007) among nursing students. Table 3 summarizes the alpha coefficient variables for each study variable.

Table 3.

Coefficient Alpha Reliabilities for Study Variable

Instruments	Coefficient Alphas
DASH	.99
LCJR	.97
Learner Satisfaction Subscale	.93
Self-Confidence in Learning Subscale	.91

Statistical Analysis

Five hypotheses were developed for this study in a sample of 74 nursing students randomly assigned to a traditional oral debriefing group or a video debriefing group. Repeated Measures Analysis of Variance was used to determine if there were differences in clinical judgment over three time intervals in both the oral debriefing group and video debriefing group. Analysis of Variance (ANOVA) was used to determine if significant differences existed between Oral and Video Groups for Learner Satisfaction, Self Confidence, DASH Debriefing Assessment at time 1 (T1) and time 2 (T2). The relationship of the roles of the students to the dependent variables was examined using Spearman's rho correlational analysis.

Quantitative analysis of the data was performed using SPSS version 20.0. Scores on the study variables met the assumption of homogeneity (Levene test, $p > .05$). To assess for normality, skewness and kurtosis were examined. The skewness and kurtosis for some variables were outside the "acceptable" range of -1 through +1 (clinical judgment T3, self-confidence T1, learner satisfaction T1, learner satisfaction T2, learner satisfaction with simulation facilitator T1, and learner satisfaction with simulation facilitator T2). The variables that were found to be outside the limits of skewness or kurtosis were corrected through rank transformation. Rank transformation is an active transformation, which is used to select the top or bottom rank of data (Conover, 2012). Rank transformation chooses the smallest or biggest values. Rank transformation results in a normal distribution from any skewed distribution (Conover, 2012).

Results of Hypothesis Testing

Hypothesis 1 was analyzed using a Repeated Measures ANOVA to evaluate mean differences in clinical judgment scores between the oral and video debriefing groups during the three points of data collection. Hypotheses 2, 3, and 4 were analyzed using an ANOVA evaluating mean differences on the SSSL and DASH for T1 and T2. Hypothesis 5 was examined using correlational analysis (Spearman's rho) to evaluate the relationship of roles to the three dependent variables. The role of primary nurse was coded as 1 and the roles of observers, family member, nursing assistant, and secondary nurse were coded as 0.

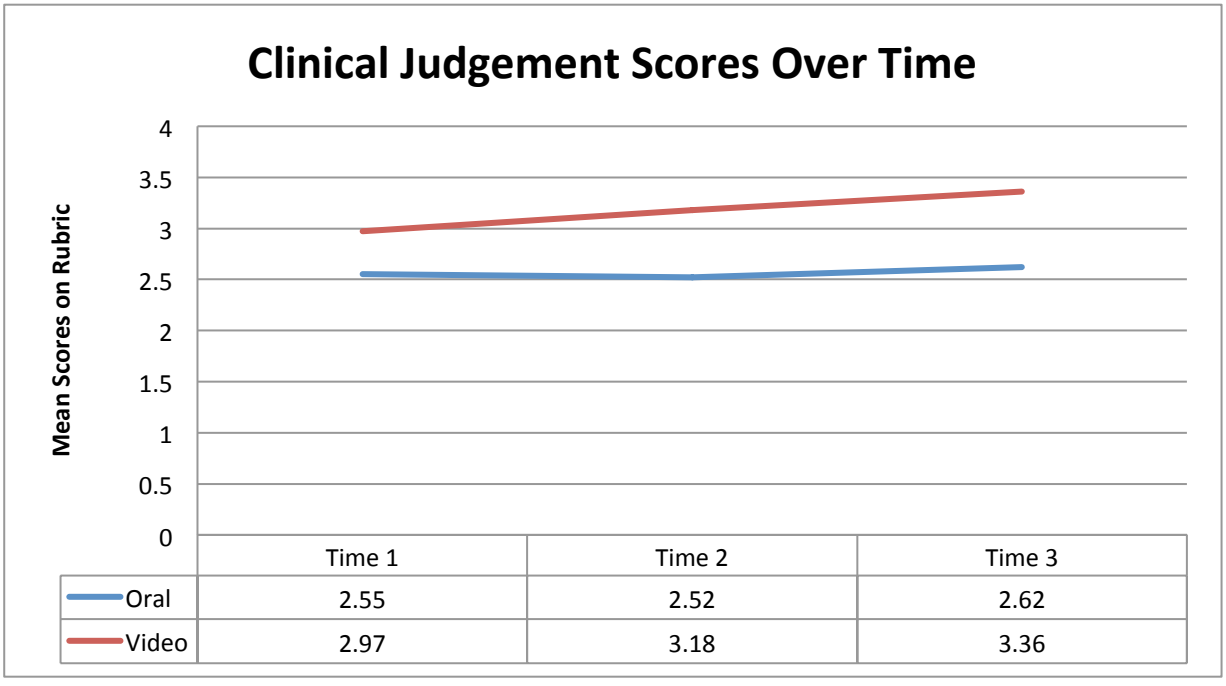
Hypothesis 1. Hypothesis 1 stated that there will be higher self-reported clinical judgment scores of associate degree nursing students in the video assisted debriefing group as compared to the traditional oral debriefing group. Hypothesis 1 was tested with

