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Evaluating The Use of a Standardized Prebriefing Tool with Novice Simulation Facilitators

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Abstract

The International Association for Clinical Simulation and Learning (INACSL) Best Practice Standards related to prebriefing recommends establishing a prebriefing plan to prepare the learners for a simulation activity. A simulation briefing should orient the learner, promote learner engagement, and reinforce psychological safety. The nursing faculty's unfamiliarity with an established prebriefing tool at the clinical site and reliance on the single simulation educator resulted in self-guided briefings and reduced the faculty facilitators' competency. The quality improvement project aimed to reorient nursing faculty in an associate degree nursing program to a prebriefing tool available at the clinical site. After reorientation, the PI evaluated how it affected the faculty's competency as facilitators. A quasi-experimental research design was utilized. Eight full-time nursing faculty utilized the Simulation Implementation Readiness Assessment Tool (SIRA-T) as the intervention tool for the quality improvement (QI) project. A pre-and post-survey was created utilizing the Facilitation Competency Rubric (FCR) prebriefing construct. This survey assessed the faculty's facilitation competency levels using Benner's Novice to Expert scale. Since a pre-and post-survey method was utilized using the same sample population, a paired sample t-test was used for data analysis. No statistical significance was observed when using the prebriefing tool. The faculty's overall competency levels improved from advanced beginner (2) to competent (3) for three out of four FCR components. While not statistically significant, the prebriefing tool did have some effect on the competency level of the faculty. These findings support best practice standards that recommend using a prebriefing tool for simulation briefings. The project contributes to

the literature that analyzes the effects of a written standardized prebriefing on faculty competency and confidence when serving as a simulation facilitator.

Keywords: prebriefing, International Association for Simulation and Clinical Learning (INACSL), briefing, (SBE), Facilitation Competency Rubric (FCR), Simulation Implementation Readiness Assessment Tool (SIRA-T)

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Evaluating the use of a standardized Prebriefing tool with novice simulation facilitators.

SECTION 1: INTRODUCTION

Over the past decade, healthcare simulation has been integrated into nursing program curriculums nationwide and internationally. Incorporating simulation into nursing curricula is an effective educational strategy that prepares students to deliver high-quality, patient-centered care in diverse healthcare settings. Best practice standards have been established to guide the development, implementation, and evaluation of simulation-based experiences. The International Nurses Association for Clinical Simulation and Learning (INACSL) provides specific guidelines for implementing these processes. For each of these guidelines, INACSL outlines what facilitators should do to achieve an effective simulation that will benefit the learners.

Prebriefing has been noted to be an essential component of the simulation process. Prebriefing is the period before a simulation starts, during which students receive pertinent logistical and clinical data needed to prepare them for the simulation experience. It establishes expectations, clarifies objectives, orients participants to the scenario, addresses concerns or questions, sets ground rules, and promotes psychological safety. It consists of two phases. The first relates to facilitator and student preparation. This includes the facilitator preparing for their role during the simulation activities and providing pre-work/pre-simulation activities for the participants. The second phase is the briefing component, which occurs on the simulation day. It covers critical logistical data that the learners will need to know to be successful in their simulation experience. It emphasizes confidentiality and reinforces psychological safety for the learners. Currently, in the literature, there are minimal implementation strategies

available for simulation facilitators to guide their execution of the prebriefing process (Brennan, 2022). Failure to have a structured prebriefing could hinder the learner's ability to reach the learning objectives for the simulation. Best practice guidelines suggest facilitators use a written and standardized prebriefing when developing simulation activities (McDermott et al., 2021). This is emphatically needed for novice simulation facilitators as they often struggle with consistently including all the needed components of a simulation prebriefing. Prebriefing for all simulation facilitators is a critical preparatory phase to optimize learning outcomes, promote participant engagement, and facilitate compelling simulation experiences.

Briefing prior to the simulation activity is a significant aspect of the simulation process that helps to ensure the learner is oriented to the simulated clinical environment and prepared for the simulation experience. Without a guide, it is possible that facilitators could miss vital information needed for the learners to meet their simulation learning objectives. Facilitators at the clinical site struggle with planning and leading a simulation briefing. This QI Project aims to evaluate whether using a standardized prebriefing tool improves the competency of novice simulation facilitators at the clinical site during a simulation briefing.

