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Mid-Simulation Debriefing: The Impact on Confidence and Clinical Judgement of Nursing Students in a Baccalaureate Mother Baby Course

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MID-SIMULATION DEBRIEFING: THE IMPACT ON CONFIDENCE AND CLINICAL JUDGEMENT OF NURSING STUDENTS IN A BACCALAUREATE MOTHER BABY COURSE

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DEDICATION

This dissertation is dedicated to my family. I would not be here today without each one of them. I will be proud to put Ph.D. behind my name, but more than anything, I treasure the title of Daughter, Wife, Mom, and Mamaw. Forever grateful for the Lord's blessings!

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ABSTRACT

Debriefing is a crucial aspect of healthcare simulation. This portion of the simulation experience encompasses the vast majority of student learning and reflection that takes place, and increases skills such as communication, clinical reasoning, and critical thinking. Traditionally debriefing is performed at the end of a clinical simulation experience after the simulation experience has concluded. In the maternal-newborn setting, there are often two phases of simulation. First is the care of the laboring mother and second is the delivery and care of the newborn. This study explored the effects of completing a mid-simulation debriefing in a maternal newborn simulation at one Midwestern public university with 40 BSN junior level students. Findings demonstrated an increase in confidence nearly two times higher in those who received a mid-simulation debriefing than those who did not. The findings also include a higher rate of behavior observations completed in students who received the mid-simulation debriefing. These findings encourage the multiple phase debriefing for future simulations.

CHAPTER I

INTRODUCTION

Jeffries 2005 simulation framework defines simulations as "activities that mimic the reality of a clinical environment and are designed to demonstrate procedures, decision-making, and critical thinking through techniques such as role playing and the use of devises such as interactive videos or mannequins" (Jeffries, P., Rogers, B., Adamson, K., 2015). Using this framework, simulation has flourished under the guidance of The International Nursing Association for Clinical Simulation and Learning (INACSL). In 2021 INACSL released the fourth edition of the Healthcare Simulation Standards of Best Practice™ (HSSOBP) which consists of 11 individual standards which include the key standards used in high-fidelity simulation: Pre-briefing, Simulation Design, Facilitation, and the Debriefing Process (Watts, et al., 2021). Standard five is specific to the debriefing process. The purpose of debriefing is to facilitate student reflection at the end of a clinical simulation experience (CSE) in an attempt to integrate learning so that it is retained and replicated. The Debriefing Standard contains the criterion necessary to meet the standard. Criterion 1 states: The debriefing process is planned and incorporated into the simulation-based experience in an appropriate manner in order to guide the learner(s) in achieving the desired learning outcomes. Relevant required elements of this criterion are that the debriefing process should be preceded with a pre-briefing activity and a CSE, be integrated within or conducted after a CSE activity, and occur in multiple phases to allow deeper exploration of the learners' performance and thinking process (INACSL Standards Committee, 2021).

Traditionally debriefing is performed at the completion of a CSE. Obstetrical simulation that includes a high-fidelity mannequin experiencing labor and delivery of the infant can also

require the student to take care of both the mother and then the newborn infant, whose condition may reflect the care provided to the mother during the first part of the simulation. With the fourth edition of INACSL's evidence-based standards supporting multiple phased debriefing, providing students a mid-simulation debriefing experience to reflect on what has transpired and prepare for what condition the newborn will be in based on the care they provided to the mother should result in improved student performance behaviors (SPB). Students who are allowed to pause and reflect on decisions made and care provided for the mother may improve their overall confidence and clinical judgment skills during the second half of the simulation scenario while providing care for the newborn. There are limited studies on debriefing practices taking place during a midpoint in a simulation scenario.

Background

High-fidelity clinical CSEs have become a common thread in undergraduate nursing curricula across the nation. Fidelity refers to the exactness or believability of the scenario (Lioce, L., et al., 2020). In CSEs, students enter a realistic environment and are presented with a patient scenario that mimics the hospital setting. A CSE provides a setting that allows students the time to critically think through which of their actions are appropriate and provides the luxury of making mistakes (and learning from them) without harm. The students have the freedom and the time to learn clinical decision-making skills and perform new procedures in a realistic and protected environment (Lavoie, Pepin, Cossette, & Clark, 2019; Mayville, 2011).

CSEs not only enhance learning experiences but have been shown to increase knowledge, leadership skills, clinical judgment, and skill retention (Aqel & Ahmad, 2014). Adverse events in the health care settings are often caused by the lack of non-technical skills in nursing, including teamwork, communication, and clinical judgment decision-making. The use of CSEs has been

shown to improve interpersonal communication skills, teamwork, and team building in a wide variety of clinical settings and demonstrates performance improvement in the management of crisis situations and clinical judgment skills (Lewis, Strachan, & Smith, 2012).

According to the INACSL Standards of Practice (2021), the debriefing process has the three strategies of feedback, debriefing, and guidance. These can be done separately or in any combination and no particular strategy is more important than another. Feedback is unidirectional and imparts information to the learner. Debriefing is bidirectional and collaborative between facilitator and learner. Guided reflection involves learners linking theory with evidence-based practice (INACSL, 2021).

There are many simulation debriefing techniques described in the literature, however, the method is primarily driven by the type of simulation utilized and the specific learning objectives (Eppich & Chang, 2015; Reed, 2015). While a portion of the student learning will occur during the simulation, a major part of the learning will occur in the final phase of simulation during debriefing. Debriefing may be mid-simulation, which would include a pause in the scenario with a timeout to debrief, or at the end of the CSE (Schober et al., 2019). One study found no statistically significant difference in the performance scores of students who had interrupted scenarios with a debriefing before the completion of the scenario and those who had debriefing at the end. However, the study focused on the skill performance of the students only (Schober et al., 2019). While skills may have not been impacted by the interruption/ pause in the progress of the scenario there was no mention of the impact on student clinical judgment or self-confidence. There is a need for further investigation into paused scenarios allowing the students a time out to use their clinical judgment and to develop a plan for patient care during the remainder of the simulation scenario.

Purpose

The purpose of this study was to determine if a mid-simulation structured debriefing during an obstetrical simulation learning experience, immediately after delivery of the newborn and the one minute Appearance, Pulse, Grimace, Activity, and Respiration (APGAR) assessment, increased self-confidence, strengthened clinical judgment skills, and demonstrated an association between student's self-confidence and clinical judgment skills versus the self-confidence and clinical judgment skills of students who did not have a mid-simulation structured debriefing.

Research Questions

This study included four specific aims:

Specific aim 1: To determine if insertion of a mid-simulation formal debriefing, will strengthen the student's clinical judgment skills during the completion of the simulation scenario as determined by the completion of specific student performance behaviors versus the completion of these behaviors in a group of students who do not have the structured mid-simulation debriefing inserted. Student performance behaviors will be assessed by the percent of variables of the National Council of State Boards of Nursing (NCSBN) Clinical Judgment Measurement Model (CJMM): recognition of cues, development of hypotheses, implementation of interventions and evaluation of patient outcomes.

Specific aim 2: To determine if inserting a mid-simulation formal debriefing immediately after the one-minute APGAR assessment that follows delivery increases student self-confidence in their performance for the second half of the simulation scenario versus student self-confidence when mid-simulation debriefing does not occur, as measured by the differences between pre and post Student Self Confidence in Learning Survey scores.

Specific aim 3: To determine if there is a relationship between student preparation for simulation, as measured by the math test scores, number of videos viewed, and the differences between the pre and post knowledge test and student self-confidence, as measured by the differences between pre and post self-confidence scores on the Student Self Confidence in Learning Survey, in students who had a mid-simulation formal debriefing inserted and students who did not.

Specific aim 4: To determine if there is a difference between student self-confidence, as measured by the differences in pre and post Student Self Confidence in Learning Survey scores, and student clinical judgment skills as measured by Student Performance Behaviors, in students who had a mid-simulation formal debriefing inserted and students who did not.

Significance

Increasingly limited student access to clinical practice sites and restrictions that prohibit student engagement with certain population are limiting cognitive, psychomotor, and affective skill development in nursing students. Access to electronic health record databases is becoming rare thereby limiting student retrieval of vital patient information and documentation of care. Clinical experience focuses on task completion rather than thinking as a measure of competence. Simulation and debriefing are important strategies that allow faculty to individualize student assessment for both psychomotor skill attainment and clinical decision making (Jessee, M.A., 2021).

The Next Generation (NGN) National Council Licensure Examination (NCLEX) is scheduled to start in 2023. The incorporation of clinical judgment skills is in direct response to the need to ensure that new graduate nurses have the clinical judgment needed to practice safely and effectively. Academic nursing educators must respond immediately by preparing

undergraduate nursing students to think and practice with the appropriate level of clinical judgment skills. Simulation along with the essential step of debriefing can help prepare the pre-licensure student through cultivation of clinical judgment and retention of knowledge (Mayville, 2011, Zinsmaster & Vliem, 2016).

The healthcare simulation standards of best practice are a set of standards defined by INACSL and are intended to help advance simulation through offering evidence-based guidelines for the practice of simulation. The standards are very thorough in evaluation and refining the simulation yet lack evidence about specific guidelines in the critical phase of debriefing (Sawyer et al., 2016). While it is understood that most of the learning occurs during debriefing, there is no direction as to which method of debriefing is the most effective. The gap widens when looking at obstetric debriefing, a simulation that includes caring for two patients simultaneously. Schober et al. (2019), showed no significant difference in student performance of skills when debriefing occurred during the middle of the simulation experience, compared to debriefing at the completion of the scenario.

Definition of Terms

Clinical Judgement is a conclusion the healthcare provider obtains and interprets from gathering patient data through recognizing, critically thinking, and make clinical decision making based off information they obtain and are interpreting when caring for the patient to help determine if an action is required, or if improvisions need to be made on behalf of the patient's needs (Tanner, 2006).

Clinical Judgement Measurement Model a tool for measuring and interrupting the clinical judgement and clinical decision making of a novice nurse (NCSBN Clinical Judgment Measurement Model 2019).

Clinical Simulation Experiences a way for educators to provide learning and practice in an environment that is fully interactive and resembles clinical care setting. This occurs through providing a guided real world patient scenario. This environment is a safe place for students and trainees to develop additional knowledge, work on improving skills and expand their critical thinking all while protecting patients from risks (Lateef, 2010).

Debriefing is the educational discussion that follows the simulation-based learning experience and allows the students to reexamine and understand their performance and their course of actions. This method promotes clinical thinking and enhances future clinical performance (Abulebda et al., 2021).

Next Generation NCLEX a new form of the NCLEX examination that is created and intended to use a new style of case study questions to assess clinical judgement and decision making in the nursing student (NCSBN, 2022).

Prebriefing is a common practice in simulation-based learning that facilitates student learners in preparation before the simulation experiences. Preparation includes things like orientation to the simulation room and equipment, discussing student expectations, creating a safe learning environment, and completing any preparatory work prior to the simulation (Chamberlain, 2015).

Self-confidence is a belief and recognition in oneself and their judgement, abilities, and strengths (Florida, Top concerns).

Simulation is an environment used for educating and training for healthcare professionals. This is a safe environment that resembles a hospital setting and encourages the student to focus on critical thinking and clinical decision making prior to working as a nurse (Koukourikos et al., 2021).

Student Performance Behaviors is a set of standards that demonstrates critical thinking, skills, and the abilities expected of the student. The goal of the student performance behaviors is to demonstrate the incorporation and application of these skills in the health care practice (Tapp et al., 2012).

Assumptions, Limitations & Delimitations

Assumptions made in the study included assuming the students would answer honestly on the self-confidence surveys before and after the simulation experience. Again, for the preparation work, assumptions were made that the answers for how many videos were reviewed and how many hours were spent preparing for the simulation experience were honest. The answers provided could change the data summaries.

Limitations present for this study included the use of a convenience sample from one Midwest university and a sample size of 40 students. The study continued over a five-week period which could have allowed students an opportunity to discuss the simulation scenarios with one another. This could have influenced the amount of time that the student spent preparing which could have directly affected the data in specific aim three, looking for an association between the student performance behaviors observed and preparation time.

The boundaries of this study were limited to the junior cohort at a Midwest baccalaureate nursing program where the faculty currently teaches the Developing Family and Child didactic and practicum courses. This sample population was chosen due to convenience, with enrollment in the above courses. All 40 enrolled students agreed to participate.

CHAPTER II

REVIEW OF LITERATURE

Introduction

Over the past 10 years, due to the growing number of nursing students, it has become difficult for nursing schools to secure in-hospital learning experiences for the students. Due to the increase in guidelines and research supporting high-fidelity simulation (HFS) as an alternative for traditional clinical hours, 22 registered nursing state boards have come to support HFS for undergraduate nursing students (Doolen et al., 2016). Now, many nursing programs have adopted the ability to use HFS learning labs to provide the clinical experiences along with hospital setting clinical hours.

Search Description

A literature review was conducted using the electronic databases EBSCO, CINAHL, Healthsource, Nursing/Academic, ERIC, and Medline. Key terms included confidence, clinical judgment, simulation, and debriefing. The key terms and Boolean operator search phrases used included “HFS and Nursing”, “Performance and HFS and Nursing Programs”, “Simulation and Standards”, “Labor and Simulation” “Obstetrics and Simulation”, “Next Gen and Preparedness”, Next Gen and Simulation”, “Student confidence and Performance”, and “Simulation and Effectiveness”. Inclusion criteria for article selection were articles that focused on HFS best practices, HFS framework, teaching with HFS, pre-briefing and debriefing techniques, HFS outcome evaluation, performance evaluation, clinical judgment, and student confidence. There were 5,182 articles identified as potentially relevant articles. The search was limited to full text and publication dates after 2010, which left 1,995 possible articles. After a review of titles and abstracts, 86 articles were reviewed for the purpose of this project. The literature was

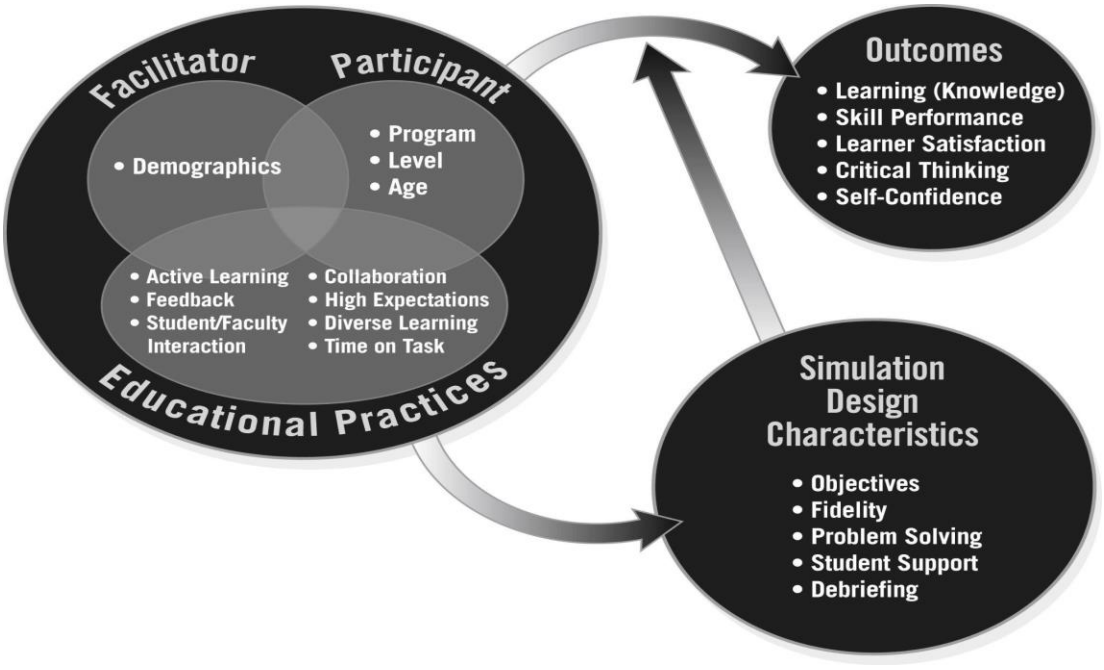
categorized into the following themes: simulation/simulation design, pre-briefing and debriefing, student self-confidence, and clinical judgment.