a repeated measure ANOVA to test mean differences between groups on clinical judgment at three intervals of time.

At baseline there was a significant difference between the oral debriefing group and the video assisted debriefing group (t (72) = -2.489, p < .015). The repeated measures ANOVA demonstrated that there was a significant main effect of time and group on clinical judgment scores (F (2, 53) = 13.79, p < .000). The subjects overall had different levels of performance over time as depicted in Figure 3.

Using the Bonferroni approach, differences in mean ratings of clinical judgment between the two groups were significant between time 1 and 3 (t (55) = 11.75, p < .000) and time 2 and 3 (t (55) = 11.64, p < .000) whereby the video group had higher self-reported clinical judgment than the oral debriefing group. Thus, hypothesis 1 was supported and the null hypothesis was rejected.

Figure 3. Clinical Judgment Differences Between Groups



Hypothesis 2. Hypothesis 2 stated that there will be higher self-reported self-confidence scores of associate degree nursing students in the video assisted debriefing group as compared to the traditional oral debriefing group. Hypothesis 2 was analyzed using an ANOVA evaluating mean differences on the student confidence subscale of the SSSL at T1 and T2. There was no significant difference between the groups in self-confidence at baseline, T1. The ANOVA revealed that confidence scores improved significantly at T2 ($F(1, 73) = 175.680$, $p = .000$), whereby both groups had significantly higher self-confidence at T2, but there was no significant differences between the groups. Hypothesis 2 was not supported and the null hypothesis was accepted.

Hypothesis 3. Hypothesis 3 stated that there will be higher self reported learner satisfaction scores with simulation of associate degree nursing students in the video assisted debriefing group as compared to the traditional oral debriefing group. Hypothesis 3 was analyzed using an ANOVA evaluating mean differences of scores on the learner satisfaction subscale of the SSSL from T1 to T2. There was no significant difference in learner satisfaction at baseline, T1. An ANOVA revealed that there was a significant difference (F (1,73)= 13.026, $p.$=.000) in learner satisfaction at time 2 whereby the video assisted debriefing group had higher satisfaction scores than the oral debriefing group. Hypothesis 3 was supported and the null hypothesis was rejected.

Hypothesis 4. Hypothesis 4 stated that there will be higher self-reported learner satisfaction scores with the simulation facilitator of associate degree nursing students in the video assisted debriefing group as compared to the traditional debriefing group. Hypothesis 4 was analyzed using an ANOVA evaluating mean differences on the DASH from T1 to T2. There were no significant differences in learner satisfaction scores at

baseline, T1. An ANOVA revealed that there was a significant difference ($F(1,73)= 16.930$, $p.=.000$) in learner satisfaction with the simulation facilitator at T2, whereby the video debriefing group had higher scores than the oral debriefing group. Hypothesis 4 was supported and the null hypothesis was rejected.

Hypothesis 5. Hypothesis 5 stated that the roles of the student are related to clinical judgment, nursing student self-confidence, and learner satisfaction. Hypothesis 5 was examined using Spearman's rho correlational analysis. There was a no relationship between primary and secondary roles and clinical judgment, self-confidence, and learner satisfaction with the simulation. Hypothesis 5 was not supported.