Background of Problem

The International Association for Clinical Simulation and Learning outlines several best practice standards for educators to achieve optimal simulation learning experiences. One of the initial standards developed in 2011 was related to the simulation design process. The standard outlines different criteria to create a simulation design incorporating simulation pedagogy and important design constructs. One component of the standard is related to creating a prebriefing plan. It included descriptions regarding what should be included in a

prebriefing plan; however, recommendations were given in a general nature and allowed room for interpretation by the educator. Researchers recognized a gap in the literature regarding what components should be included in prebriefing and that tools need to be developed to guide simulation facilitators.

In 2021, INACSL released an updated Healthcare Simulation Standards of Best Practice guidelines and included prebriefing as a standard separate from the simulation design. This standard was created to establish common terminology related to prebriefing activities and to structure the concept of prebriefing in simulation. Despite the updated guidelines provided, few frameworks are available for simulation facilitators to use to guide the development of the prebriefing process (Dileone et al., 2020). This contrasts with the many evidence-based tools available to evaluate and debrief simulation-based activities. The preparatory component of prebriefing may be more familiar to simulation educators as it involves providing assignments that will assist the learner in preparing for the simulation activity and self-preparation by the facilitator.

However, the briefing phase is more specific to the simulation itself. Key components of the briefing phase need to be included for the learners to succeed in the simulation activity. Failure to include critical components, such as the logistics regarding the location of medications and supplies or how to contact a provider, can distract learners during the simulation and disengage them from the scenario. Emphasizing psychological safety is paramount during the briefing phase so learners understand that a simulation is a safe place to demonstrate their knowledge, skills, and abilities without fear of negative criticism or judgment. These are familiar concepts that are often missed during the briefing phase.

A Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis was

completed to assess the project's needs at the clinical site. The strengths of the project include the updated guidelines provided by INASCL regarding the components of simulation prebriefing and the need for facilitators to be knowledgeable in concepts related to prebriefing. The project has strong administrative support from the clinical site as they recognize the need to improve facilitator competency. Weaknesses of the QI Project include a smaller faculty population and limited simulation staffing. The small population may affect the statistical data, and the limited simulation staffing may hinder the promotion and reinforcement of any benefit from the study. Scheduling conflicts may present an issue as adjunct faculty are rarely on campus outside of clinical experiences and often have other obligations that prevent them from participating. This QI Project is an excellent opportunity for the clinical site. The clinical site is building a simulation program and looking for opportunities for continued professional development for faculty. Threats to the QI Project include ensuring faculty compliance with completing pre- and post-prebriefing surveys given their varying academic schedules. Given the small sample size, every participant's response is essential to the data collection.

The briefing is not simply an orientation to the simulation scenario (Solli et al., 2020). It is a complex process that allows the learners to understand what is simulated and their roles and provides them with the tools to succeed. The literature highlights the importance of briefing /prebriefing; however, additional data is needed to demonstrate the benefits of having a prebriefing framework and tool.

Review and Summary of Relevant Literature

A literature review was completed to find evidence-based research that discusses using

briefing in simulation. The PICOT question for this QI Project is: Among nursing clinical faculty completing simulation in a pre-licensure nursing program (P), how does utilizing a standardized prebriefing tool (I) compared to self-guided prebriefing (C) impact their competency as a facilitator (I) during the briefing phase of simulation (T) over a two–four-week timeframe? Since multiple terms were used (briefing, prebriefing, pre-simulation activities) to describe the briefing process, the search focused on the general term prebriefing when analyzing the literature. The following databases were used: ProQuest Central, CINAHL Ultimate, MEDLINE, and PubMed Central. Due to the lack of prebriefing tools, finding articles specifically related to using a tool was difficult. The literature review's primary focus was establishing the definition of prebriefing and identifying what makes prebriefing necessary in simulation. An additional search was completed to locate articles highlighting prebriefing in nursing simulation. Literature was excluded if it was published more than five years ago. Initially, 51 articles were found. This was further reduced to seven and was utilized for the literature review. Four of INACSL's Best Practice Standards articles (Prebriefing, Debriefing, Simulation Design, and Facilitation) were included.