Theoretical Framework

The framework that clinical simulation was founded on was developed in concert with the National League of Nursing by Dr. Pam Jeffries in 2005 (figure 1). The framework incorporates 5 components: Teacher, Student, Educational Practices, Simulation Design Characteristics, and Outcomes. Each component of the framework is associated with variables.

These components are linked to associated variables that provide context for the framework. The Teacher/Student variables are basic attributes of both components. The Outcomes variables reflect the degree of evidence-based practices utilized as indicated by the Educational Practices component variables. The Simulation Design Characteristics utilize variables are essential for a simulation that creates an environment where students utilize critical thinking to achieve the appropriate outcome.

Figure 1: 2005 National League of Nursing (NLN) Jeffries Simulation Model



In 2005 this framework was reconceptualized into the NLN Jeffries Simulation Theory (Jeffries, Rodgers, & Adamson, 2015). The background includes goals and specific expectations of the simulation as well as how the simulation fits within the larger curriculum. The time and resources needed are also considered part of the background. Design incorporates the specific learning objectives for each simulation scenario that in turn guide the content, problem-solving activities, equipment and moulage used, student and facilitator responses, and debriefing strategies.

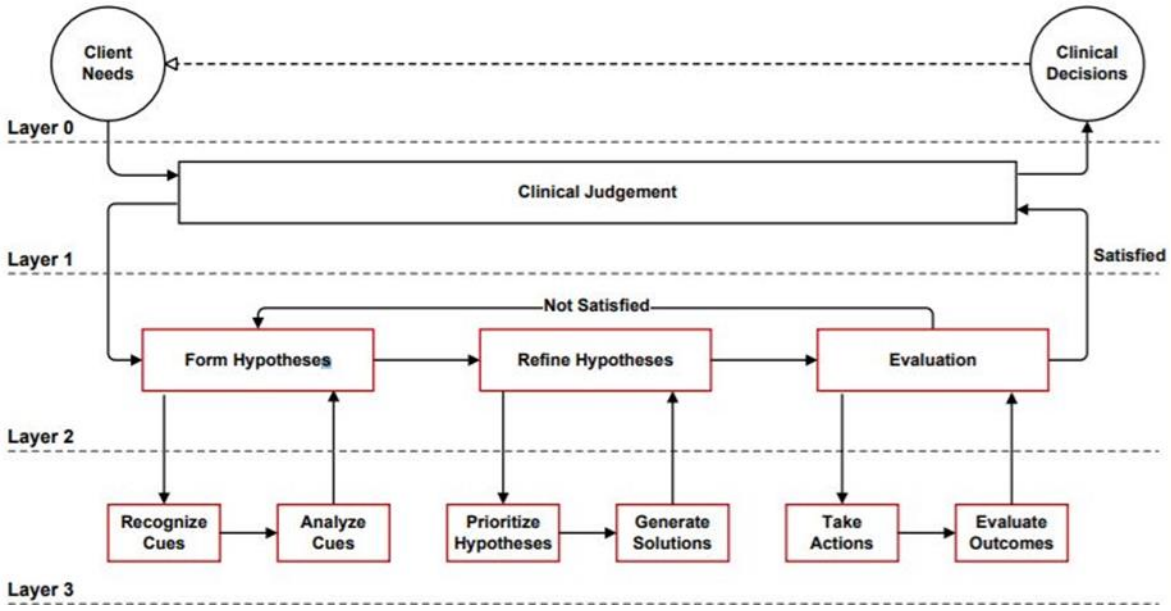
The Simulation Experience requires an environment that is experiential, interactive, collaborative, learner centered, and establishes an environment of trust. Both the facilitator and participant subscribe to the authenticity of the experience. The facilitator and participant have a dynamic relationship that requires the facilitatory to have fluidity in their educational strategies in response to the participants performance and knowledge level. This relationship affects pre and post debriefing strategies. The attributes of facilitatory and participant affect the simulation. The skill, educational techniques, preparation, and experience affect the simulation experience. The age, gender, level of anxiety, self-confidence, preparation, skill level impact their learning experience.

Outcomes is divided into three parts: System, Patient, and Participant. Most published outcomes of clinical simulation are focused on participant and patient. With the addition of the INACLS's HSSOBPs that use evidence to guide the practice of simulation, it was time to exam the role of clinical decision-making skills, in particular, the role CSEs play.

The National Council of State Boards of Nursing (NCSBN) have developed a new NCLEX-RN examination testing format that will measure not only the Registered Nurse (RN) applicant's knowledge base but their clinical judgment skills as well. NCSBN conducted

extensive research to determine whether clinical judgment and decision making could be reliably assessed using innovative test items (NCSBN, 2022). This research resulted in an evidence-based framework for developing, classifying, and scoring these test items. The NCSBN CJMM provides a method of measuring and extrapolating the nursing clinical judgment and decision-making ability of nursing students and will be used to replace the nursing process model that focuses on problems to the CJMM which focuses on outcomes.

Figure 2: Clinical Judgment Measurement Model



Simulation/Simulation Design

In 2014, the NCSBN completed a study showing that 50% of traditional clinical hours could be substituted with HFS with no statistically significant difference in outcomes compared to nursing students who used only traditional clinical hour methods (Hayden et al., 2014). Over the past ten years, due in part to the growing number of nursing students and a decrease in nursing faculty, particularly in specialty areas such as pediatrics, mental health, and maternity, it has become increasingly difficult for nursing schools to secure in-hospital learning experiences. Whereas with simulation, you can create a learning environment and scenario that fits the

students' needs and increase their exposure to clinical experiences such as births, pediatric procedures, and critical events.

As defined by INACSL, simulation is "a technique that creates a situation or environment to allow persons to experience a representation of a real event for the purpose of practice, learning, evaluation, testing, or to gain understanding of systems or human actions" (Lioce, 2020). During the simulation, the objective for the participants is to take their assigned roles and tasks, assess the issue or problems that occur during the guided scenario, and experience the effects of their clinical judgment skills in a safe environment. Aebersold (2018) described how nursing programs can no longer use simulation as simply an add on experience in the curricula. Simulation must play a significant role in the student's education to optimally cultivate their skills, foster the development of critical thinking and clinical judgment skills, and improve competency to care for patients. These elements are essential with the upcoming NGN test guidelines for 2023 (NCSBN, 2022).

Due to changing guidelines and growing research evidence supporting the use of HFS as an alternative for traditional clinical hours, registered nursing state boards' support for the use of HFS in undergraduate nursing programs is growing (Doolen et al., 2016). All state boards include HFS verbiage in their regulations, and each state declared that a permissible percentage of simulation hours can be used to qualify students to sit for the national certification licensure exam (NCLEX). Most states, including Kentucky, allow 50% of clinical hours to come from HFS; seven states, including Indiana, allow 25% (INACSL Simulation Regulations Map, 2020). With the 2020 national health emergency of the Coronavirus (COVID-19), Kentucky amended the percentage to 100% to ensure that all students could progress forward and prepare for graduation (Kentucky Board of Nursing 201 KAR 20:320, 2020).

INACSL is a professional organization, created to bridge the transition from simulation to nursing practice. Best practice suggests that each simulation experience follows the same design and includes the assessment, measurable objectives, simulation format, preparation, clinical assessments, facilities, pre-reading, feedback, and evaluation (Sittner et al., 2015).

Jeffries et al. (2015) discussed designing a simulation theory framework, which outlines the need for clearly detailed goals and expectations that impact the simulation activities and scenarios' approach. This ensures the proper level of content and problem-solving difficulty, along with moulage and reactions to the interventions. The educator focuses on the participant's needs during the simulation by altering the planned progression and providing feedback and cues during the simulation. Educators use outcomes to help plan the progression. The framework's outcomes focus on reaction, self-confidence, learning, changes in knowledge, skills, attitude, and behavior, which the participants use in the clinical setting. The framework's last component is the debriefing process. (Jeffries et al., 2015). The next section reviews the assessments of each of these high-fidelity simulation components, including learning outcomes, prebriefing, the simulation activity, and debriefing.

Prebriefing

The 2021 standards for prebriefing include 3 criteria that must be present to meet the standard: 1) Simulationist should be knowledgeable about the scenario and competent in concepts related to prebriefing. 2) Prebriefing should be developed according to the purpose and learning objectives of the simulation-based experience. 3) The experience and knowledge level of the simulation learner should be considered when planning the prebriefing (INACSL Standards Committee, 2021).

Prebriefing is critical to a successful simulation that improves student confidence and optimizes student learning. Research shows many different views on what prebriefing should include, but the design and planning for the simulation event are considered part of the prebriefing (Page-Cutrara, 2015). Educators have varying ideas of what topics or information to include in the prebriefing, but all agree that prebriefing is essential. Prebriefing is designed to provide the student with knowledge of the patient in multiple formats, such as pre-tests, electronic medical records, medication administration records, and shift reports, as well as orientation to the simulation environment (Kim et al., 2017). The prebriefing should include the following: (a) information that helps set the stage for the scenario; (b) orientation to the environment, equipment, high fidelity simulator, and evaluation methods; (c) roles of the facilitator and student, and (d) the time allotment. Prebriefing preparation can include computer-simulated videos and practicing a skill to help with psychomotor skills before the learning activity to increase their comfort level (Tyerman et al., 2016).

Chmil (2016) includes three essential pieces to prebriefing: theory, nursing process, and outcomes. Chmil postulates that learning guided by the experiential theory is more effective when the learners engage in an active simulation that provides concrete evidence and reflective observation. Ample information should be provided in the prebriefing, which allows students to process and identify possible or probable patient outcomes; this allows them to devise a patient care plan prior to the provision of care. When prebriefing provides the student with a chance to develop a plan prior to the event, the facilitator can use this plan of action as part of the debriefing, which will come at the end and assist in self-evaluation (Chmil, 2016).

Simulation development benefits the facilitator and the student. The student benefits from the knowledge learned during the simulation experience and will be able to apply that

knowledge in the in-hospital patient in the form of direct patient care. The facilitator benefits from an accurate assessment and evaluation of the learning activity to validate student and patient outcomes. The facilitator needs to know that the student understands the role and expectations for a thorough evaluation. Prebriefing assignments affect learning outcomes (Rutherford-Hemming et al., 2019). Arrogante et al., (2021), argue for the use of both a formative and summative evaluation of the student's simulation performance for an assessment of learning and for learning.

Notable in the simulation literature for the prebriefing, multiple methods are considered for the prebriefing phase of simulation. However, the literature does not provide sufficient information on how to educate facilitators in the prebriefing or in the structure of the pre-briefing process. Nursing students rely on the facilitators to provide them with the required information for simulated learning (Paige et al., 2019). Further research on prebriefing is needed, guidelines that identify what is important and provide quality information.

Debriefing

INACSL provides clear evidence that essential learning occurs during the debriefing phase. Debriefing encourages a new understanding through reflection, which can lead to cognitive reframing and, ultimately, a transfer of knowledge, skills, and attitudes with an improvement in overall patient care and professional development for the student (INACSL Standards of Best Practice: SimulationSM Debriefing, 2016). Once the simulation activity is over, this is often considered the primary place the learning takes place (Kang & Yu, 2018). Debriefing can be defined as a formal act of reflection within the clinical simulation experience that traditionally follows the experience as a learning activity. Debriefing can occur using a

verbal format, a written format, a mixture of both or may include reviewing a video of the simulation (Sawyer et al., 2016).

Multiple methods of debriefing can be found in the literature for simulation in nursing. A review of literature on healthcare debriefing methods by Sawyer et al., (2016) revealed multiple methods for debriefing along with many definitions for the learning experience. The methods of the reflective conversation could occur between the participants themselves, the facilitator and the participants or a combination of the two. Addressed by Sawyer et al. (2016), was the timing of the conversation in relation to the CSE. There were two time frames identified, the postevent and the within-event debriefing. The post-event debriefing can be led by the facilitator or the participants, we as the within-event were always facilitator led. The interruption within the simulation event is often utilized for a stop and rewind moment, when trying to correct an error (Sawyer et al., 2016).

The Promoting Excellence and Reflective Learning in Simulation (PEARLS) method of debriefing consists of four phases: reactions, description, analysis, and summary. The phases begin with open-ended questions that prompt the student to describe their perception, followed by the facilitator determining which aspect of the performance to review, and ending the wrap up with a summary of the simulation (Eppich & Cheng, 2015). Utilization of the PEARLS method ensures that both the participant in the CSE and the facilitator have the same mind set of what transpired during the experience (Sawyer et.al., 2016).

Studies on the effectiveness of PEARLS debriefing can be found throughout the literature spanning several years. The method has proven to be effective if the scripted design is followed. One recent study by McNutt, Tews, & Kleinheksel (2021), hypothesized that student performance can affect the debriefing of the CSE. In a randomized controlled study, 32

facilitators who were trained in the PEARLS debriefing method, with levels of competency ranging from novice to expert, were assessed for effectiveness in debriefing through a review of videotaped debriefing sessions. Inter-rater reliability was established among the 32 participants with a correlation coefficient of 0.913 (Omer, 2016). Videos were reviewed and scored for the definitive intervention completed along with the debriefing score. The debriefers' scores showed no statistically significant difference in the students who performed the definitive intervention ($p=0.25$) in time compared to those who did not ($p=0.62$), indicating the debriefing method is effective no matter how the student participant performs. Student performances vary from one CSE to the next, yet, with the scripted debriefing method of PEARLS, a poor performance can receive equal benefit from debriefing as the high-performance.