Additional Findings

The data collected was further analyzed for relationships between demographic variables and clinical judgment, self-confidence, and learner satisfaction using Pearson's Product Moment correlations. There was a positive correlation between race and learner satisfaction ($r = .267$, $p = .022$). Caucasians had an overall higher satisfaction as compared to other races. There was a positive correlation between comfort with technology and self-confidence ($r = .286$, $p = .014$), whereby, students who had more comfort with technology had higher self-confidence.

Chapter V. Discussion of the Findings

Preliminary effects of high fidelity human patient simulation on student outcomes in nursing have been reported. However, there is little evidence supporting the use of the structured debriefing process using video assisted debriefing and its impact on student outcomes. The purposes of the present study were as follows: 1) to examine the effects of video assisted debriefing as compared to traditional oral debriefing on clinical judgment of associate degree nursing students, 2) to examine the effects of video assisted debriefing as compared to traditional oral debriefing on associate degree nursing student self-confidence, 3) to examine the effects of video assisted debriefing as compared to traditional oral debriefing on learner satisfaction with the simulation of associate degree nursing students, 4) to examine the effects of video assisted debriefing as compared to traditional oral debriefing on learner satisfaction with the facilitator of associate degree nursing students, and 5) to examine the relationship between roles of the nursing student and clinical judgment, nursing student self-confidence, and learner satisfaction with the simulation.

The NLN/Jeffries Simulation Framework (Jeffries, 2005) has three components: (a) antecedents to simulation, (b) the simulation experience, and (c) outcomes of simulation. In this framework, Jeffries (2007) proposes that student and faculty characteristics and educational practices are antecedent to and directly influence the simulation experience. The simulation design characteristics/intervention includes the following components: objectives, fidelity, complexity, cues, and debriefing. The last component of the framework is the student outcomes of simulation that include learning (knowledge), skill performance, learner satisfaction, critical thinking, and self-

confidence. It is proposed that simulation design characteristics, including debriefing, directly influence student outcomes. Thus, it is proposed that debriefing directly influences student outcomes in simulation.

Discussion of Findings for Each Hypothesis

Video assisted debriefing and clinical judgment. Hypothesis 1 stated that there will be higher self-reported clinical judgment scores of associate degree nursing students in the video assisted debriefing group as compared to the traditional oral debriefing group. This hypothesis was derived from theory that suggests that debriefing influences student outcomes (Jeffries, 2005), and that debriefing promotes the outcome of clinical judgment (Dreifuerst, 2009). Theory also suggests that feedback through video assisted debriefing allows for higher levels of thinking (Parker & Myrick, 2010) that may impact clinical judgment. Based on theory, the relational proposition that was tested in the present study was: video assisted debriefing increases clinical judgment. The testing of Hypothesis 1 in this study found that the hypothesis and underlying theory were supported; both groups had higher clinical judgment scores over time, however, the video assisted group had significantly higher mean scores on clinical judgment than the oral assisted group. Empirical support is lacking on the direct relationship between video assisted debriefing and clinical judgment. One study demonstrated that clinical simulation increases nursing student clinical judgment when compared to traditional teaching (Lindsey & Jenkins, 2013). Other studies showed that there was no significant difference between oral and video debriefing groups in clinical performance (Grant, Moss, Epps, Watts, 2009; Sawyer, Sierocka-Castraneda, Chan, Berg, Lustik, & Thompson, 2012).

In the present study, there were higher self-reported clinical judgment scores of associate degree nursing students in the video assisted debriefing group as compared to the traditional oral debriefing group. The findings of this research add to the body of literature on simulation and specifically debriefing.

A caveat to these findings is that there was a difference at baseline between groups and sample attrition at T3. More research needs to be done to confirm these findings with increased sample sizes and higher power. The findings of this study provide beginning empirical support for video debriefing impacting clinical judgment more than oral debriefing. However, a larger sample and a longitudinal design over a longer period of time are needed.