The INACSL Simulation Design standard created by Watts et al., (2021) outlines the components needed to design a practical simulation experience. In the article, eleven criteria provide the framework for the simulation design standard. The 8th criterion discusses the use of prebriefing within simulation. It emphasizes the need for structured prebriefing that orients the learners' logistical information and the simulation modality and creates an environment of psychological safety (Watts et al., 2021). An organized simulation design, including structured prebriefing, helps ensure the organization provides consistent educational experiences that benefit learners.

An article by (McDermott et al., 2021) discussed the development of the prebriefing standard and the criteria needed to fulfill the standard. It initially addressed the inconsistency in the verbiage and actions used to describe the act of prebriefing. It has been difficult for researchers to pinpoint what elements of prebriefing impact learner outcomes. This also confused educators attempting to review the literature regarding designing a simulation activity (McDermott et al., 2021). Because of this, INACSL further defined the term prebriefing in 2021. The prebriefing standard is divided into two specific criteria. The first criterion discusses preparation and provides general guidelines for the educator to provide materials to the students before the simulation day to prepare them for the simulation experience. This helps reduce the occurrence of cognitive overload and reduces their anxiety regarding completing the simulation experience. Simulation can be stressful to the learner due to the unfamiliarity with the simulators, location of supplies and equipment, and other factors.

Introducing the learners to specific content related to their learning objectives may help them on their simulation day and reduce the cognitive load. It allows them to engage more in the prebriefing phase. The briefing phase occurs on the simulation day. It focuses on orientating the learners to their objectives, simulator use, supply and equipment locations, debriefing details, and creating an environment of psychological safety. It may also include reviewing the prework materials assigned during the preparation phase to address knowledge gaps before the students begin the simulation. Again, the purpose is to reduce the learner's cognitive load. Cognitive overload can occur when the learners are introduced to additional knowledge needed to complete the simulation but not necessarily a part of the learning objectives (Cole et al., 2023). A structured briefing can help prevent learners from experiencing cognitive overload and allow them to process orientation and retain information.

The standard emphasizes that a standardized written or recorded tool can benefit the learner (McDermott et al., 2021).

An article by Dileone et al. (2020) described an integrative review of literature discussing simulation prebriefing in nursing education. It recognized facilitators had no specific frameworks or time-specific guidelines to follow when developing a prebriefing (Dileone, 2020).. The six articles identified for the review were analyzed using the Mixed Methods Appraisal Tool. The study identified that effective simulation enhances student confidence and clinical judgment. However, they did not establish itself as the foundation of simulation related to learning (Dileone et al., 2020). The study promotes a well-designed standardized plan for prebriefing so that learning can begin in this phase.

The INACSL prebriefing standard does not mention using an evidence-based standardized tool for developing a simulation briefing. This contrasts with the Debriefing Standard created by Decker et al. (2020). This article specifically refers to the fact that the debriefing process needs to be based on ‘theoretical frameworks and evidence-based concepts' (Decker et al., 2021, p.5). In addition to describing criteria to meet the standard, it lists many available evidence-based tools for guiding debriefing in simulation. These resources are not available for the prebriefing standard.

INACSL’s Best Practice Standard for Facilitation states that facilitators need to be familiar with methods for delivering prebriefing to their learners (Persico et al., 2021). Facilitation in simulation is multi-faceted, and this article outlines the criteria that simulation educators should follow to be effective facilitators. Criterion 3 of the standard specifically discusses the need for prebriefing before the start of a simulation experience by the facilitator.

Solli et al., (2020) used an exploratory qualitative approach to evaluate the impact of the facilitator's role in briefing on the simulation participants. Prebriefing is a facilitator-led process and is essential in preparing the learners for simulation during the briefing session (Solli et al., 2020). The learners determined there were several factors that they felt were important that needed to be stated by the facilitator during the briefing. This included framing the scenario, teaching how to utilize specific equipment and simulators, and explaining to the students how to complete specific nursing tasks in the simulated environment (Solli et al., 2020). One participant in the study specifically pointed out how she received different information in her briefing compared to other learners. This discouraged the student and increased her stress during the simulation experience. It emphasizes the importance of consistently delivering a briefing to all learners participating in the simulation activity. Simulation facilitators are integral to helping the learner understand the day's expectations and explaining what they will encounter during the simulation experience. The role is complex and must be specifically catered to the scenario involved. Having a standardized tool that can guide the development of the briefing session allows for a structured approach to facilitating learning by the novice simulation facilitator.