No matter the method used, all debriefing sessions are vital to the simulation learning experience and a transfer of knowledge (Reed, 2015). The structural elements of debriefing need to include the experience itself, the students' overall impact, the event's recall, and any underlying components that led to an error or misinterpretation (Sawyer & Deering, 2013). INACSL adds that debriefing should also occur in an environment conducive to learning and be congruent with the learning outcomes ("INACSL Standards of Best Practice: SimulationSM Debriefing," 2016). According to Eppich and Cheng (2015), all facilitators should be trained in simulation and a level of expertise should be required for debriefing because an inadequate facilitator can ultimately cause a negative impact on the learner in knowledge, skill acquisition, and attitude.

Kang and Yu, (2018) consider debriefing essential to the simulation experience where it is estimated that 80% of the learning occurs during this phase. Fey et al. (2014), makes the profound statement that learning cannot occur without the debriefing phase of simulation.

However, for such an essential component there is a lack of clarity for the specific elements necessary to facilitate a successful debriefing phase (Roh et al., 2018). Schober, et.al., (2019), expresses there were no statistical differences in the skills performance of students who had breaks during a mid-point of their simulation scenario. Important to note in any debriefing methods, is the facilitator must assess the participant on how well the tasks were performed so the debriefing phase can focus on ways the learner can improve. The scripted approach of the PEARLS debriefing method can help ensure quality debriefing is conducted with each participant no matter the performance level (McNutt, Tews, & Kleinheksel, 2021).

Student Self-Confidence

Student self-confidence can be increased through repeated exposure to HFS throughout the nursing curricula. Increasing the exposure itself will allow for a decrease in the participant's anxiety and ultimately, increasing self-confidence (Chiml, 2016). Lewis et al. (2012), reports that HFS is a significant confidence builder for nursing students as they complete their nursing education in BSN programs.

Methods varied in the literature on ways to increase student self-confidence with CSE. One of those methods included focusing on a step-based prebriefing format to determine if the prebriefing activities make a difference for the students. Kim et al., (2017) looked at the flow of the activity, competence, satisfaction, and self-confidence during performance of the scenario. The step-based prebriefing included verbal orientation, prior orientation to the simulation environment, and the nursing skill practice in a previous open lab. Group one received verbal orientation, group two received verbal orientation and had prior simulation experience, and group three received verbal orientation, had prior simulation experience, and had practiced the

nursing skill performed previously. Group three, who received all the information and practice, showed significantly higher scores in self-confidence and clinical competence (Kim et al., 2017).

Clinical Judgment

In 2023, the NCSBN will begin to test student clinical judgment on the NCLEX exam using their CJMM (NCSBN.org, 2016). The model consists of three levels that delineate the cognitive process of how nurses make clinical judgments. The NCSBN defines clinical judgment as the observed outcome of two unobserved underlying mental processes, critical thinking and decision making. However, within simulation, concepts such as critical thinking and clinical judgment are seemingly interchangeable. Critical thinking requires objective analysis of the issue at hand allowing you to formulate a judgment and clinical judgement is is a conclusion the healthcare provider obtains and interprets from gathering patient data through recognizing, critically thinking, and make clinical decision making based off information they obtain and are interpreting when caring for the patient (Cascella, Risk management tools & resources). With the development of the Lasater Clinical Judgment Rubric (LCJR) (2007) the definition of clinical judgment, which involved understanding followed by responding to problems, became more widespread. It remains unclear how much critical thinking contributes to the goal of clinical judgment.

In 2016 a descriptive correlational study (n=160) using novice undergraduate nursing students examined the impact of critical thinking on clinical judgment during simulation. The variables of gender, ethnicity, Health Science Reasoning Test scores deduction, and analysis were statistically significant predictors of clinical judgment while 11 critical thinking variables accounted for 17 percent of LCJR scores. This study reinforces that critical thinking is not the same as clinical judgment and that deduction rather than analysis should be used in defining

clinical judgment (Cazzell J & Anderson M 2016). Klenke-Borgman, Cantrell, and Mariani (2020) after their extensive literature review of 86 articles, agree that clinical reasoning and critical thinking lead to the result of clinical judgment. In a quasi-experimental pre/post study, the experimental group showed significant recognition and response to the deteriorating patient, while the control group did not. This recognition and response to the deteriorating patient is just another way of saying clinical judgment (Goldsworthy S, Patterson J, Dobbs M, & Deboer S, 2019). An exploratory study discovered that reconfiguring curriculum to include simulation improved student clinical reasoning skills. (Reinhardt A, Leon T, DeBlieck C, & Amatya A. 2019).

As psychomotor skills are a necessary component of the taking action steps of the CJMM, evidence on simulation and skill performance was investigated. In a meta-analysis conducted on the effectiveness of simulation-based nursing education, particularly large effects were found in the performance of psychomotor skills. (Kim J, Park J, & Shin S, 2016) An umbrella review that included 97 reviews. Outcomes from the simulation review articles had the largest effect on cognitive outcomes which involved problem solving, critical thinking, clinical judgment, and psychomotor skills. (Cantrell M, Franklin A, Leighton K, & Carlson A. 2017).

With the new and improved NCSBN Next Gen Clinical Judgment Action Model expected in 2023, the students must be prepared for the new and improved variety of questions. Next Gen model is the process in which the students can show their knowledge, critical reasoning, and clinical judgment skills. By following a framework like PEARLS along with adding the mid-simulation debriefing that will allow the students to build that solid foundation through repetition of scenario, mid-simulation debriefing, scenario, and end-simulation debriefing.

No literature was identified for a mid-simulation break between the obstetrical care of the laboring mother and the newborn. Future research is needed on varying methods of debriefing to achieve best practice in this phase of simulation and ultimately improve student clinical judgment and patient outcomes.

CHAPTER III

RESEARCH METHODOLOGY

Introduction

At the conclusion of Jeffries framework, outcomes are what completes the simulation experience. This is where the students and faculty interaction occur the most. The educator provides feedback to the student from the student learning outcomes that were observed during the simulation. This allows immediate feedback for the student. The educator can discuss and reflect on skills and assessment the students completed. This also highlights any collaborations that occurred during the simulation to problem solve or support each other. This vital component of debriefing can be utilized both during and after the simulation to assist the student in the transformation of learning process. This study will look at the benefits of a mid-simulation formal debriefing inserted into a laboring mother scenario on student self-confidence and clinical judgment performance behaviors.

Research Design

A quantitative descriptive design was utilized to examine the effect of a maternal newborn mid-simulation formal debriefing after the delivery of the newborn and the one minute APGAR assessment, student confidence and successful completion of student performance objectives. Students were placed in pairs to participate in the simulations which occurred on scheduled clinical days of the week. During the laboring mother scenario, one student performed as the assessment nurse and the other student managed interventions and performed skills. The students were encouraged to work together and share the workload during the scenario but to keep focused on the assigned roles. The student roles reversed immediately after the delivery of the newborn in the simulation and the intervention/skills student performed the one minute

APGAR assessment on the newborn as he or she transitioned to the assessment role. The simulation experience was observed by one faculty member and two senior nursing students in their management course, behind a two-way mirror, and two junior nursing students in the clinical group watched the simulation in the video room live on a large screen television. All scenarios were videotaped for review, to evaluate the success or failure of completing the student performance objectives through recognizing cues, developing the hypothesis, appropriate implementation, and evaluation, validating clinical judgment. At the completion of the mother and newborn scenarios a 45 to 60 minute open forum debriefing occurred between the student participants, student observers, senior management students, and the faculty member.

Comments to students during this debriefing period were focused on clinical judgements that were made from assessment cues, hypothesis, interventions, and prioritization of interventions and how the student's self-confidence may have affected these clinical decisions and its effect on their performance. To examine this closer, an educational intervention was developed that introduced formal debriefing between the care of the laboring mother and the care of the newborn and its impacts on student's self-confidence, clinical judgment skills, reflection of learning, completion of student performance objectives, and retention of learning.

Research Questions and Hypotheses

This study focuses on fours specific aims; (1) To determine if insertion of a mid-simulation formal debriefing, will strengthen the student's clinical judgment skills during the completion of the simulation scenario as determined by the completion of specific student performance objectives versus the completion of these objectives in a group of students who do not have the structured mid-simulation debriefing inserted. Student performance objectives will be assessed by the variables of the CJMM: recognition of cues, development of hypotheses,

implementation of interventions and evaluation of patient outcomes. (2) To determine if inserting a mid-simulation formal debriefing immediately after the one-minute APGAR assessment that follows delivery increases student self-confidence in their performance for the second half of the simulation scenario versus student self-confidence when mid-simulation debriefing does not occur, as measured by the differences between pre and post Student Self Confidence in Learning Survey scores. (3) To determine if there is a relationship between student preparation for simulation, as measured by the math test scores, number of videos viewed, differences between the pre and post knowledge test and student self-confidence, as measured by the differences between pre and post self-confidence scores on the Student Self Confidence in Learning Survey, in students who had a mid-simulation formal debriefing inserted and students who did not. (4) To determine if there is a relationship between student self-confidence, as measured by the differences in pre and post Student Self Confidence in Learning Survey scores, and student clinical judgment skills as measured by Student Performance Objectives, in students who had a mid-simulation formal debriefing inserted and students who did not.

Setting

This study took place at a Midwestern Baccalaureate in the Science of Nursing (BSN) program. The HFS in the obstetrical clinical course, occurred during the second semester of the student's junior year. The students enrolled in the program undergo didactic, clinical practicum experiences, and obstetrical clinical simulation experiences each spring semester. The scenarios involved students caring for an antepartum patient, a patient in active labor, and a postpartum patient, the delivery is assisted by a Nurse Practitioner, and lastly caring for the resulting newborn. There are four scenarios with the mother suffering from a different complication in each scenario. After the delivery, the newborn's condition reflects the level of care provided

during the labor by the students. Specific student performance behavior (SPB) objectives were developed for each mother's labor experience, complications, newborn complications, and care (See appendices F, G, H, I, J, K, L, & M).

The student performance objectives forms were re-evaluated using a videotape of each maternal newborn simulation experience. The student performance objectives were evaluated based on recognition of cues, development of hypothesis, intervention, and evaluation, validating clinical judgment skills. A convenience sample of 40 junior level BSN students, randomly placed in groups of two were used. All students took a pre and posttest over the obstetrical content from the didactic portion of the course, prior to the simulation experience, a self-confidence survey before and after the simulation, along with the post simulation debriefing. Of the 20 dyads, 10 received the mid-simulation formal debriefing (interventional group) and 10 did not (control group).

Utilizing the obstetrical mid-simulation debriefing will help provide the student the opportunity to increase their communication skills, leadership skills, clinical judgment skills, and critical thinking ability in a safe environment. Debriefing allows the student to understand and analyze their knowledge and behaviors, while also recognizing any mistakes that may have taken place. Simulation is a safe environment for the student to learn from their mistakes and discuss it with their educator(s) and peers.

Population and Sample

During the second semester of the junior year, each nursing student is enrolled in the Developing Child and Family (H364) course along with the Developing Child and Family Practice (H364) course at Midwestern university. All students enrolled in the courses were eligible for inclusion in the study. The obstetrical simulation occurred on campus in the

Simulation Hospital each Thursday, Friday, and Saturday, starting the last week of March and running through the 3rd week of April. During course orientation, all students registered in the course received a personal invitation during the course orientation as well as received a formal letter of invitation to participate in the study. Exclusion criteria was any student who did not willingly sign the form or changed their mind about participating in the study before their scheduled simulation date. All 40 members of the cohort agreed to participate in the study and were assigned into simulation groups of four, according to their practicum group. The groups of four were assigned a clinical simulation day according to availability on the group's schedule. The student would still be required as part of the practicum course to participate in the simulation but would be removed from any data collection. Students completed the seven-week maternal-newborn didactic course before participating in the simulation experience.

Demographics were collected on the cohort participants to ensure that the sample was a good representation of the population. Forty students with ages ranging from 21 to 37 defined the cohort with a mean age of 24.03 years. Of the 40 students there were 32 females (80%) and 8 males (20%). Ethnicities identified were Caucasian (n = 33; 82.5%), African American (n = 4; 10%), Asian (n = 1; 2.5%), Hispanic (n = 1; 2.5%), Middle Eastern (n = 1; 2.5%) (see table 1). The mean score/final grade in the didactic course was 81.03, with one unsuccessful student and one student withdrawal at the completion of the course. The practicum course was a pass/fail course with 39 students passing and one withdrawal after the completion of the simulation experience and clinical practicum.

In comparison with the 2020 National Nursing Workforce the makeup of the cohort is an adequate representation of the nursing workforce. According to the NCSBN and the National Forum of State Nursing Workforce Centers (2021), biannual report, the male registered nurse

representation is 9.4% for the 2020 report. The Caucasian workforce was noted to be the largest group with nearly 70% of the RN licensed workers with Asians showing 7.2%, African Americans at 6.7% of the RN workforce, both showing an increase in numbers since the last report (National Nursing Workforce Study, 2021). For this study, the small convenience sample size of 40 students shows a diverse group that is representative of the RN licensed workforce, with a slightly higher number of males in the group.

Table 1: Sample Demographics

Student Characteristics	Total N = 40	
Age	Range 21 – 37 years	Mean age = 24.03 years
Gender	Female = 32 (80%) Male = 8 (20%) Other = 0	
Ethnicity	White/Caucasian = 33 (82.5%) African American = 4 (10%) Asian = 1 (2.5%) Hispanic = 1 (2.5%) Middle Eastern = 1 (2.5%)	

Procedure

On the assigned simulation day, the four students were randomly placed into two groups by each student drawing a piece of paper labeled with either an “A - assessment, an “A - skills, a “B - assessment, or a “B - skills from a cup. This was to determine which group the student would participate in for the simulation. The first group, group A was the control group, without

a mid-break debriefing, and group B followed as the intervention group and did receive a mid-break formal debriefing during the simulation. The groups were not informed of the differences in debriefing methods prior to the simulation experiences. Each group member had their assigned specific nursing role, such as the skills/treatment nurse or the assessment nurse. Both members were reminded and encouraged to help one another throughout the scenario and not to feel as if treatment or assessment was their only role. This was to reinforce the concept that patient care is a group effort. A second walk through the labor room was provided to acclimate the students to their surroundings before beginning care for the laboring patient.

Four days prior to the scheduled simulation date, each participating student was provided with information for four patients in the simulation hospital. Preparation information provided included a medical and obstetrical history for the patient, medication administration record (MAR), and all previous laboratory results from previous doctor visits and admission labs. Each session was video recorded to allow the facilitator and the students to reflect on the decisions and actions that were taken. The faculty member and two senior management students observed the simulation from behind a two-way mirror, while the two junior students observed from the viewing room via live stream on television. The students observing were provided a student performance observation sheet to record questions for the debriefing.