Video assisted debriefing and self-confidence. Hypothesis 2 stated that there will be higher self-reported self-confidence scores of associate degree nursing students in the video assisted debriefing group as compared to the traditional oral debriefing group. The hypothesis was derived from theory that proposes that simulation influences student outcomes (Jeffries, 2005). Theory also suggests that simulation increases student self-confidence (Jeffries, 2005; Mould, White, and Gallager, 2011). Based on theory, the relational proposition that was tested in this study was: video assisted debriefing increases self-confidence. The testing of the hypothesis in this study demonstrated that the hypothesis was not supported; there was no significant difference in student self-confidence between the oral and video debriefing groups. Both the video and the oral debriefing groups demonstrated an increase in confidence from T1 to T2. The scores for the video group were higher than the oral group, but there was no difference between the groups. A possible explanation for the lack of differences between the two groups was

the small sample size. Since the sample size was small, it was less likely to find a significant difference between the groups. Another possible explanation for the results is that the simulation experience increases student self-confidence with both debriefing types. Theory and research supports the proposition that simulation increases student self-confidence (Bambini, Washburn, & Perkins, 2009; Bremner et al., 2006; Brown & Chronister, 2008; Harder, 2010; Jeffries & Rizzolo, 2006). However, the results of another study demonstrated that there was no significant difference in self-confidence between students who received lecture alone as compared to those who received simulation. (Brannan, White & Bezanson, 2008). In a recent integrative review of the literature, Foronda, Liu, and Bauman (2013) found that most studies reviewed demonstrated an increase in student self-confidence after the simulation experience. Yuan, Williams and Fang (2012) concluded from their systematic review that further research is needed to provide clear evidence of the effect of simulation on self-confidence using reliable and valid instruments and larger sample sizes. Moreover, Reed, Andrews, and Ravert (2013) studied the student debriefing experience and found that overall the student experiences with debriefing were similar, concluding that there was no clear evidence that one debriefing method was more efficacious than the other. The researchers cautioned that the sample size was small and the power was low for the study. Further research would help to distinguish if there is a significant effect of video assisted debriefing on self-confidence.

Video assisted debriefing and learner satisfaction with the simulation.

Hypothesis 3 stated that there will be higher self reported learner satisfaction scores with the simulation in the video assisted debriefing group as compared to the traditional oral

debriefing group. The hypothesis was based on theory suggesting that simulation increases learner satisfaction (Jeffries, 2005; Partin, Payne, & Slemmons, 2011). Schlairet (2011) proposes that students value satisfaction with the high-fidelity simulation experiences. The present study focused on the design variable debriefing and the outcome variable student satisfaction in the NLN/Jeffries Simulation Framework, which proposes that debriefing influences student satisfaction (Jeffries, 2005). Based on theory, the present study tested the following proposition: video assisted debriefing increases learner satisfaction with the simulation. Testing of the hypothesis demonstrated that the video assisted group had significantly higher mean scores on learner satisfaction with debriefing than the oral assisted group. The underlying theory and hypothesis were supported in this study. The present study lends support to research that has shown that students are satisfied with simulation (Feingold, Calaluce, & Kallen, 2004; Jeffries & Rizzolo, 2006; Schlairet, 2011; Wagner, Bear, & Sander, 2009). In the present study, there were higher self-reported learner satisfaction scores with the simulation of associate degree nursing students in the video assisted debriefing group as compared to the traditional oral debriefing group. The finding of this study provides beginning empirical support for video assisted debriefing impacting learner satisfaction with simulation more than oral assisted debriefing. The findings of this research add to the body of literature of simulation and specifically debriefing. More research is needed to confirm these findings with larger sample sizes.

Video assisted debriefing and learner satisfaction with the simulation facilitator. Hypothesis 4 stated that there will be higher self-reported learner satisfaction

scores with the simulation facilitator of associate degree nursing students in the video assisted debriefing group as compared to the traditional oral debriefing group.

Testing of the hypothesis demonstrated that the video assisted group had significantly higher mean scores on learner satisfaction with the debriefing facilitator than the oral assisted group. The underlying hypothesis was supported. Because different facilitators may have influenced the results, it should be noted that the simulation facilitator was the same individual for both the oral and video groups in this study.

Chronister (2008) stated that students value the use of video-assisted debriefing. Chronister proposed that faculty debriefing facilitators who were supportive decreased students' anxiety, enhancing their learning. Dieckmann, Friis, Lippert, and Ostergaard (2009) described six roles for the faculty debriefer (a) information provider, (b) role model, (c) facilitator, (d) assessor, (e) planner, and (f) resource developer. According to Dieckmann et al. (2009), the facilitator role helps students learn by asking questions that stimulate reflection. Decker et al. (2013) stated that effective debriefing facilitators use best practices in providing a structured debriefing that facilitates reflective discussion.