Since the publication of the Prebriefing Standard, more literature has focused on exploring frameworks or tools for standardizing the delivery of prebriefing. A study by Brennan (2022) used a randomized experimental group design to evaluate the Self-Efficacy Prebriefing Model (SEPM) and its effects on the self-efficacy of BSN students. This prebriefing tool was evidence-based, developed from literature, and based on the Self Efficacy Theory (Brennan, 2022).

The study showed that the SEPM impacted students' self-efficacy and clinical competency. Additional studies like this are needed to support using a standardized prebriefing tool in nursing simulation. All articles in the literature review magnify the importance of the prebriefing phase in simulation implementation. The literature supports further exploring evidence-based prebriefing tools and their effects on the facilitator and the learner.

Statement of Problem

The use of a standardized tool has been proven to be beneficial in other areas of simulation. A standardized tool provides structure and guidance to assist not only novice educators but also experienced educators. It reduces the likelihood of missing essential components and ensures that each learner receives a consistent experience.

At the clinical site, all clinical nursing faculty act as simulation facilitators for simulation-based activities. The site only has one simulation specialist. This person is considered a staff member and is responsible for assisting faculty with the development of simulation activities, completing the setting up of the activity, and acting as the operations staff member. The simulation specialist also leads the briefing portion of prebriefing during simulation activities utilizing a standardized tool. This evidence-based tool was developed using the Prebriefing Best Practice Standard designed by INACSL. The clinical faculty have expressed concern about leading a simulation briefing session alone due to their minimal experience completing the process. Given that only one simulation specialist exists for the clinical site, all faculty members acting as facilitators must be comfortable completing a briefing session if the simulation specialist is unavailable. Utilizing a standardized tool to guide the presentation of the briefing phase may help improve the competency of the faculty

simulation facilitators. Failure to address the problem will affect the sustainability of the simulation program at the clinical site. A sustainable simulation program cannot be reliant on one person. If the simulation specialist is unavailable, the faculty member will provide the simulation briefing. Failure to deliver a proper briefing can result in the learners' decreased ability to reach the learning outcomes for the simulation scenario. The QI Project provides a cost-effective solution to providing faculty development training related to simulation facilitation.

Purpose Statement

This project aims to compare using a standardized prebriefing tool to self-guided prebriefing by novice simulation facilitators. The intent is to analyze whether using the standardized tool improves the facilitator's competence in delivering a simulation briefing. The clinical site is in its infancy of developing its nursing simulation program. Resources to provide dedicated simulation staff members trained in best practice standards have only existed for less than two years. Previously, the faculty delivered briefings based on the faculty's perception of what the learners needed to know for the simulation experience. These briefings were not structured or standardized and could vary from instructor to instructor. Currently, at the clinical site, the nursing faculty often defers the briefing duties to the simulation educator.

Currently, only one simulation specialist is assigned to the clinical site. If the specialist is unavailable, the faculty will deliver the simulation briefing to the learners on the simulation day. The faculty members rely heavily on their simulation educator, resulting in decreased confidence in their abilities to lead some aspects of the simulation activities. With the implementation of this QI Project, the PI can gain perspective on whether using the standardized prebriefing tool increases the confidence and competency of the faculty

simulation facilitator. An improvement in competency benefits the clinical site as its organizational structure for simulation staffing demonstrates a need for faculty to be competent in all facilitation components, including prebriefing.