The four individualized simulation scenarios included: (1) a gestational diabetic mother, (2) a pregnancy induced hypertensive (PIH) mother, (3) a drug-addicted mother with no prenatal care, and (4) an active labor who is group beta strep (GBS) positive. The simulation experience lasted between two and a half and three and a half hours, including pre-briefing and debriefing. The scenarios were run in order and then repeated after all four had been utilized. This was to ensure randomization of the scenario for each group, intervention, or control. Upon arrival at the

simulation hospital, the students were provided with a tour of the simulation hospital by faculty experienced with simulation and familiar with the facility to reacclimate themselves with items in the room and the room itself.

The simulation itself took anywhere from 80 minutes to 120 minutes, depending on the progression of the labor and timely action of the student participants. The scenario included a progressive labor, delivery of the newborn, and transition straight to the initial newborn assessment and administration of necessary immediate neonate medications. For the intervention group, the mid-break debriefing occurred immediately after the delivery of the newborn and the completion of the one minute APGAR, assessing the newborn's immediate health status.

The mid-simulation formal debriefing consisted of six open-ended questions using the PEARLS design of scripted debriefing. This format of debriefing consisted of four phases: reactions, description, analysis, and summary. The debriefing questions were as follows: (1) How do you feel? (2) Can you tell me what you did? (3) What steps are next? (4) What should you look for? (5) Did you miss anything? (6) What is your baby going to look like now? No responses were provided to the answers given by the participants. Once the mid-break debriefing was complete, the researcher left the simulation room and allowed the students to begin the second half of the simulation, starting with performing the newborn assessment, five minute APGAR, and taking care of the newborn's immediate needs.

Upon completion of the mother and newborn scenario, a 45 minute to 60 minute debriefing took place in the conference room when the student observers were viewing the live feed of the simulation experience. This room is considered a neutral environment for both groups of students. Here they were able to openly discuss the simulation learning experience. The participants were asked to reflect on how they felt things went and was there anything that

they could have or should have done differently for their patients. Once the participants have finished their discussion, the observers were able to participate in the reflection. Students were then given a one hour lunch break to decompress and return to switch roles of participants and observers.

Setting/Site

The clinical experience took place at a Hospital Simulation Birthing Lab on a University campus in the Midwest. The setting was a realistic replication of a traditional birthing suit with a two way mirror to allow observation of the student performance while providing care for a laboring patient. The room was equipped with a newborn warmer for immediate care of the newborn and as both mom and baby were in the same room, this allowed for continued communication with mother.

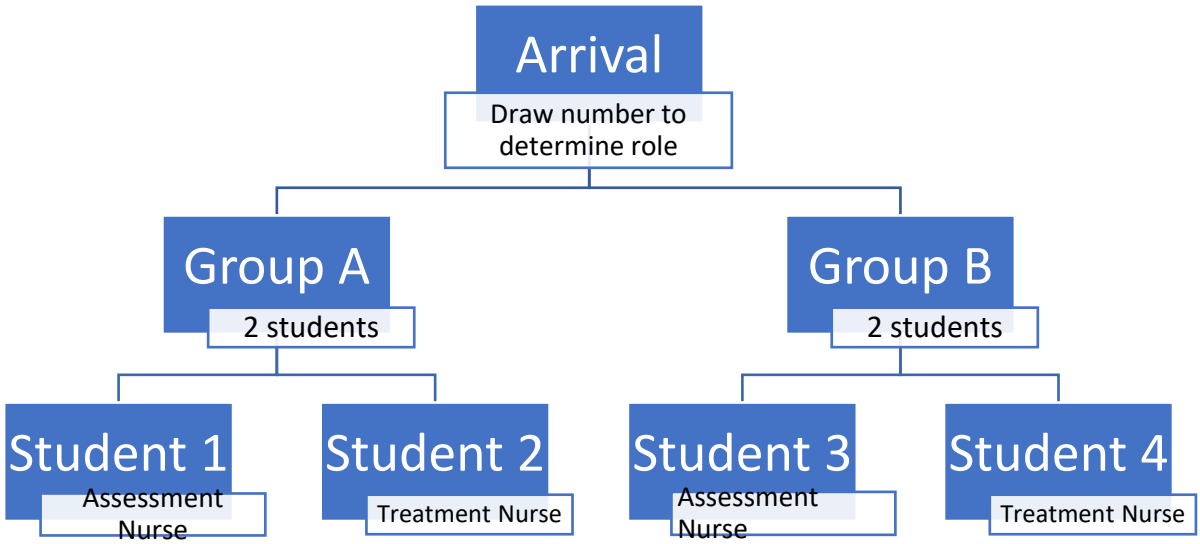
Ethical Considerations

This study was conducted within the routine curriculum for students enrolled in the H363 Development of Family and Child didactic course and H364 the Development of Family and Child practicum course, where the simulation took place. Students were informed about the study in the simulation orientation verbally and with a formal letter with instructions prior to the simulation taking place. Students were asked for and provided their informed consent. All students were informed that participation in the study would have no impact on their learning experience or grade. The simulation scenarios were videotaped and reviewed by faculty to determine if the student performance behaviors/objectives, cues, hypothesis, and implementations validated clinical judgment. All student information was de-identified and there was no harm to the students.

Intervention

The intervention was implemented by the primary investigator of this study. There were ten dyads of four students each. Once the students arrived the morning of the simulation experience, positions and placements were drawn from a cup to determine if they were group A, number one (assessment) or a number two (skills), or group B, with a one (assessment) or a number two (skills). Once the four students were broken down into groups of two, team A was taken to the simulation lab for a final review of the room and group B was taken to the viewing room. Group A was now scheduled to have a traditional end of scenario debriefing, and group B is scheduled to have an obstetrical mid-simulation formal debriefing (Figure 3).

Figure 3. Grouping of Simulation Participants.



Group A of two students, completed a laboring mother scenario. One student nurse was assigned the assessment nurse role, which completed the head-to-toe assessment, continuously monitored the fetal heart tones and contractions throughout the scenario, sterile vaginal exams and monitored any changes that took place with the patient. Student nurse number two was assigned the role of treatment nurse, which required the student to complete all the medication

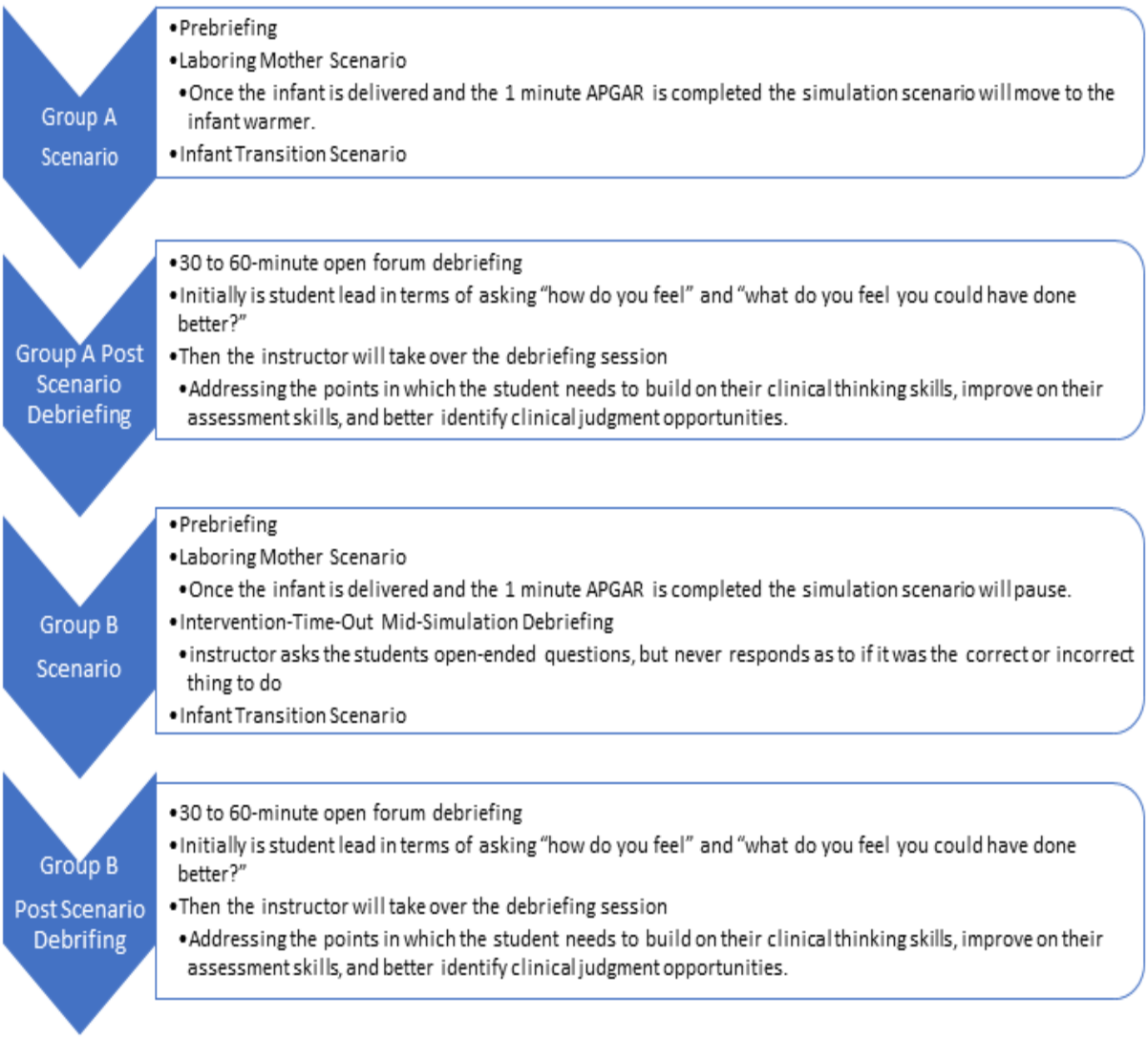
administration, and any hands-on skills such as an indwelling catheter insertion, obtaining any lab specimens, and sterile vaginal exams when needed. The students were provided with a description of their roles before the scenario began. The students were also reminded they are not limited to those skill sets and are encouraged to work together as a team to care for the patient. Throughout the simulation, the instructor, two senior management students, and the additional two students, from group B were observing to determine if the two students participating in the simulation were able to recognize the cues from the student performance objectives outlined for the mother scenario. Upon delivery of the infant, the student in the skills role performs a one minute APGAR on the newborn, the student in the assessment role assessed the placenta, while the newborn was then moved over to the infant warmer. This moment was the transition point for the students with a change in roles. The assessment nurse switched to the skills nurse and the skills nurse took on the assessment nurse role for the newborn. The student then started the five minute APGAR and initial head to toe assessment on the newborn. The treatment nurse completed the necessary medications (Pitocin) for the mother and then transitioned to caring for the infant. Once the assessment, treatments, and necessary medications were given to the newborn, the instructor ended the simulation. Upon completion of the simulation experience, all students and the instructor gather in the viewing room for a post scenario debriefing. Initially this was student-led in terms of asking “how do you feel” and “what do you feel you could have done different/better?”, then the facilitator took over the debriefing session. The facilitator addressed all points in which the student(s) needed to build on in their critical thinking skills, allowing to better identify clinical judgment opportunities. After the debriefing group A took a posttest along with a post self-confidence survey. Both groups were then given a one hour lunch break.

Next, group B was allowed to review the laboring room for several minutes before starting a different laboring mother scenario. As before, one student nurse was assigned the assessment nurse role and the other student nurse was assigned to be the treatment nurse, but again, not limited to this skill set. During the simulation, the instructor, two senior management students, and additional two students, from group A were observing to see if the two students participating in the simulation meet and recognize the cues from the student performance objectives outlined for the mother scenario. Once delivery of the infant and the one minute APGAR was performed, the instructor paused the simulation and performed a 15 minute to 20 minute obstetrical mid-simulation formal debriefing for the two students participating in the scenario experience. The instructor asked the students open-ended questions, but never responded as to if it was the correct or incorrect thing to do. The questions were (1) “what did you do from start to finish”, (2) “what would happen next?”, (3) “what effect does what you did have on the baby?”, and (4) “what do you expect your baby to look like?” Students were encouraged to critically think about the status of the laboring mother, and how the infant will present due to any issues or complications from earlier in the scenario. Once the obstetrical mid-simulation formal debriefing process was complete, the simulation resumed with bringing the newly delivered infant to the warmer to perform the second, five minute APGAR assessment.

After the obstetrical mid simulation formal debriefing, the students then moved over to the warmer to complete the infant scenario in the flipped roles, the assessment nurse now the skills nurse and the treatment nurse working as the assessment nurse. Meanwhile the instructor, and two senior management students, were watching from behind the two way mirror and group A was observing from the viewing room, to see if the student performance objectives specific to the infant have been met.

Upon completion of the second scenario for group B, all student participants and observers gathered in the viewing room for a 45 minute to 60 minute formal debriefing. Again, this debriefing was student-led, asking "how do you feel" and "what do you feel you could have done better?", with the facilitator taking over for remainder of the debriefing session. The facilitator addressed all points in which the student(s) needed to build on their clinical thinking skills, or improve on their assessment skills, allowing for better identify clinical judgment opportunities (Figure 4).

Figure 4. Mid-Simulation Debriefing Process



Evaluation

Evaluation of data included using SPSS version 28 for descriptive statistics, Pearson's correlation coefficient, and a t-test. The quantitative data was reviewed for raw descriptive data on the percentage of students that had higher confidence levels and successful completion of the student performance objectives and clinical judgment. A Pearson's correlation coefficient used to assess for a relationship between the student confidence and student clinical judgment, as well as to determine if the number of hours of preparation work, number of videos watched, or the pretest score had any correlation with the overall success of completing the student performance objectives. Lastly a t-test was performed on the pre and posttest obstetrical information for retention of student knowledge. The video recordings were reviewed to ensure the student performance objective forms were marked accordingly during the live simulation, verifying cues were recognized, the appropriate hypotheses were developed, and the necessary interventions were performed, along with an evaluation of the student's intervention. All of which validated the student's clinical judgment skills. The outcomes that derived from this study will also be used for course assessment and improvement, along with program assessment and improvement.

Data Collection and Instruments

Data collection started after IRB approval (Appendix A) was obtained from Bellarmine University and Indiana University Southeast. Signed consent was obtained by each student. Participants were asked to fill out a demographic survey (Appendix C) which included gender, age, ethnicity, and their current grade.

All pre and post knowledge tests were written by faculty with six questions reoccurring on each test that aligned with the completed didactic portion of the course. The remaining four questions are dependent on the two scenarios scheduled to run for the clinical day, focusing on

the assessment or skills needed to care for the mother or newborn patient (Appendices E and F). This data was then entered in SPSS 28 to assess the retention of learning using a t-test.