Cantrell (2008), in a qualitative study, explored the efficacy of structured debriefing using videotape in a sample of 11 senior level baccalaureate nursing students. Content analysis demonstrated that students believed that debriefing and the demeanor of the faculty enhanced their learning. Relative to their preference of oral or video-assisted debriefing, participants had no preference, but instead felt that the timing of the debriefing immediately following the simulation and the faculty debriefing facilitator were more important to their learning than the medium for debriefing. Wickers (2010)

proposed that the addition of video to the debriefing helps to reinforce effective interventions and generate discussions about ineffective behaviors. In the present study, there were higher self-reported learner satisfaction scores with the simulation facilitator of associate degree nursing students in the video assisted debriefing group as compared to the traditional oral debriefing group. The finding of this study provides beginning empirical support for video assisted debriefing impacting learner satisfaction with the debriefing facilitator more than oral assisted debriefing. The findings of this research add to the body of literature on simulation, and specifically debriefing. More research is needed to confirm these findings with larger sample sizes.

The roles of the student, clinical judgment, nursing student self-confidence, and learner satisfaction. Hypothesis 5 stated that the roles of the student are related to clinical judgment, nursing student self-confidence, and learner satisfaction. Jeffries and Rogers (2007) described roles in simulation as being either process-based or response-based roles. Participants in process-based roles are active participants in the scenario, such as a nurse making patient care decisions. Participants in response-based roles, such as observer, are not involved actively in patient care. Bethards (2013) states that students have similar satisfaction with the simulation regardless of the role played in the scenario. Jeffries and Rizzolo (2006), in their multi-site study, assigned roles to the students (a) Nurse 1, (b) Nurse 2, (3) significant other, or (4) observer. The results showed that there was no difference in self-confidence or satisfaction with simulation relative to the roles played in the simulation scenario. Relative to judgment, students who were in the role of Nurse 1 self-rated their clinical judgment higher than those in the role of Nurse 2. Students in the significant other role rated their judgment significantly higher than those

who assumed the Nurse 2 role. There was no significant difference in judgment between those who assumed the significant other role and those who assumed the Nurse 1 role. Grant et al. (2010) found that roles the students played in the scenario significantly affected student performance, whereby students who were team leaders, airway managers, and nurse anesthetists had higher mean total performance scores than did crash cart managers, recorders, or medication nurses. The researchers concluded that all of the students should have the opportunity to assume different roles, especially that of team leader, to enhance the simulation experience.

In the present study, the roles of the student were not related to clinical judgment, nursing student self-confidence, and learner satisfaction. Further research would help to clarify if there is a significant effect of the role of the student on clinical judgment, nursing student self-confidence, and learner satisfaction with the simulation.

Ancillary Findings

The data collected was further analyzed for relationships between demographic variables and clinical judgment, self-confidence, and learner satisfaction using Pearson's Product Moment correlations. There was a positive correlation between race and learner satisfaction ($r = .267$, $p = .022$), however the majority of participants were Caucasian. There was a positive correlation between comfort with technology and self-confidence ($r = .286$, $p = .014$) which was an expected finding as comfort with technology may lead to decreased anxiety in the simulation experience. Foronda, et al.(2013) in their integrative review, found that most of the studies suggested that simulation caused anxiety in students. Lower anxiety may increase self-confidence scores of students.

Limitations

There were several limitations to the study. The lower sample size than originally anticipated at the onset and time 3 and the fact that students were enrolled in one nursing program limit the generalizability of the findings. Further, the reliance on self-reported data may have contributed to the students over-rating their responses resulting in socially desirable responses. Another limitation is that most of the participants were female and White. More research using men, as well as women, and multicultural samples would be desirable. Also, as Foronda et al. (2013) reports when self-confidence and satisfaction are investigated in the same study, it is unknown if social desirability of responses is a factor. There may also be a threat to internal validity in "repeated testing" since repeatedly measuring associate degree nursing students may lead to score gains related to the same instrument measuring clinical judgment being used over time at three different points. Other factors that could not be controlled for may have impacted findings, such as clinical placements and faculty. A severe storm, Hurricane Sandy, also afflicted members of the community and the county of residence for this community college. The effects of the hurricane remain unknown but should have been controlled for using the randomized design. The hurricane also affected the power of the study since 12 students withdrew from the College.