Scope, Limitations, Delimitations, Change, and Change Framework

Scope

Simulation Best Practice Standards now outline the necessary components of a prebriefing. This process is divided into two phases (preparation and briefing). Despite the existing standards, minimal evidence-based tools are available that outline the components of an effective simulation briefing. Simulation briefings are routinely completed by the simulation specialist at the clinical site. The simulation specialist is a registered nurse with a master's degree in nursing. They are not considered faculty by the clinical site, but they are considered educators who specialize in simulation education. They coordinate and manage simulation implementation to ensure faculty follow best practice standards. Many of the novice faculty facilitators at the clinical site have decreased self-perceived competency regarding leading a briefing due to reliance on the primary simulation educator and their unfamiliarity with the standardized prebriefing tool. Due to staffing needs, all facilitators need to be comfortable leading simulation briefings. This makes this simulation program more sustainable. The clinical site has eight full-time nursing faculty and five adjunct faculty members who must know simulation best practices techniques, including simulation briefings.

The evaluated population will include faculty at the clinical site with less than two years of experience facilitating simulation using best practice standards. They will be evaluated utilizing the Facilitation Competency Rubric (FCR), explicitly using the prebriefing construct.

Their submissions will be anonymous and confidential. Following IRB approval, data will be collected from April through May 2024, with data analysis occurring through August 2024. Faculty with more than two years of experience facilitating simulation using best practice standards will be excluded. Staff members and administration will be excluded as well.

The Simulation Implementation Readiness Assessment Tool (SIRA-T) was developed after an analysis of the INACSL prebriefing standard was completed by an experienced simulation educator at the clinical site. The criteria listed in the standard were used to create a 2-phase step-by-step tool to navigate faculty through the steps of completing an appropriate prebriefing. Phase one focuses on the preparatory components needed to prepare students for simulation activities before their actual simulation day. Phase two occurs on the day of their simulation experience. This includes introducing their facilitators and simulation staff, determining the location of supplies and equipment, determining medication locations, and debriefing information. The use of Phase Two of this tool will be the primary focus of this QI Project.

The participants in this project will be evaluated utilizing the Facilitation Competency Rubric (FCR). Developed in 2018 by Kim Leighton and a team of simulation educators, it evaluates competency related to various concepts of facilitation. It utilizes Benner's scale, which rates the facilitator's competency levels from beginner to expert. For the QI Project, the PI specifically focused on the prebriefing construct and was given written permission from the authors to utilize that portion of the tool. The prebriefing construct focuses on delivering expectations, discussing learning outcomes, role identification, and creating a learning environment (Leighton et al., 2018). It should be noted that these are specifically related to the briefing component of the prebriefing process.

The literature has illustrated that having standardized prebriefing improves the learner's confidence and reduces the facilitator's anxiety when delivering a simulation prebriefing. The briefing phase of simulation alerts the learner to critical logistical data, so they are prepared for the simulation experience. This information needs to be delivered consistently from learner group to learner group. The project evaluated whether the use of standardized prebriefing had positive effects on the facilitator's competency. If positive effects are demonstrated, it can help show how the tool can benefit facilitators within the simulation program at the clinical site (micro-system). It will benefit the learners at the site by ensuring they receive a consistent briefing to help them reach their learning objectives for the simulation (meso-system). The QI Project will also reinforce current literature that promotes using a standardized prebriefing tool when delivering a simulation(macro-system).

Limitations

Limitations include a variable sample size dependent upon the number of volunteers for the QI Project. All full-time and adjunct faculty members will be allowed to participate in the project. Those who choose to participate will be provided with a copy of the prebriefing tool and instructions on how to relate the information in the tool to their specific simulation experience. They will complete the pre-survey, deliver the simulation briefing, and then complete the post-survey. The prebriefing tool itself presents another limitation. Although the tool is evidence-based, its use is relatively new and limited to the clinical site and nursing program. There are few evidence-based tools available that are updated and specifically address prebriefing.

An additional limitation relates to the evaluation tool being used. The verbiage in the tool specifically states prebriefing. The literature shows that prebriefing is separated into two

phases (preparation and briefing). In the evaluation tool, the components under prebriefing are related to the briefing components described by INACSL. The interchangeable use of the terms can confuse an educator attempting to differentiate between the different components of prebriefing. Another limitation is ensuring that participants complete the pre- and post-survey during the project timeframe. The failure of participants to complete the surveys may falsely represent the project data. Because participation is voluntary, there is no way to force anyone to complete the surveys, regardless of whether they were active participants.