Student confidence was measured using a 13-item 5-point Likert Student Self-confidence in Learning Scale survey. Validity and reliability of this survey was established through the NLN/Laerdal Research Study with a Cronbach's alpha score of 0.87 (Appendix D). The data was assessed by individual questions as well as total confidence scores with the control group, and intervention group separately for comparison.

The NLN/Jeffries simulation framework was used to guide the simulation scenario, while using the CJMM for assessment of the student's clinical judgment when providing patient care. The CJMM supports the new NGN testing for the NCLEX-RN certification exam for nursing students. The forms were used to determine if cues, analysis, hypothesis, generating solutions, action/implementation of care, and evaluation of outcomes were completed assessing for entry level clinical judgment (Lasater, 2007) (Appendices G, H, I, J, K, L, M, and N). All four simulation scenarios were developed by faculty based on patients that the junior cohort will take care of in the clinical setting for the H364 Developing Family and Child Practicum. During the simulation experience, participants were graded by faculty using student performance objectives on a form developed by faculty specific to each patient scenario.

Statistical Package for the Social Sciences (SPSS) version 28 was used to input data. A standard t-test was completed on the pre and posttests. The tests were analyzed for any student retention of learned material in the classroom and after application in the simulation exercise. The pretest was compared to the posttest to determine if there was knowledge gain after participation in hands on HFS.

A Person's coefficient correlation test was performed using the student performance and observations sheets from the simulation experience. This was used to determine if there is a relationship between the student level of confidence and clinical judgment or preparation and student performance. The student confidence level was determined through using a 5-point Likert scale self-confidence assessment tool.

CHAPTER IV

PRESENTATION OF RESEARCH

Data collection started on March 31st of 2022 and was collected daily, prior to and after the simulation experience on each scheduled simulation day. A pretest was given to assess student knowledge retention of obstetrical information provided in the didactic portion of the corequisite course and the simulation experience itself. A self-confidence survey with a 5-point Likert scale was given before and after the simulation experience. The student observation and performance objective forms using Next Gen CJMM were filled out by faculty during the scenario for the first time and again later while watching the video to ensure no observations were missed during the live simulation experience. Data collection was completed on the last scheduled simulation day of April 21st, 2022. There were no cancellations due weather, illnesses, or equipment failures.

Findings

The results of the analyses of data for this study are presented in this chapter. The chapter will present the findings for the following four research questions.

Question 1: Did the insertion of a mid-simulation formal debriefing, strengthen the student's clinical judgment skills during the second half of the simulation scenario?

H0: There is no statistically significant difference between students who received a mid-simulation formal debriefing and an increased clinical judgment compared to those students who did not receive a mid-simulation formal debriefing.

H1: There is a statistically significant difference between students who received a mid-simulation formal debriefing and an increased clinical judgment compared to those students who did not receive a mid-simulation formal debriefing.

Question 2: Did the insertion of a mid-simulation formal debriefing, strengthen the student's self-confidence during the second half and at completion of the simulation scenario?

H0: There is no statistically significant difference between students who received a mid-simulation formal debriefing and an increased self-confidence compared to those students who did not receive a mid-simulation formal debriefing.

H1: There is a statistically significant difference between students who received a mid-simulation formal debriefing and an increased self-confidence compared to those students who did not receive a mid-simulation formal debriefing.

Question 3: Is there an association between students' preparedness for simulation and student self-confidence in students who had a mid-simulation formal debriefing inserted in the scenario and those who did not?

H0: There is no statistically significant association between students who were prepared for the simulation-based learning experience and their confidence level with those who had a mid-simulation formal debriefing and those who did not.

H1: There is a statistically significant association between students who were prepared for the simulation-based learning experience and their confidence level with those who had a mid-simulation formal debriefing and those who did not.

Question 4: Is there a difference between students with higher self-confidence and clinical judgment skills in students who had a mid-simulation formal debriefing and those who did not?

H0: There is no statistically significant difference between students who had high self-confidence and clinical judgment skills and those who had lower self-confidence with those who had a mid-simulation break and those who did not.

H1: There is a There is no statistically significant difference between students who had high self-confidence and clinical judgment skills and those who had lower self-confidence with those who had a mid-simulation break and those who did not.

Question One Findings

The first question in the study was: Did the insertion of a mid-simulation formal debriefing, strengthen the student's clinical judgment skills during the second half of the simulation scenario? Using the NLN Jeffries framework and the Laster's Clinical Judgment Measurement Model (Laster, 2007) along with the faculty driven student performance behavior observation form data were analyzed based on the number of behavior cues, analyses, hypotheses, actions taken, and evaluations completed in the simulation scenario.

The 20 participants who received the intervention of a mid-simulation break (M = 83.03, SD = 69.68) compared to 20 students who did not receive the mid-simulation break during the simulation experience (M = 74.55, SD = 9.65) demonstrated significantly higher scores in student performance behaviors, $t(19) = 52.29$, p value = < 0.001, 95% CI [79.77, 86.29]. The non-intervention groups also noted an increase in the student performance behaviors $t(19) = 34.56$, p value = < 0.001, 95% CI [70.04, 79.06]. Variances are assumed for both the intervention and non-intervention groups, as the mean difference of 83.03 for intervention and 74.55 for non-intervention, does fall within the parameters of the 95% confidence interval of differences. There is less than a 0.001 percent chance that the performance behaviors were by chance, therefore, rejecting the null hypotheses and concluding there is a difference between students who had a mid-simulation formal debriefing and number of student performance behaviors completed than those who did not receive the mid-simulation debriefing.

Table 2: Student Performance Behavior Observation Scores

Table 2: Descriptive Statistics
Student Performance Behavior Observation Scores

Intervention or No Intervention	N	Mean	Std. Dev.	SEM
Intervention Performance Behaviors Completed	20	83.0300	6.96851	1.55821
No Intervention Performance Behaviors Completed	20	74.5500	9.64575	2.15686

Table 3: One-Sample T-test
Student Performance Behavior Observation Scores

			Significance			95% Confidence Interval of the Difference	
	t	df	One Sided p	Two Sided p	Mean Difference	Lower	Upper
Intervention	53.286	19	<.001	<.001	83.03000	79.7686	86.2914
No Intervention	34.564	19	<.001	<.001	74.55000	70.0356	79.0644

Question Two Findings

The second question in the study was: Did the insertion of a mid-simulation formal debriefing, strengthen the student's self-confidence during the second half and at completion of the simulation scenario?

The pre self-confidence survey scores showed no statistically significant difference ($p > 0.05$) between the intervention and non-intervention groups in all 13 questions on the survey. The post self-confidence survey scores showed no statistically significant difference ($p > 0.05$) between the intervention and non-intervention groups in all 13 questions on the survey. For all

who received a mid-simulation debriefing break increased their overall self-confidence mean from 3.85 to 4.28, a 0.385 difference. The mean post-self-confidence scores for the intervention group are greater than the pre self-confidence scores in all 13 questions. Those who did not receive a break scored their overall confidence mean at 3.81 with an increase to 3.83, a 0.019 difference in confidence. The mean post self-confidence scores for the non-intervention group also increased scores in all 13 questions. The non-intervention group saw a total increase of 3.54 points. While the intervention group saw a total increase of 7.70 points (table 4).

When the pre-self-confidence scores versus the post-self-confidence scores for all the non-intervention students, was statistically analyzed using a t-test for each of the 13 questions, the following was found: Twelve of the 13 questions had no statistically significant difference, question 12 had a p = 01. When the pre-self-confidence scores versus the post-self-confidences scores for the intervention group was statistically analyzed using a t-test for each of the 13 questions the following was found: Eleven of the 13 questions had no statistically significant difference, question 4 has a p = 0.04 and question 9 has a p = 0.04. Three of the questions had identical pre and post scores that were identical.

The 20 participants who received the intervention of a mid-simulation break (M = 0.38, SD = 0.41) compared to 20 students who did not receive the mid-simulation break during the simulation experience (M = 0.18, SD = 0.47) (table 4) demonstrated significantly higher scores in post student self-confidence, $t(19) = 4.21$, $p = < 0.001$, 95% CI [0.19, 0.58]. The non-intervention groups also noted an increase in the student post self-confidence scores $t(19) = 1.69$, $p = < 0.11$, 95% CI [-0.04, 0.40]. Variances are assumed for both the intervention and non-intervention groups, as the mean difference of 0.38 for intervention and 0.18 for non-intervention, does fall within the parameters of the 95% confidence interval of differences. There

is less than a 0.001 percent chance that the student post self-confidence scores were by chance, therefore, rejecting the null hypotheses and concluding there is a difference between students who had high post self-confidence scores and those who had lower post self-confidence with those who had a mid-simulation break and those who did not (table 5).

Table 4: Descriptive Statistics
Pre/Post Student Self Confidence Score Differences

	N	Mean	Std. Dev.	SEM
Intervention Post Self-Confidence Diff	20	.3846	.40856	.09136
Nonintervention Post Self-Confidence Diff	20	.1769	.46830	.10471

Table 5: One-Sample T-test
Student Self-Confidence Differences in Pre/Post Survey Scores

			Significance			95% CI Interval of the Difference	
	t	df	One-Sided p	Two-Sided p	Mean Difference	Lower	Upper
Intervention Self-Confidence diff	4.210	19	<.001	<.001	.38461	.1934	.5758
Nonintervention Self-Confidence diff	1.689	19	.054	.107	.17692	-.0423	.3961

Question Three Findings

The third question in the study was: Is there an association between students' preparedness for simulation and student self-confidence in students who had a mid-simulation formal debriefing inserted in the scenario and those who did not?

A Pearson's Correlation Coefficient was computed to assess for the association between student preparedness and overall student reported self-confidence for both the intervention group

who received the mid-simulation debriefing and the control group who did not receive the debriefing. The variables included as part of the student's preparedness were reported hours of preparation, number of videos watched, and math preparation.

Looking at the non-intervention group of students, the Pearson's Correlation Coefficient revealed a negative association between the number of hours prepared, r(18) = -.04, p = .860, as well as with the math preparation, r(18) = -.04, p = .867. There was a small positive association with the number of videos reviewed but did not show to be significant, r(18) = 17, p = 477 (table 7). The students who received the intervention, the mid-simulation formal debriefing showed a negative association with the number of preparation hours (r = -0.19) and the student self-confidence score, and small association with the math preparation (r = 0.36) and an even smaller association with the number of videos reviewed (r = 0.12) (table 7).

Table 6: Descriptive Statistics
Preparation and Sefl-Confidence

Non-Intervention Group	Mean	Std. Dev.	N
Post Self-Confidence	3.8315	.55562	20
Hours of Preparation	6.0750	6.39958	20
Videos Reviewed	1.0500	.22361	20
Math Preparation	97.5000	5.50120	20

Table 7: Descriptive Statistics
Preparation and Self-Confidence

Intervention Group	Mean	Std. Dev.	N
Post Self-Confidence	4.2380	.56468	20
Hours of Preparation	4.1000	2.85897	20
Videos Reviewed	3.5500	.82558	20
Math Preparation	99.5000	2.23607	20

Table 8: Correlations

Non- Intervention Group Association of Preparation and Self-Confidence

		Confidence	Hours	Videos	Math
No Intervention Self-Confidence Score	Pearson Correlation	1	-.042	.169	-.040
	Sig. (2-tailed)		.860	.477	.867
	Sum of Squares and Cross-products	5.866	-2.847	.399	-2.325
	Covariance	.309	-.150	.021	-.122
	N	20	20	20	20
No Intervention Hours of Preparation	Pearson Correlation	-.042	1	-.150	.275
	Sig. (2-tailed)	.860		.528	.241
	Sum of Squares and Cross-products	-2.847	778.138	-4.075	183.750
	Covariance	-.150	40.955	-.214	9.671
	N	20	20	20	20
No Intervention Number of Videos Reviewed	Pearson Correlation	.169	-.150	1	-.321
	Sig. (2-tailed)	.477	.528		.168
	Sum of Squares and Cross-products	.399	-4.075	.950	-7.500
	Covariance	.021	-.214	.050	-.395
	N	20	20	20	20
No Intervention Math Preparation	Pearson Correlation	-.040	.275	-.321	1
	Sig. (2-tailed)	.867	.241	.168	
	Sum of Squares and Cross-products	-2.325	183.750	-7.500	575.000
	Covariance	-.122	9.671	-.395	30.263
	N	20	20	20	20

Table 9: Correlations

Intervention Group – Association of Preparation and Self-Confidence

		Confidence	Hours	Videos	Math
Intervention Self-Confidence Score	Pearson Correlation	1	-.188	.122	.358
	Sig. (2-tailed)		.427	.608	.122
	Sum of Squares and Cross-products	6.058	-5.771	1.082	8.580
	Covariance	.319	-.304	.057	.452
	N	20	20	20	20
Intervention Hours of Preparation	Pearson Correlation	-.188	1	.198	-.156
	Sig. (2-tailed)	.427		.402	.510
	Sum of Squares and Cross-products	-5.771	155.300	8.900	-19.000
	Covariance	-.304	8.174	.468	-1.000
	N	20	20	20	20
Intervention Number of Videos Reviewed	Pearson Correlation	.122	.198	1	.442
	Sig. (2-tailed)	.608	.402		.051
	Sum of Squares and Cross-products	1.082	8.900	12.950	15.500
	Covariance	.057	.468	.682	.816
	N	20	20	20	20
Intervention Math Preparation	Pearson Correlation	.358	-.156	.442	1
	Sig. (2-tailed)	.122	.510	.051	
	Sum of Squares and Cross-products	8.580	-19.000	15.500	95.000
	Covariance	.452	-1.000	.816	5.000
	N	20	20	20	20

Question Four Findings

The fourth and final question in the study was: Is there a difference between students with higher self-confidence and clinical judgment skills in students who had a mid-simulation formal debriefing and those who did not?

Data was computed using a Pearson's Correlation Coefficient to assess the linear association between post student self-confidence surveys and student performance behaviors completed. There was a positive correlation between the non-intervention group's self-confidence scores and the completed student performance behavior objectives r(18) = .47, p = .035, two tailed 95% confidence interval. The group with the mid-simulation debriefing break, had a smaller association in student self-confidence scores and student performance behaviors, r(18) = .32, p = .164.. The differences in association can be related to the overall differences in student self-confidence scores and student performance behaviors (table 10). The non-intervention group data revealed the post self-confidence survey (M = 3.83, SD = .56) with a (M = 74.55, SD = 9.64) for the student performance behaviors observed, while the intervention groups scores were higher for the post self-confidence survey (M = 4.24, SD = .56) and the student performance behaviors observed (M = 83.03, SD = 6.97) (table 11).