On the positive side, the hypotheses were derived from theory and most were supported empirically. Based on the findings of this research study, it can be concluded that for this sample of students video debriefing increased clinical judgment, learner satisfaction with the simulation, and learner satisfaction with the debriefing facilitator more than oral debriefing.

Chapter VI. Summary, Conclusions, Implications, and Recommendations

Summary of Findings

The purpose of this study was to examine differences in the student outcomes of (a) clinical judgment, (b) self-confidence, (c) learner satisfaction with the simulation, and (d) learner satisfaction with the debriefing facilitator between associate degree nursing students engaged in video assisted debriefing as compared to those participating in traditional oral debriefing.

Theory suggests that the debriefing process promotes clinical judgment through reflection (Dreifuerst, 2009) and that an important element of clinical judgment is thinking (Tanner, 2006). Theory also proposes that debriefing influences nursing student self-confidence and satisfaction following a simulation session (Jeffries, 2005; Partin, Payne, & Slammons, 2011; Schlairet (2011).

Based on theory and empirical findings, the following hypotheses were developed for this study:

1. There will be higher self-reported clinical judgment scores of associate degree nursing students in the video assisted debriefing group as compared to the traditional debriefing group.
2. There will be higher self-reported self-confidence scores of associate degree nursing students in the video assisted debriefing group as compared to the traditional debriefing group.

3. There will be higher self-reported learner satisfaction scores with the simulation of associate degree nursing students in the video assisted debriefing group as compared to the traditional debriefing group.
4. There will be higher self-reported learner satisfaction scores with the simulation facilitator of associate degree nursing students in the video assisted debriefing group as compared to the traditional debriefing group.
5. The roles of the student are related to clinical judgment, nursing student self-confidence, and learner satisfaction.

The setting for the study was a community college located in a suburb in Southern New Jersey. The sample consisted of 74 participants with 37 participants in the oral debriefing group and 37 participants in the video debriefing group for time 1 and time 2. At time 3, attrition occurred leaving a sample of 56 students for time 3, 29 in the oral group and 27 in the video group. Participants were pre-licensure nursing degree students in the second year, first semester, of a two-year program. The age of the participants ranged from 20 to 56 years, with an average age of 31.7 years; the majority of participants were female (90.5%), White (79.7%), and had a G.P.A. between 3.0-3.4 (58.1%) on a 4.0 scale. For the majority of the sample, it was their first degree (68.9%), they had worked in the health care setting for 2 or more years (50%), and were very comfortable with technology (61%).

Four instruments were used in this study: (a) The Demographic Survey, (b) the Lasater Clinical Judgment Rubric (LCJR), (c) the Student Satisfaction and Self-Confidence in Learning scale (SSSL) and (d) Debriefing Assessment for Simulation in Healthcare (DASH). The LCJR, SSSL, and the DASH had alpha reliabilities above .90.

The participants were randomly assigned to a traditional oral debriefing group or a video debriefing group. Students in the oral and video groups participated in two simulation sessions, 7 weeks apart. They used the same simulator and scenarios, followed by debriefing sessions. The purpose of the first simulation session was to re-socialize the students to the simulation experience and to videotaping for the video group. During the simulation session, a teaching assistant (TA) read a pre-printed sheet to orient the students to the experience and to the lab environment. The first simulation session, or T1, was the baseline for this study.

The first simulation scenario focused on four essential actions that the student was expected to perform during the simulated experience of a pediatric patient with asthma. The second scenario was a modified version of the first scenario focusing on crisis management related to airway management and hemorrhage of a pediatric patient. Therefore, the second simulation session reinforced the four essential actions from the first simulation session.

Students in both the oral and video groups participated in simulation sessions lasting 15 minutes followed by debriefing sessions lasting 30 minutes. Students were also assigned roles during the simulation. Each debriefing group, comprised of 3-6 students, was facilitated by the same teaching assistant (TA). Nine guided questions facilitated the debriefing process.