Timing would be an additional limitation. Simulations are pre-scheduled at the clinical site. The participants must complete the simulation briefing during a simulation that occurs after IRB approval and before the end of the Spring 2024 semester. The population size is another limitation of this project. The clinical site only has eight full-time faculty and five adjunct faculty who meet the inclusion criteria for the project. In addition, adjunct faculty have a minimal role in developing and managing simulation activities, making it less likely that they will be interested in volunteering to participate in the project.

Delimitations

Delimitations for this project include the population being evaluated. The project is limited to ADN faculty members at the clinical site. The entire organization consists of four nursing programs at four different sites. However, IRB approval only permitted the project to be completed at only one of those locations. Because of this, the project may not be as impactful to the entire nursing organization.

This project will not comprehensively analyze the prebriefing standard. The preparatory phase of prebriefing will not be evaluated during the completion of this project. Only faculty at the clinical site who volunteer will be surveyed for this project. While this project will analyze

whether faculty‘s competency levels improved, it will not assess whether that improved competency impacted the learner’s ability to reach their learning objectives. The QI Project is not for research or is not considered a study. This is a quality improvement project. The data may support some of the findings in the literature; however, this project will not be disseminated as research or an experimental study.

Change and Change Framework

Lewin’s change theory is a 3-step model organized into stages. Figure 1 shows the 3 stages of the change theory, defined as unfreeze, change, and refreeze (Burnes, 2020). The unfreeze stage demonstrates the need for change. It requires the organization to move from its current state to the new state. The clinical site desires to increase the number of trained faculty facilitators for their simulation experiences. Since they only employ one simulation educator on their campus, their faculty must be well-trained in simulation best practices. For this to occur, faculty would need to begin to utilize resources like their prebriefing tool (SIRA-T) to guide the implementation of simulation-based experiences. The clinical site would also need to encourage its faculty not to depend solely on the simulation specialist and to seek professional development opportunities related to simulation actively. The change stage involves demonstrating the benefits of the change desired. The clinical site will benefit from implementing the prebriefing tool because it could standardize the prebriefing process for all facilitators and increase the competency of their novice simulation facilitators. This effect would likely produce more consistent and quality simulation experiences for their students. The clinical site could evaluate the learner's perception of the prebriefing process and review their performance to assess whether the prebriefing substantially impacted the learner. In addition, the QI Project results will be shared with the simulation lab manager.

The intent is to compare the pre-and post-survey results and demonstrate that the tool effectively improved the simulation facilitators' competency. The refreeze stage reinforces the new behavior. If the data analysis identifies improved competency for the simulation facilitators, the clinical site will benefit from utilizing the standardized tool. This should motivate the clinical site to promote the consistent use of the prebriefing tool with all simulation facilitators. The simulation specialist at the clinical site can work with the lab manager to develop strategies that would allow the faculty to have more opportunities to lead prebriefing to maintain or improve their competency as a facilitator.

Theoretical Framework

The NLN Jeffries Simulation Theory is the framework for best practice guidelines for simulation implementation within nursing. This framework was initially developed after the author Pamela Jeffries completed a study reviewing simulations and how they model clinical environments. Through this study, she realized there was a need for a structured framework for developing and using simulation within nursing education. These elements did not exist in the literature. Her initial simulation framework was proposed in 2005. Then, in 2015, with the support of the National League of Nursing, she published Jeffries's NLN Simulation Theory. This theory provides a systematic guide and highlights the educational components that should be incorporated into simulation-based experiences (SBE).

Figure 2 describes the simulation theory's five constructs: participant, educational principles, teacher, simulation design, and outcomes (Al Khasawneh et al., 2021). Regarding the participants, the simulation educator needs to consider the program and its capabilities, the level of the learner participating in the simulation, and possible age demographics that may

influence the learner's performance. For educational practices, the simulation educator needs to consider what active learning activities they would like to include in the simulation-based experience and how feedback will be provided to the learners. Emphasis needs to be placed on professional integrity and student-faculty interaction as it greatly impacts on the learner's ability to feel comfortable participating in this simulation and debriefing process. Clear expectations must be communicated to the learner of what will be involved in the simulation and their role. Lastly, collaboration among the nursing faculty and the simulation staff is paramount to ensure the simulations are prepared appropriately for the learner group. The teacher should consider the demographics of the faculty participating in the simulation. This includes their educational levels and experience participating in simulation activities. Training should be provided to ensure that they are following best practice standards and aligning with the goals of the simulation program when completing simulation activities with their students.