Table 10: Descriptive Statistics
Post Self-Confidence Scores and Student Performance Behaviors

	Mean	Std. Dev.	N
No Intervention Post Self-Confidence Scores	3.8315	.55562	20
No Intervention Student Performance Behaviors	74.5500	9.64575	20
Intervention Post Self-Confidence Scores	4.2380	.56468	20
Intervention Student Performance Behaviors	83.0300	6.96851	20

Table 11: Correlations
Self-Confidence and Student Performance Behaviors Non-Intervention Group

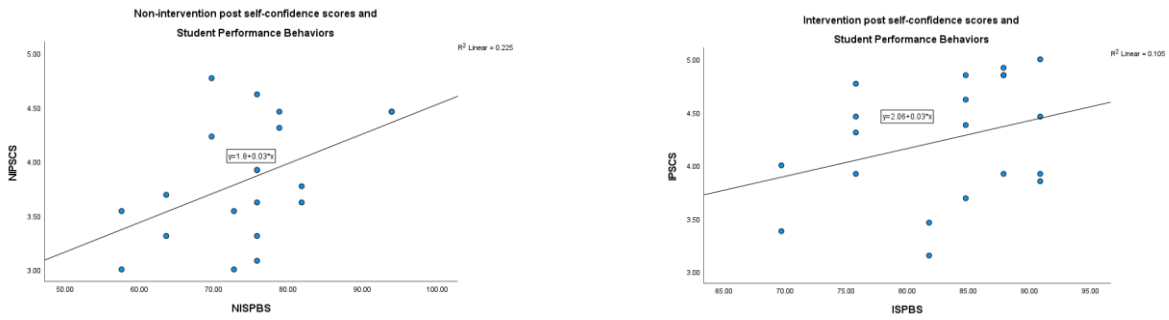
		Confidence	Behaviors
No Intervention Student Self-Confidence Scores	Pearson Correlation	1	.474*
	Sig. (2-tailed)		.035
	Sum of Squares and Cross-products	5.866	48.288
	Covariance	.309	2.541
	N	20	20
No Intervention Student Performance Behaviors	Pearson Correlation	.474*	1
	Sig. (2-tailed)	.035	
	Sum of Squares and Cross-products	48.288	1767.770
	Covariance	2.541	93.041
	N	20	20

*. Correlation is significant at the 0.05 level (2-tailed).

Tablet 12: Correlations
Self-Confidence and Student Performance Behaviors Intervention Group

		Confidence	Behaviors
Intervention Student Self-Confidence Scores	Pearson Correlation	1	.324
	Sig. (2-tailed)		.164
	Sum of Squares and Cross-products	6.058	24.194
	Covariance	.319	1.273
	N	20	20
Intervention Student Performance Behaviors	Pearson Correlation	.324	1
	Sig. (2-tailed)	.164	
	Sum of Squares and Cross-products	24.194	922.642
	Covariance	1.273	48.560
	N	20	20

Figure 6: Scatter Plots for Student Self-Confidence Scores and Student Performance Behaviors



Conclusion

In conclusion, the analysis of data shows that the non-intervention group, who did not receive a formal mid-simulation debriefing, reported a mean post self-confidence score of 78.55%, which was an increase of 3.54%. The mean completion for student performance behaviors for the non-intervention group was 74.55%. The group did show an increase in the posttest scores with a mean of 10.5%. Students who received the intervention of a mid-simulation break, had a total of 39.5 less hours spent on preparation, and reported a mean post self-confidence score of 84.76%, an increase of 7.7%. Along with the increase in self-confidence scores, the intervention group had a mean score of 83.03% in student performance behaviors, an 8.48% higher score, resulting in a higher number,169.6 more, student performance behaviors observed on the clinical judgment measurement model.

The intervention groups showed an 8.48% increase over the non-intervention groups. The intervention groups were more successful at completing a total of 169.6 more clinical judgment behaviors observed, even with the linear association being less.

CHAPTER V

DISCUSSION

Introduction

This study focused on a multiple phase debriefing style for simulation, with the insertion of a mid-simulation break with formal debriefing after the delivery of a laboring mother, prior to caring for the newborn. This chapter will summarize the findings for each specific aim in the study, along with providing some recommendations for future research with an emphasis on the debriefing process. Finally, limitations will also be discussed as it applies to each specific aim.

Discussion

Summary and Discussion of Question 1

The findings for specific aim one in this study, showed that students who received a mid-simulation break; completed more student performance behaviors objectives, with an increase of 169.6 more performance behaviors. The mean score for the non-intervention group, 74.55% was more than eight percent less than the invention group at 83.03%. With both groups having statistically significant values that fell within the 95% confidence intervals, with a p value < .001, rejects the null hypothesis that there is no statistically significant difference.

The NCSBN's CJMM was used in the study to assess the student's ability to hypothesize, prioritize, identify a solution, take action, and evaluate outcomes. Using this model, an increase in the students' performance behaviors was revealed in the data with those who had a mid-simulation debriefing break. This same CJMM was used as the framework for developing, classifying, and scoring NCLEX testing items. Doolen et al., (2016) reports that the changing guidelines and growing research evidence supports the use of HFS as an alternative to clinical, along with the state boards of nursing who support the use of HFS and its growth in

undergraduate nursing programs. These changes will allow faculty to bring the clinical to the classroom through simulation. As mentioned previously, these elements are essential for the students in preparation for the new Next Gen NCLEX testing (NCSBN, 2022).

Summary and Discussion of Question 2

The results of the second specific aim revealed an increase for both groups, but nearly twice the increase for the intervention group verse the non-intervention group. The students who received the mid-simulation debriefing showed an increase in their self-confidence scores (M = .38) and those who did not receive the mid-simulation break showed a lower self-confidence increase (M = .18). Both groups had a 95% confidence interval with the intervention group showing a statistically significant difference with a p = <.001, the non-intervention group not reporting a statistically significant difference in scores with a p = *.11*. While both groups showed an increase in average scores, the intervention group was the only group that showed statistical significance, with a less than .001 percent that the change in confidence scores is by chance.

In Jeffries et al., (2015) the framework's outcomes focus on reaction, self-confidence, learning, changes in knowledge, skills, attitude, and behavior, which the participants use in the clinical setting. With an increase in self-confidence through a mid-simulation debriefing we are also including the framework's final component of the debriefing process and bringing them together.

Summary and Discussion of Question 3

Specific aim three, explored the association between the student's preparedness, as identified by math homework, hours of preparation, and videos reviewed for skills, and the student's self-confidence. According to the Pearson's Correlation Coefficient test, there were

little to no associations between the variables. For the non-intervention groups there was a very weak negative correlation between hours of preparation and math preparation with the overall student's self-confidence, with both associations (r = -.04). The association between number of videos reviewed and student's self-confidence was also weak but revealed a positive association with a higher correlation (r = .17). The intervention groups showed a negative correlation with hours of preparation (r = -.19). Showing those who studied for an increased number of hours had lower self-confidence scores. There was a positive correlation for the number of videos reviewed (r = .12) and math preparation (r = .36). The students in the intervention group who reviewed more videos and scored higher on the math showed higher self-confidence scores (tables 6, 7, 8, & 9).

The mixed positive and negative relationships were from a low number of participants. A larger group of participants would allow for stronger evidence as to whether the relationships were truly positive or negative. Future research is required to gather more data for sufficient determination in relationships to the above variables with student self-confidence.

Summary and Discussion of Question 4

The final specific aim in this study was to investigate if a student with higher self-confidence will have higher number of completed student performance behaviors observed. The data showed a statistically significant association with the student self-confidence scores and the student performance behaviors with the non-intervention group. However, the non-intervention group had a lower mean score (M= 3.83) in self-confidence as well as a lower mean score (M= 74.55) in completed student performance behaviors observed. Whereas the intervention group had a higher mean score in both the self-confidence scores (M= 4.24) and the student performance behaviors observed (M= 83.03).

One goal of the mid-simulation debriefing break is to allow students a moment to regroup and reflect on their decisions thus far. Providing a small amount of time to process what has gone on with the patient and what the response to the treatments provided were and how might patient number two, the newborn be affected. In alignment with the goal of increasing student confidence and clinical judgment with a mid-simulation debriefing, the evidence shows that the intervention group performed 169 more observed behaviors than the non-intervention group. When comparing the two groups side by side, overall, the mid-simulation debriefing group improved in both areas with a notable increase of self-confidence by 0.41 percent and clinical judgment by 8.48 percent.

Limitations and Implications

As previously mentioned, limitations for this study include the small convenient sample size that was drawn from one Midwest university. The total of 20 dyads from the sample limited the intervention to being performed with ten groups. The study spanned over a five-week period, allowing students an opportunity to discuss their performance with their peers and provide information such as what to expect to groups prior to participating in their scheduled simulation. Having prior knowledge about the simulation could influence how much time and effort was placed into preparation work, overall self-confidence, and completion of student behaviors. All of which could alter the data gathered.

A more detailed explanation of the study during the student orientation to simulation and in the letter could help decrease the student's anxiety when we take the break in the middle of the active simulation. Students are accustomed to the traditional debriefing at the completion of the learning experience and on more than one occasion when stopping mid-simulation for the debriefing, the students mentioned feeling scared that the simulation was being paused or

interrupted due to poor performance or something they had done drastically wrong. This perception could have created another level of anxiety for the student and changed the outcome for the second portion of the scenario, when caring for the newborn.

One recommendation to further explore this would be to add a qualitative post-simulation survey with questions allowing the student to express how they felt about the mid-simulation break. For instance: "If you received the mid-simulation break was it beneficial to you?" with a follow up of "why or why not" to let the student explain in his or her own words their experience. This would allow for exploration of any themes that might arise from the answers and for what reasons from the students.

In addition to the qualitative information, further exploration of clinical judgment and competency need to be performed to assess students for readiness in meeting the newest essentials from the American Association of Colleges of Nursing (AACN). The newest essentials focus on a competency based education for the student nurse, making the transition from student nurse to novice nurse a seamless one. Through simulation and multiple phased debriefing, such as mid-simulation debriefing, we can support student learning teaching the novice nurse not only how to perform as a nurse but how to think, hypothesize, prioritize, take action, and re-evaluate the patient outcomes.

Conclusion

In conclusion, this study explored the impact that a mid-simulation debriefing during a maternal newborn scenario had on students' clinical judgment and confidence. Students who participated in the mid-simulation debriefing showed an increase nearly twice as high as students who did not receive the mid-simulation debriefing and completed a total of 169 more observed

student behaviors than the non-intervention groups. Further investigation with a larger group of participants needs to be pursued in future research.

Allowing students, a moment in time to regroup and process what is happening can lead to better decision making and increased performance behaviors. This type of debriefing within the simulation can help faculty reinforce learning that has previously taken place in the classroom. Future research exploring best practices in debriefing needs to continue and support the Next Gen movement for student NCLEX success and the AACN essentials.

APPENDICIES

Appendix A: Internal Review Board Paperwork

BELLARMINE UNIVERSITY

March 24, 2022

Dr. Kimberly Hawkins **(PI)**
Tonya M. Broughton (Co-PI)
School of Nursing, Bellarmine University

IRB#998: *Mid-simulation Debriefing: The Impact on Confidence and Clinical Judgment of Nursing Students in a Baccalaureate Mother Baby Course*

Dear Dr. Hawkins:

The IRB has completed its review of your project entitled *Mid-simulation Debriefing: The Impact on Confidence and Clinical Judgment of Nursing Students in a Baccalaureate Mother Baby Course*, IRB#998. Your project has been approved as exempt under the following categories, specifically CFR Section 46.104(d)(1),(2)(ii),(3)(i)(B)(ii):

1) Research, conducted in established or commonly accepted educational settings, that specifically involves normal educational practices that are not likely to adversely impact students' opportunity to learn required educational content or the assessment of educators who provide instruction. This includes most research on regular and special education instructional strategies, and research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.
2) Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) and (ii) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation;
3) (i) Research involving benign behavioral interventions in conjunction with the collection of information from an adult subject through verbal or written responses (including data entry) or audiovisual recording if the subject prospectively agrees to the intervention and information collection and:
    B. Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation;

(ii) For the purpose of this provision, benign behavioral interventions are brief in duration, harmless, painless, not physically invasive, not likely to have a significant adverse lasting impact on the subjects, and the investigator has no reason to think the subjects will find the interventions offensive or embarrassing.

IN \'ERITATIS AMORE

Your study's review period extends from **March 24, 2022, t**hrough **March 23, 2025.** This approval period will expire automatically at the end of the three-year period. If you complete your project before the end of this review period, it is not necessary to make a formal request that your study be closed. Should you wish to continue your research activity beyond this three-year period, you will need to submit a continuation request for review and approval *prior to continuation* past the expiration date. As a reminder, you will receive an Outlook calendar invitation for this expiration date.

As always, although this project qualifies for exemption from the requirements of [45 CFR 46] federal regulations, the primary investigator is expected to:

- adhere to the ethical principles of the responsible conduct of research inclusive of informed consent, data security, and responsible reporting;
- submit amendments for protocol alterations that may affect the exempt classification;
- report events and unanticipated problems to the IRB as soon as possible; and
- retain research records for at least 3 years after completion of project.

If you have any questions, please feel free to contact me. We wish you the best with your project!

Sincerely,

Christy Wolfe, PhD
Chair, Bellarmine IRB

cc: Connie Smith, Director of Sponsored Projects
Dr. Frank Hutchins, Vice-Chair, IRB
Dr. Mark Wiegand, Associate Provost

Appendix B: Letter of Participation

March 24, 2022

Dear Participant:

My name is Tonya Broughton, and I am a Health Professions Education graduate student at Bellarmine University. For my research project, I will be examining if there is a relationship between a student's level of confidence and simulation based learning performance and does a mid-simulation timeout debriefing increase clinical judgment. I am inviting you to participate in the clinical simulation study.

The simulation exercise is a scheduled part of the H364 Developing Family and Child practicum course. You will be provided the necessary prep work 3 to 4 days prior to the simulation exercise to familiarize yourself with the patient. The exercise will take approximately 2.5 to 3.5 hours to complete. There will be a short pre and post-test along with a short survey on self-confidence. There is no risk, payment, or extra credit awarded in the course for participating in the study. All information will remain confidential. The results of the simulation study project will be shared with my Dissertation Chair, Dr. Kim Hawkins, other students in my cohort for review, and the simulation faculty at IUS. Participation is voluntary and you may choose not to participate at any time. There will be no penalty for not participating. Consent forms will be available the morning of your scheduled simulation and attached to your pretest. Again, please note that there will be no penalty for non-participation.

Thank you for your consideration and taking the time to work with me during this educational journey. The data collected will provide information on whether a relationship between confidence and performance exists with students in simulation performance. If you would like a summary of the data collected in this study, please send an email to the address below requesting the final summary. A copy of the information will be sent back to you. Your consent form will indicate your willingness to participate. If you have any questions, please feel free to contact me at the number or email listed below.