The findings demonstrated that higher clinical judgment scores were reported in the video assisted debriefing group as compared to the traditional oral debriefing group for a main effect of time and debriefing group ($F(2, 53) = 13.79$, $p < .000$). Specifically, there were differences between time 1 and 3 ($t(55) = 11.75$, $p < .000$) and time 2 and 3

($t(55) = 11.64$, $p < .000$), whereby the video group had higher scores than the oral debriefing group.

The results also showed that there were significantly higher self-confidence scores for both groups over time ($F(1, 73) = 175.680$, $p = .000$). However, there were no differences in self-confidence between groups.

Higher learner satisfaction with the simulation scores revealed a difference in the video debriefing group and oral debriefing group over time ($F(1,73) = 13.026$, $p = .000$). Learner satisfaction with the debriefing facilitator revealed a significant difference between mean scores of the video debriefing group and oral debriefing group ($F(1, 73) = 16.930$, $p = .000$), whereby the video debriefing group had higher scores than the oral debriefing group.

Last, roles were not related to the dependent variables of clinical judgment, self-confidence, and learner satisfaction with the simulation. Additionally, there was a positive correlation between race and learner satisfaction ($r = -.267$, $p = .022$). There was a negative correlation between comfort with technology and self-confidence ($r = -.286$, $p = .014$).

Conclusions

Video debriefing may be a vital addition to the successful implementation of the teaching strategy of simulation. The concepts, clinical judgment, student self-confidence, student satisfaction with the simulation, and student satisfaction with the debriefer are student outcomes of simulation and debriefing that were examined in this study. Relative to clinical judgment, safe and effective patient care is delivered using clinical judgment

skills. Four key components of clinical judgment are (1) noticing, (2) interpreting, (3) responding, and (4) reflecting (Tanner, 2006). Clinical judgment is an essential component to making decisions relative to patient care in nursing school and as a nurse. This study demonstrated that video debriefing increased clinical judgment, an important skill for nursing students to learn and develop in schools of nursing.

Findings from the present study also demonstrated that students were more satisfied with the simulation when using the video during their debriefing as compared to traditional oral debriefing. Students can identify their own achievements and errors by watching the video recording of their simulation session. Further, the facilitator supports the students by encouraging them to self-reflect on the session. In this study, students were more satisfied with the debriefing facilitator when using video assisted debriefing. This study provides beginning support for the importance of video assisted debriefing influencing student outcomes.

Implications

The global nursing shortage is impacting health care around the world. Since nurses are directly involved in patient care, patient safety will be compromised if the shortage persists (Oermann, 2004). For example, Aiken, Clarke, Slone, Sochalski, and Silber (2002) state that as a direct result of the nursing shortage, there is an increase in mortality rates for surgical patients. Additionally, if the shortage persists, patients, families, nurses, faculty members, and other health care providers will become dissatisfied with the health care system (Grumet & Gilbert, 2004).

Recruitment strategies are vital to solving the global nursing shortage, but nursing schools are turning away students despite growing numbers of applications. With growing numbers of nursing students in nursing schools, hospitals cannot accommodate the demand for clinical sites. Bantz, Dancer, Hodson-Carlton, and Van Hove (2007) suggest using simulation with high-fidelity simulators in place of a clinical day. Human patient simulators (HPS) can be used to teach decision-making skills, and develop lifelong clinical judgment skills. Thus, the lack of hospital based clinical sites can be overcome with the use of simulation labs. The need for simulation is vital to the propagation of clinical judgment, self-confidence, and learner satisfaction in nursing students.

Simulation is a highly structured teaching strategy but the debriefing portion remains unstructured. Using a structured video assisted debriefing may influence student-learning outcomes. Findings from this study support the use of video assisted debriefing as compared to oral assisted debriefing. Student learning outcomes of clinical judgment, learner satisfaction with the simulation, and learner satisfaction with the debriefer improved after video assisted debriefing. The role of simulation in the nursing curriculum has grown and there is a need for education of faculty relative to this teaching strategy. There is also a need for further research with larger sample sizes to evaluate the efficacy of debriefing, and specifically video-assisted debriefing.