The NLN Jeffries Simulation Theory identifies simulation design as critical to developing successful simulation experiences for student learners. Learning objectives need to be clearly defined by faculty. A review of resources needs to be completed, and the type of fidelity used in this simulation should be chosen. The simulation should be designed to have specific outcomes that the students should meet. A detailed plan needs to be put in place for how debriefing will occur and what debriefing model will be used to guide the experience. When describing the simulation design construct, a specific subcomponent highlights the importance of evaluating the student's needs when developing the simulation design. This should be done through each phase of simulation development, including the prebriefing phase (Watts et al., 2021). The prebriefing standard takes into consideration what is needed by the learners to be successful in the simulation experience. Orientation or briefing is a critical

aspect of that standard because it sets the stage for the learners and can significantly impact whether they can reach their learner objectives in the simulation experience.

Once the simulation has been designed and completed, outcomes need to be measured to determine whether it was adequate and whether students met their learning objectives. In Jeffries's theory, evaluation is reviewed from the perspective of the participant, patient, and system. Often, simulation educators can evaluate the impact on the participant through several evidence-based evaluation tools available for simulation educators to evaluate components of simulation experiences. For example, the Simulation Effectiveness Tool- Modified (SET-M) allows the learners to evaluate the prebriefing, scenario, and debriefing components of their simulation experience.

Through Jeffries's simulation theory, we can understand the impact of prebriefing on students participating in the simulation. Prebriefing can influence a student's overall confidence and can benefit their learning. Facilitators must be appropriately trained in the logistical aspects needed to develop a successful prebriefing.

Summary

In section one, we review the purpose of the QI Project and outline critical components to establish the need for quality improvement measures at the clinical site. The literature review analyzed the background of the problem and supported the need to implement the QI Project at the clinical site. The theoretical framework described validates the project's aim by recognizing that the facilitator plays a vital role in preparing the learner for the simulation-based experience. This project will align with national recommendations that endorse using INACSL Best Practice Standards when utilizing simulation in nursing programs.

The component of simulation prebriefing has been identified as a weakness for novice faculty simulation facilitators at the clinical site. The QI Project will target this population, providing them with education and resources to lead a simulation briefing. Section II will focus on the methods and evaluation tools used when implementing the QI Project at the approved clinical site.

SECTION II: METHODS

Introduction

This QI Project aimed to evaluate whether the use of a standardized prebriefing tool improved the competency of novice simulation facilitators at the clinical site during a simulation briefing. Over the past two years, the clinical site has been developing a standardized simulation program. The site is one of four campuses offering a nursing program for the college. Each nursing campus has one simulation specialist responsible for managing their campus's simulation experiences. They work collaboratively with their nursing faculty to plan each course's simulation experience. The simulation specialist has been primarily responsible for delivering the simulation briefing for the simulation experience. This includes orientation to the simulation environment, logistics regarding the location of supplies, equipment, and medication, debriefing, and emphasizing psychological safety. Prebriefing has been identified as a valuable component of the simulation process as it helps to ensure the learner is prepared for the simulation-based experience.

One of the NLN Jefferies Simulation Theory constructs focuses on the relationship between the facilitator and the participant. It acknowledges that the interaction between these two individuals significantly impacts the learner's performance in the simulation (Al

Khasawneh et al., 2021). The facilitator's role in prebriefing is critical to enhancing the participant's learning experience and providing them with valuable information needed to complete the simulated activity.

For a simulation program to be considered sustainable, it cannot rely on a single individual for leading simulation activities. In addition, acting as a simulation educator requires a different skill set than working as a nursing professor (Koukourikos et al., 2021). Simulation educators acting as facilitators require specialized training regarding simulation best practice methods. After completing a SWOT needs assessment, it was determined that the simulation program had a standardized prebriefing tool frequently used by the simulation specialist but underutilized by the faculty facilitators. Faculty felt less confident and competent when leading a simulation briefing. These circumstances prompted the development of the QI Project, which evaluated whether using a standardized prebriefing tool could improve the competency of novice faculty facilitators.