Respectfully,

Tonya M. Broughton

Health Professions Education Graduate Student

Cell number: 502-643-5686 email: tbroughton@bellarmine.edu

Appendix C: Student Demographics

Student Demographic Form

Age _____

Please circle one of the following:

Gender: M F Other Decline to answer

Ethnicity: White/Caucasian African American Asian

Middle Eastern Hispanic Other_____

Appendix D: Student Self-Confidence Survey

Student Self-Confidence in Learning Survey

Instructions: This questionnaire is a series of statements about your personal attitude toward your self-confidence in your simulation activity. Each item represents a statement about your attitude toward your self-confidence. You will probably agree with some of the statements and disagree with others. Please indicate your own personal feelings about each statement below by marking the numbers that best describe your attitude and beliefs. Please be truthful and describe your attitude as it really is, not what you would like it to be. The results will be compared to your survey results after the mother baby clinical simulation experience.

Mark: 1 = STRONGLY DISAGREE with the statement
2 = DISAGREE with the statement
3 = UNDECIDED – you neither agree nor disagree with the statement
4 = AGREE with the statement
5 = STRONGLY AGREE with the statement

Self-confidence in Learning	SD	D	UN	A	SA
1. I am confident that I can recognize signs and symptoms of diseases.	○ 1	○ 2	○ 3	○ 4	○ 5
2. I am confident that I am obtaining the required knowledge from simulation to perform necessary tasks in a clinical practice.	○ 1	○ 2	○ 3	○ 4	○ 5
3. I am confident that I am developing the required skills from simulation to perform necessary tasks in clinical practice.	○ 1	○ 2	○ 3	○ 4	○ 5
4. I am confident that I can accurately assess an individual with any abnormalities.	○ 1	○ 2	○ 3	○ 4	○ 5
5. I am certain that I can accomplish my intended learning goals.	○ 1	○ 2	○ 3	○ 4	○ 5
6. I am confident that I am mastering the content of the simulation activity that my instructors presented to me.	○ 1	○ 2	○ 3	○ 4	○ 5
7. I am confident that I can deal efficiently with unexpected events.	○ 1	○ 2	○ 3	○ 4	○ 5
8. I am confident that I can develop an appropriate nursing care plan for any individuals with any abnormalities.	○ 1	○ 2	○ 3	○ 4	○ 5
9. I am confident that the simulation covered critical content necessary for the mastery of the curriculum.	○ 1	○ 2	○ 3	○ 4	○ 5
10. I can handle whatever comes my way in clinical practice.	○ 1	○ 2	○ 3	○ 4	○ 5
11. I am confident that I can always manage to solve difficult problems if I try hard enough.	○ 1	○ 2	○ 3	○ 4	○ 5
12. I am confident that I can evaluate the effectiveness of my interventions for an individual with any abnormalities.	○ 1	○ 2	○ 3	○ 4	○ 5
13. I am confident that I can appropriately intervene to meet the need of an individual with any abnormality.	○ 1	○ 2	○ 3	○ 4	○ 5

(National League for Nursing (NLN). (2006).

Appendix E: Pre/Post Test for simulation exercises

Pre/post-test

1. Mom is Rh negative, which medication is important to give within 72 hours after birth?

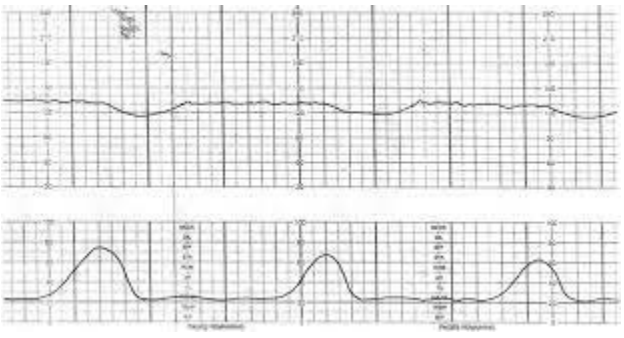
2. Mom comes in 9cm dilated and in pain. What interventions can you provide? Select all that apply.
    a. Epidural
    b. Repositioning
    c. Breathing techniques
    d. acetaminophen/hydrocodone

3. Please label the fetus' position in the picture below.

4. What technique is used to determine fetal position to place the FHR monitor? Draw an X over where the FHR monitor should be placed on mom's belly.

5. Mom is a 30 year old female who is 30 weeks pregnant with twins. She has 5 living children. Four of the 5 children were born at 39 weeks gestation and one child was born at 27 weeks gestation. Two years ago, she had an abortion at 10 weeks gestation. She also lives in a blended family with two adopted children. What is her GTPAL?

6. Identify the Fetal Strip below. What intervention is needed if any?



Pre/Posttest questions specific to scenario

Scenario 1 Dana Johnson – Gestational Diabetes

7. The fetus has had three late decelerations in a row. What do you do? Select all that apply
    a. Do nothing
    b. Provide mom with oxygen via mask
    c. Call the NP
    d. Reposition mom to her right side
    e. Reposition mom to her left side
    f. Call OR to prepare for an emergency cesarean delivery

8. Your infant is born at 35 weeks gestation to a mother with gestation diabetes. As the nurse, you know that the newborn is at risk for….? Select all that apply
    a. Jaundice
    b. Hyperthermia
    c. Hyperglycemia
    d. Hypoglycemia
    e. Respiratory distress

Scenario 2 Sarah Scott – Pregnancy Induced Hypertension

1. What is the sign/symptom that the laboring mother has advanced from preeclampsia to eclampsia?

    a. Protein in the urine
    b. Seizures
    c. Headache
    d. Elevation in the blood pressure greater than 30 points

2. When should the APGAR scoring be performed and what is considered a good score? Please provide your rationale for a good score.

Scenario 3 Candy Smith – Drug Addiction with No Prenatal Care

1. What methods can be used to assess the fetus for maternal drug use? Select all that apply

    a. Meconium stool
    b. Heal stick
    c. Cord blood
    d. Saliva swab

2. What are common signs and symptoms of a neonate with Neonatal Abstinence Syndrome? Select all that apply

a. Jittery
b. Good suck/swallow coordination
c. High pitched cry
d. Poor/low weight
e. Firm stool
f. Discolored umbilical cord

Scenario 4

Rachel Miller – GBS positive in active labor

1. What is the priority nursing intervention upon admission for a GBS positive mom?
    a. Pain medication administration
    b. Therapeutic communication
    c. Administer ampicillin
    d. Administer betamethasone

2. You are preparing to administer vitamin K to a newborn when the mother asks what the purpose of the injection is? What is the appropriate response?
    a. Vitamin K helps the blood clot and prevents serious bleeding
    b. Vitamin K helps prevent infection in newborns
    c. Vitamin K helps develop the baby's lungs
    d. Vitamin K helps regulate glucose levels

Appendix F: Observation Grading Form for Patient Dana Johnson

Name:_____ Date:_____

2022 Observation Grading Form: Scenario 1 – Dana Johnson

NCSBN Clinical Judgment Model	Evidence Based Student Performance Objectives	Observed
Cognitive Operations	Introduces selves to patient	
	Checks MD orders	
Safety	Checks patient arm band to verify correct identity	
	Verifies patient Name and Birthdate with patient	
	Verifies IV pump: working correctly and rate	
	Verifies correct IV solution is hanging	
	Calls Nurse Practitioner using ISBAR format	
	• Identifies self	
	• Gives situation and background	
	• Gives assessment data (VS, Dilation, Pain, Fetal strip)	
	• Offers recommendation	
	• Repeats back orders for verification	
	• Writes new orders in patient chart	
	SPECIFIC TO SCENARIO	
Recognize Cues	Patient history of gestational diabetes in chart	
	What are the concerns for Mom and fetus – patient findings	
Analyze Cues	Assessment of patient's blood sugar and condition and cues	
	What patient cues are of concern for Mom and fetus	
Prioritize Hypotheses	Which explanations are most or least likely	
	Which explanations are the most serious – prioritize care	
Generate Solutions	What outcomes do you want for Mom and fetus	
	What interventions will help achieve the desired outcome(s)	
Take actions	Interventions – how to accomplish/perform or administer	
Evaluate Outcomes	What signs point toward Mom and fetus improving or declining	
	Effectiveness of intervention(s) – something more effective?	

Name:_____ Date:_____

Specific to simulation scenario 1 – Dana Johnson

Clinical Judgment Component	Observation Notes
NOTICING – Recognizing Cues	• Patient information in chart. • Patient complains of feeling "flush, clammy, lightheaded, thirsty, and having some blurred vision. • Tests patient's glucose level • Monitor, assess, and recognize anomalies on fetal heart tracing strip.
• Focused Observation:	
• Recognizing Deviations from Expected Patterns	
• Information seeking	
INTERPRETING – Analyzing Cues	
• Assessment of Condition/Cue	
INTERPRETING – Prioritize and Hypotheses	**Observation Notes**
Generate Solution	• Call NP for sliding scale insulin. • Discuss large fetal assessment issues. • Educating patient and communicating care being provided.
• Prioritizing Data	
• Making Sense of Data	
RESPONDING – Take Action	**Observation Notes**
	• Administer sliding scale insulin. • Turn mother, apply O2, and treat fetal decelerations. • Foley catheter placement. • Head to toe assessment. • Sterile vaginal exams.
• Confidence - Calmness	
• Clear Communication	
• Well Planned Intervention	
• Skills	
REFLECTING – Evaluate Outcomes	**Observation Notes**
	• Reassess fetal heart tracing and response to changes/implementations. • Reassess patient's blood glucose. • Assess for dilation changes as needed with monitor/fetal changes and patient information or complaints. • Notifies NP when time to deliver.
• Evaluation and Self-Analysis	
• Commitment to Improvement	

Appendix G: Observation Grading Form for Patient Baby Johnson

Name:_____ Date:_____

2022 Observation Assignment: Scenario 1 – Baby Johnson

NCSBN Clinical Judgment Model	Evidence Based Student Performance Objectives	Observed
Cognitive Operations	Checks MD orders	
Safety		
	Verifies patient Name and Birthdate with parent	
	Verifies bracelet matches mother's bracelet	
	Calls Nurse Practitioner using ISBAR format	
	• Identifies self	
	• Gives situation and background (time of birth, complications)	
	• Gives assessment data (VS, APGAR, Oxygen)	
	• Offers recommendation	
	• Repeats back orders for verification	
	• Writes new orders in patient chart	
	SPECIFIC TO SCENARIO	
Recognize Cues	Mother's history of gestational diabetes in chart	
	What are the concerns for fetus – patient findings	
Analyze Cues	Assessment of patient's blood sugar and condition and cues	
	What patient cues are of concern for fetus	
Prioritize Hypotheses	Which explanations are most or least likely	
	Which explanations are the most serious – prioritize care	
Generate Solutions	What outcomes do you want for fetus	
	What interventions will help achieve the desired outcome(s)	
Take actions	Interventions – how to accomplish/perform or administer	
Evaluate Outcomes	What signs point toward fetus improving or declining	
	Effectiveness of intervention(s) – something more effective?	

Name:_____ Date:_____

Specific to Simulation Scenario 1 – Baby Johnson

Clinical Judgment Component	Observation Notes
NOTICING – Recognizing Cues	• Identify mother is GDM • Patient is jittery, pale in color, irritable, floppy tone, and has rapid breathing with grunting • Monitor, assess, and recognize anomalies on infant monitor.
• Focused Observation:	
• Recognizing Deviations from Expected Patterns	
• Information seeking	
INTERPRETING – Analyzing Cues	
• Assessment of Condition/Cue	
INTERPRETING – Prioritize and Hypotheses Generate Solution	**Observation Notes** • Assess fetal glucose level • Discuss large fetal assessment issues. • Educating patient and communicating care being provided. • Consent for Hep B vaccine.
• Prioritizing Data	
• Making Sense of Data	
RESPONDING – Take Action	**Observation Notes** • Administer oral glucose if needed • Administers O2 if needed • Head to toe assessment • Administers Hep B injection • Administers Vitamin K • Administer Ilotycin in both eyes
• Confidence - Calmness	
• Clear Communication	
• Well Planned Intervention	
• Skills	
REFLECTING – Evaluate Outcomes	**Observation Notes** • Reassess fetal glucose level and response to oral glucose. • Continues to monitor O2 saturation and respiratory rate. • Notifies Pediatric NP of infant arrival
• Evaluation and Self-Analysis	
• Commitment to Improvement	

Appendix H: Observation Grading Form for Patient Sarah Scott

Name:_____ Date:_____

2022 Observation Assignment: Scenario 2 – Sarah Scott

NCSBN Clinical Judgment Model	Evidence Based Student Performance Objectives	Observed
Cognitive Operations	Introduces selves to patient	
	Checks MD orders	
Safety	Checks patient arm band to verify correct identity	
	Verifies patient Name and Birthdate with patient	
	Verifies IV pump: working correctly and rate	
	Verifies correct IV solution is hanging	
	Calls Nurse Practitioner using ISBAR format	
	• Identifies self	
	• Gives situation and background	
	• Gives assessment data (VS, Dilation, Pain, Fetal strip)	
	• Offers recommendation	
	• Repeats back orders for verification	
	• Writes new orders in patient chart	
	SPECIFIC TO SCENARIO	
Recognize Cues	Patient history of Pregnancy Induced Hypertension in chart	
	What are the concerns for Mom and fetus – patient findings	
Analyze Cues		
	Assessment of patient's blood pressure and condition and cues	
	What patient cues are of concern for Mom and fetus	
Prioritize Hypotheses		
	Which explanations are most or least likely	
Generate Solutions	Which explanations are the most serious – prioritize care	
	What outcomes do you want for Mom and fetus	
Take Actions	What interventions will help achieve the desired outcome(s)	
Evaluate Outcomes	Interventions – how to accomplish/perform or administer	
	What signs point toward Mom and fetus improving or declining	
	Effectiveness of intervention(s) – something more effective?	