Recommendations

It is imperative that nursing leaders understand how to properly develop teaching and debriefing strategies that promote superior student learning outcomes following a simulation. To address these concerns, it is recommended that:

1. The study should be replicated with a larger sample size in both baccalaureate and associate degree nursing programs.
2. The study should be replicated with a more diverse student population (gender and race).
3. The study should be replicated with multiple sites.
4. Qualitative exploration of student reactions and experiences to video debriefing should be explored.
5. Simulation leaders should develop and evaluate communication strategies, such as online orientation programs to enhance video debriefing.
6. Simulation leaders should develop technological strategies to mitigate the risk associated with video assisted debriefing in the case of faulty video equipment.
7. Nursing research studies on video debriefing, as a process of simulation, should be further controlled, using a longitudinal design with reliable and valid instruments.

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Appendix A
Demographic Survey

Sex:

___ Male
___ Female

What is your age? ____

Racial background: Please indicate all that apply:

___ American Indian or Alaskan Native
___ Asian
___ Black or African American
___ Native Hawaiian or Other Pacific Islander
___ White
___ Other : Please describe: _____

What is your current G.P.A? 3.5-4.0
3.0-3.4
2.5-2.9
2.0-2.4
Below 1.9

Is this your first degree?

___Yes
___No

Please list your prior degrees/credentials.

_____

Are you an LPN?

___Yes
___No

How many years have you been working in the healthcare setting? (ie as a Patient Care Associate, Patient Care Technician or as a Nursing Assistant) ____

Are you an online student?

___Yes
___No

(See next page for additional questions)

Please rate your comfort with computers, printers, mobile devices/smart phones, and the internet. Circle your answer.

How comfortable are you with technology?

___5 =Mostly Comfortable
___4= Comfortable
___3=Neither Comfortable or Uncomfortable
___2=Uncomfortable
___1=Very Uncomfortable

What role did you play in the simulation? (Please circle one)

Primary Nurse
Secondary Nurse
Tertiary Nurse
Mother
Nursing Assistant
Respiratory Therapist
Observer

Please state whether you had any prior high fidelity human patient simulation experience in other courses or in your previous programs. Circle your answer below.

Have you had any previous simulation experience?

___Yes
___No

Appendix B

Debriefing Questions

Think-Pair-Share Question

1. Were you satisfied with your ability to work through the simulation? What were things you did well and what were things you would change?

Reflection Questions

1. What did the group do well?
2. What were key assessment findings?
3. How well did you anticipate potential patient problems/complications? (related to safety QSEN, delegation, and family members)
4. What were the top three nursing diagnoses for this patient?
5. Give me specific examples of where you prioritized the needs of the patient effectively?
6. What interventions did you or would you have performed for this patient?
7. How would you describe the communication among team members? How did you perform as a team?
8. What were some of your success? Your failures?
9. If you were able to do this again, how could you have handled this situation differently?

Summary

In summary, these are the things you did well…

And these are the things you told me you need to work on…

The take home points include…

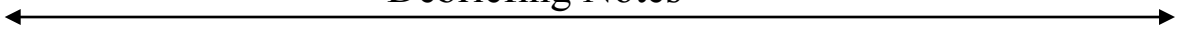
Great work!

Appendix C

Simulation Debriefing Handout

Simulation Debriefing Handout

Debriefing Notes



Curriculum vitae

Name:

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Date and Place of Birth:

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Secondary School and Colleges Attended: Degree Earned & Subjects: Dates:

University of Maryland Baltimore County	Pre-Nursing	2000-2002
Johns Hopkins University School of Nursing	B.S.N. Nursing	2002-2004
New York University College of Nursing	M.S. Nursing Education	2004-2007

Current Faculty Role/Occupation:

Assistant Professor, Monmouth University 2009-present
Coordinator of MSN Nursing Education Track

Previous Faculty Role/Occupation:

Part time lecturer, Rutgers, the State University of New Jersey 2007-2009
Teaching Assistant

Adjunct Faculty, New York University 2004-2009
Project Coordinator
Graduate Assistant

Publications:

Dusaj, T.K. (2013). Pump up your PowerPoint® presentations. *American Nurse Today,* 8(7), pp. 43-46.

An, J.Y., Hayman, L.L., Park, Y., Dusaj, T.K., & Ayres, C.G. (2009). Web-based weight management programs for children and adolescents: A systematic review of randomized controlled trial studies. *Advances in Nursing Science*, 32(3), pp. 1–19.