Name:_____ Date:_____

Specific to simulation scenario 2 – Sarah Scott

Clinical Judgment Component	Observation Notes
NOTICING – Recognizing Cues	• Patient information in chart. • Patient complains of having a headache, feeling "nauseous and having some blurred vision," and has bilateral lower edema. • Monitor and assess patient's blood pressure every 15 minutes as per MD orders. • Monitor, assess, and recognize anomalies on fetal heart tracing strip.
• Focused Observation:	
• Recognizing Deviations from Expected Patterns	
• Information seeking	
INTERPRETING – Analyzing Cues	
• Assessment of Condition/Cue	
INTERPRETING – Prioritize and Hypotheses Generate Solution	**Observation Notes** • Call NP if blood pressure rises above parameters in patient chart. • Discuss fetal assessment issues. • Educating patient and communicating care being provided.
• Prioritizing Data	
• Making Sense of Data	
RESPONDING – Take Action	**Observation Notes** • Administer blood pressure medication. • Turn mother, apply O2, and treat fetal decelerations. • Foley catheter placement. • Head to toe assessment. • Sterile vaginal exams.
• Confidence - Calmness	
• Clear Communication	
• Well Planned Intervention	
• Skills	
REFLECTING – Evaluate Outcomes	**Observation Notes** • Reassess fetal heart tracing and response to changes/implementations. • Reassess patient's blood pressure. • Assess for dilation changes as needed with monitor/fetal changes and patient information or complaints. • Notifies NP when time to deliver.
• Evaluation and Self-Analysis	
• Commitment to Improvement	

Appendix I: Observation Grading Form for Baby Scott

Name:_____ Date:_____

2022 Observation Assignment: Scenario 2– Baby Scott

NCSBN Clinical Judgment Model	Evidence Based Student Performance Objectives	Observed
Cognitive Operations	Checks MD orders	
Safety		
	Verifies patient Name and Birthdate with parent	
	Verifies bracelet matches mother's bracelet	
	Calls Nurse Practitioner using ISBAR format	
	• Identifies self	
	• Gives situation and background (time of birth, complications)	
	• Gives assessment data (VS, APGAR, Oxygen)	
	• Offers recommendation	
	• Repeats back orders for verification	
	• Writes new orders in patient chart	
	SPECIFIC TO SCENARIO	
Recognize Cues	Mother's history of Pregnancy Induced Hypertension in chart	
	What are the concerns for fetus – patient findings	
Analyze Cues	Assessment of patient's wellbeing and condition and cues	
	What patient cues are of concern for fetus	
Prioritize Hypotheses	Which explanations are most or least likely	
	Which explanations are the most serious – prioritize care	
Generate Solutions	What outcomes do you want for fetus	
	What interventions will help achieve the desired outcome(s)	
Take actions	Interventions – how to accomplish/perform or administer	
Evaluate Outcomes	What signs point toward fetus improving or declining	
	Effectiveness of intervention(s) – something more effective?	

Name:_____ Date:_____

Specific to Simulation Scenario 2 – Baby Scott

Clinical Judgment Component	Observation Notes
NOTICING – Recognizing Cues	• Identify mother is 36 weeks gestation • Patient has lack of tone, has rapid breathing, and apneic episodes with grunting • Monitor, assess, and recognize anomalies on infant monitor.
• Focused Observation:	
• Recognizing Deviations from Expected Patterns	
• Information seeking	
INTERPRETING – Analyzing Cues	
• Assessment of Condition/Cue	
INTERPRETING – Prioritize and Hypotheses	**Observation Notes**
Generate Solution	• Assess fetal oxygen saturation and temperature • Discuss small fetal assessment issues and findings (such as maintaining temp). • Educating patient and communicating care being provided. Consent for Hep B vaccine.
• Prioritizing Data	
• Making Sense of Data	
RESPONDING – Take Action	**Observation Notes**
• Confidence - Calmness	• Initiate skin to skin if necessary • Administers O2 if needed • Head to toe assessment • Administers Hep B injection • Administers Vitamin K • Administer Ilotycin in both eyes
• Clear Communication	
• Well Planned Intervention	
• Skills	
REFLECTING – Evaluate Outcomes	**Observation Notes**
• Evaluation and Self-Analysis	• Reassess temperature. • Continues to monitor O2 saturation and respiratory rate. • Notifies Pediatric NP of infant arrival
• Commitment to Improvement	

Appendix J: Observation Grading Form for Patient Candy Smith

Name:_____ Date:_____

2022 Observation Assignment: Scenario 3 – Candy Smith

NCSBN Clinical Judgment Model	Evidence Based Student Performance Objectives	Observed
Cognitive Operations	Introduces selves to patient	
	Checks MD orders	
Safety	Checks patient arm band to verify correct identity	
	Verifies patient Name and Birthdate with patient	
	Verifies IV pump: working correctly and rate	
	Verifies correct IV solution is hanging	
	Calls Nurse Practitioner using ISBAR format	
	• Identifies self	
	• Gives situation and background	
	• Gives assessment data (VS, Dilation, Pain, Fetal strip)	
	• Offers recommendation	
	• Repeats back orders for verification	
	• Writes new orders in patient chart	
	SPECIFIC TO SCENARIO	
Recognize Cues	Patient history of no prenatal care in chart	
	What are the concerns for Mom and fetus – patient findings	
Analyze Cues	Assessment of patient's drug use and condition and cues	
	What patient cues are of concern for Mom and fetus	
Prioritize Hypotheses	Which explanations are most or least likely	
	Which explanations are the most serious – prioritize care	
Generate Solutions	What outcomes do you want for Mom and fetus	
	What interventions will help achieve the desired outcome(s)	
Take actions	Interventions – how to accomplish/perform or administer	
Evaluate Outcomes	What signs point toward Mom and fetus improving or declining	
	Effectiveness of intervention(s) – something more effective?	

Name:_____ Date:_____

Specific to simulation scenario 3 – Candy Smith

Clinical Judgment Component	Observation Notes
NOTICING – Recognizing Cues	• Patient information in chart (no prenatal care). • Patient complains of having a headache, backache and pain all over at an "11" all the time on a scale 1-10. • Monitor patient's inappropriate behavior/communication • Monitor, assess, and recognize anomalies on fetal heart tracing strip.
• Focused Observation:	
• Recognizing Deviations from Expected Patterns	
• Information seeking	
INTERPRETING – Analyzing Cues	
• Assessment of Condition/Cue	
INTERPRETING – Prioritize and Hypotheses Generate Solution	**Observation Notes** • Call NP when patient admits drug use. • Discuss fetal assessment issues (lack of variability). • Educating patient and communicating care being provided.
• Prioritizing Data	
• Making Sense of Data	
RESPONDING – Take Action	**Observation Notes** • Administer necessary medication. • Turn mother, apply O2, and treat fetal decelerations. • Foley catheter placement. • Head to toe assessment. • Sterile vaginal exams.
• Confidence - Calmness	
• Clear Communication	
• Well Planned Intervention	
• Skills	
REFLECTING – Evaluate Outcomes	**Observation Notes** • Reassess fetal heart tracing and response to changes/implementations. • Reassess and continually educate pt. • Assess for dilation changes as needed with monitor/fetal changes and patient information or complaints. • Notifies NP when time to deliver.
• Evaluation and Self-Analysis	
• Commitment to Improvement	

Appendix K: Observation Grading Form for Baby Smith

Name:_____ Date:_____

2022 Observation Assignment: Scenario 3 – Baby Smith

NCSBN Clinical Judgment Model	Evidence Based Student Performance Objectives	Observed
Cognitive Operations	Checks MD orders	
Safety		
	Verifies patient Name and Birthdate with parent	
	Verifies bracelet matches mother's bracelet	
	Calls Nurse Practitioner using ISBAR format • Identifies self • Gives situation and background (time of birth, complications) • Gives assessment data (VS, APGAR, Oxygen) • Offers recommendation • Repeats back orders for verification • Writes new orders in patient chart	
	SPECIFIC TO SCENARIO	
Recognize Cues	Mother's history of no prenatal care in chart	
	What are the concerns for fetus – patient findings	
Analyze Cues	Assessment of patient's drug use and condition and cues	
	What patient cues are of concern for fetus	
Prioritize Hypotheses	Which explanations are most or least likely	
	Which explanations are the most serious – prioritize care	
Generate Solutions	What outcomes do you want for fetus	
	What interventions will help achieve the desired outcome(s)	
Take actions	Interventions – how to accomplish/perform or administer	
Evaluate Outcomes	What signs point toward fetus improving or declining	
	Effectiveness of intervention(s) – something more effective?	

Name:_____ Date:_____

Specific to Simulation Scenario 3 – Baby Smith

Clinical Judgment Component	Observation Notes
NOTICING – Recognizing Cues	• Identify what mother is using • Patient behaviors and APGAR scores may be lower than normal. • Initiate NAS screening • Monitor, assess, and recognize anomalies on infant monitor.
• Focused Observation:	
• Recognizing Deviations from Expected Patterns	
• Information seeking	
INTERPRETING – Analyzing Cues	
• Assessment of Condition/Cue	
INTERPRETING – Prioritize and Hypotheses Generate Solution	• Assess fetal glucose level if needed. • Discuss large fetal assessment issues. • Educating patient and communicating care being provided. • Consent for Hep B vaccine.
• Prioritizing Data	
• Making Sense of Data	
RESPONDING – Take Action	• Administer necessary medication • Obtain meconium sample • Administers O2 if needed • Head to toe assessment • Administers Hep B injection • Administers Vitamin K • Administer Ilotycin in both eyes
• Confidence - Calmness	
• Clear Communication	
• Well Planned Intervention	
• Skills	
REFLECTING – Evaluate Outcomes	• Reassess fetal glucose level if needed. • Continue with NAS screening assessments. • Continues to monitor O2 saturation and respiratory rate. • Notifies Pediatric NP of infant arrival
• Evaluation and Self-Analysis	
• Commitment to Improvement	

Appendix L: Observation Grading Form for Patient Rachel Miller

Name:_____ Date:_____

2022 Observation Assignment: Scenario 4 – Rachel Miller

NCSBN Clinical Judgment Model	Evidence Based Student Performance Objectives	Observed
Cognitive Operations	Introduces selves to patient	
	Checks MD orders	
Safety	Checks patient arm band to verify correct identity	
	Verifies patient Name and Birthdate with patient	
	Verifies IV pump: working correctly and rate	
	Verifies correct IV solution is hanging	
	Calls Nurse Practitioner using ISBAR format	
	• Identifies self	
	• Gives situation and background	
	• Gives assessment data (VS, Dilation, Pain, Fetal strip)	
	• Offers recommendation	
	• Repeats back orders for verification	
	• Writes new orders in patient chart	
	SPECIFIC TO SCENARIO	
Recognize Cues	Patient history of GBS status in chart	
	What are the concerns for Mom and fetus – patient findings	
Analyze Cues	Assessment of patient's allergies, condition, and cues	
	What patient cues are of concern for Mom and fetus	
Prioritize Hypotheses	Which explanations are most or least likely	
	Which explanations are the most serious – prioritize care	
Generate Solutions	What outcomes do you want for Mom and fetus	
	What interventions will help achieve the desired outcome(s)	
Take Actions	Interventions – how to accomplish/perform or administer	
Evaluate Outcomes	What signs point toward Mom and fetus improving or declining	
	Effectiveness of intervention(s) – something more effective?	

Name:_____ Date:_____

Specific to simulation scenario 4 – Rachel Miller

Clinical Judgment Component	Observation Notes
NOTICING – Recognizing Cues	• Patient information in chart (allergies) and patient is GBS positive. • Patient progressing and water has broken. • Monitor and assess patient's blood pressure every 30 minutes as per MD orders. • Monitor, assess, and recognize anomalies on fetal heart tracing strip.
• Focused Observation:	
• Recognizing Deviations from Expected Patterns	
• Information seeking	
INTERPRETING – Analyzing Cues	
• Assessment of Condition/Cue	
INTERPRETING – Prioritize and Hypotheses	**Observation Notes**
Generate Solution	• Call NP due to antibiotic prescribed is on patients chart as an allergy. • Discuss fetal assessment issues. • Educating patient and communicating care being provided.
• Prioritizing Data	
• Making Sense of Data	
RESPONDING – Take Action	**Observation Notes**
	• Administer new antibiotic after obtaining order. • Turn mother, apply O2, and treat fetal decelerations. • Foley catheter placement. • Head to toe assessment. • Sterile vaginal exams.
• Confidence - Calmness	
• Clear Communication	
• Well Planned Intervention	
• Skills	
REFLECTING – Evaluate Outcomes	**Observation Notes**
	• Reassess fetal heart tracing and response to changes/implementations. • Reassess patient as needed. • Assess for dilation changes as needed with monitor/fetal changes and patient information or complaints. • Notifies NP when time to deliver.
• Evaluation and Self-Analysis	
• Commitment to Improvement	

Appendix M: Observation Grading Form for Baby Miller

Name:_____ Date:_____

2021 Observation Assignment: Scenario 4 – Baby Miller

NCSBN Clinical Judgment Model	Evidence Based Student Performance Objectives	Observed
Cognitive Operations	Checks MD orders	
Safety		
	Verifies patient Name and Birthdate with parent	
	Verifies bracelet matches mother's bracelet	
	Calls Nurse Practitioner using ISBAR format • Identifies self • Gives situation and background (time of birth, complications) • Gives assessment data (VS, APGAR, Oxygen) • Offers recommendation • Repeats back orders for verification • Writes new orders in patient chart	
	SPECIFIC TO SCENARIO	
Recognize Cues	Mother's history of GBS status in chart	
	What are the concerns for fetus – patient findings	
Analyze Cues	Assessment of patient's GBS treatment, condition, and cues	
	What patient cues are of concern for fetus	
Prioritize Hypotheses	Which explanations are most or least likely	
	Which explanations are the most serious – prioritize care	
Generate Solutions	What outcomes do you want for fetus	
	What interventions will help achieve the desired outcome(s)	
Take actions	Interventions – how to accomplish/perform or administer	
Evaluate Outcomes	What signs point toward fetus improving or declining	
	Effectiveness of intervention(s) – something more effective?	

Name:_____ Date:_____

Specific to Simulation Scenario 4 – Baby Miller

Clinical Judgment Component	Observation Notes
NOTICING – Recognizing Cues	• Identify mother is 36 weeks gestation • Patient has lack of tone, has rapid breathing, and apneic episodes with grunting • Monitor, assess, and recognize anomalies on infant monitor.
• Focused Observation:	
• Recognizing Deviations from Expected Patterns	
• Information seeking	
INTERPRETING – Analyzing Cues	
• Assessment of Condition/Cue	
INTERPRETING – Prioritize and Hypotheses	**Observation Notes**
Generate Solution	• Assess fetal oxygen saturation and temperature • Discuss small fetal assessment issues and findings (such as maintaining temp). • Educating patient and communicating care being provided. • Consent for Hep B vaccine.
• Prioritizing Data	
• Making Sense of Data	
RESPONDING – Take Action	**Observation Notes**
	• Initiate skin to skin if necessary • Administers O2 if needed • Head to toe assessment • Administers Hep B injection • Administers Vitamin K • Administer Ilotycin in both eyes
• Confidence - Calmness	
• Clear Communication	
• Well Planned Intervention	
• Skills	
REFLECTING – Evaluate Outcomes	**Observation Notes**
	• Reassess temperature. • Continues to monitor O2 saturation and respiratory rate. • Notifies Pediatric NP of infant arrival
• Evaluation and Self-Analysis	
• Commitment to Improvement	

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