A quality improvement project utilizing a quasi-experimental design was developed to address the deficit recognized by the faculty facilitators. This project allowed the facilitators to receive brief training regarding using the standardized prebriefing tool. They would then complete a simulation briefing utilizing the tool. Permission was obtained to utilize the Facilitator Competency Rubric (FCR) evaluation tool that could measure the competency of the facilitator pre- and post-implementation of the QI Project. The pre-test would represent the faculty's self-perceived facilitation competency when using a self-guided briefing technique. The post-test would represent the faculty's self-perceived competency levels when using the prebriefing tool.

The IRB approval process was completed for the project. Data was collected using a

Google Form, and results were submitted anonymously. That data was then analyzed using a paired sample t-test to compare the pre- and post-survey results. The PICOT question for this QI Project is: Among nursing clinical faculty completing simulation in a pre-licensure nursing program (P), how does utilizing a standardized prebriefing tool (I) compared to self-guided prebriefing (C), impact their competency as a facilitator (I) during the briefing phase of simulation (T) over a two–four-week timeframe?

Project Design

A quasi-experimental design was chosen to complete this quality improvement project. This type of design allowed for the implementation of an intervention in a realistic environment, which allowed the evaluator to assess whether the intervention was effective (Siedlecki, 2020). This project fits the quasi-experimental design as it needs to be completed in a functional simulation lab space with active learners and faculty willing to participate.

The Plan-Do-Study-Act (PDSA) implementation framework was utilized to develop the design for this project. The model is commonly used when individuals desire to initiate a change related to a specific problem. Research has shown that using a structured implementation framework can positively impact the success of the change project (Moullin et al., 2020). Before beginning the planning for the project, it was necessary to identify what needed to be accomplished by implementing the project. The goal was to identify whether the use of the standardized prebriefing tool would influence the competency of novice simulation facilitators when leading a simulation briefing. The desired effect was that using the tool would help to improve the facilitator's self-perceived competence. It was also necessary to identify how the evaluator would know whether the change would improve the problem. An

analysis of the pre-and post-survey results utilizing the Facilitation Competency Rubric was completed to determine whether the QI Project was effective. The final step was to implement changes that could improve the problem. A standardized prebriefing tool guided the faculty through simulation briefing for the QI Project. Previously, faculty members relied heavily on the single simulation specialist at the clinical site for leading their simulation activities briefing portion. In addition, faculty who completed their own briefing did not use the standardized tool resulting in valuable information being forgotten that was needed for students to achieve success during the simulation activity.

The planning stage for the project can best be described by the completion of the feasibility study, which provides a framework for the QI Project. Initially, a needs assessment was completed to identify the QI Project's targeted population and why the project was needed. The needs assessment led to the development of the problem statement, which outlined the deficits recognized at the clinical site and presented a solution to how to address those deficits. The targeted intervention population was identified as faculty at the clinical site with less than two years of experience utilizing best practice standards for simulation education. The Spring 2024 semester was selected as the project time frame for implementation. Inclusion and exclusion criteria were established. Faculty members with more than two years of simulation experience completing simulation using best practice standards were excluded from the intervention population. Additional criteria for data collection for the project included the educational background of the faculty members and their years of teaching experience.

There was a need to establish a relationship with the clinical site to discuss the identified deficits and how the QI Project could address them. Various meetings occurred with

the clinical site point of contact and the simulation lab manager to discuss the implementation of the project. The QI Project idea was presented to the faculty with the clarification that participation would be voluntary and that any surveys completed would be anonymous. The simulation calendar was reviewed with the simulation lab manager, and specific simulations that could be used for the QI Project were identified.

For the next component of the QI Project, it was necessary to establish which evaluation and prebriefing tools would be utilized. The Facilitation Competency Rubric was an established evaluation tool that required permission from the author to be utilized for the QI Project. Permission was received from the author, along with additional approval, to utilize only the prebriefing portion of the rubric. This tool was translated into a Google form so that anonymous submissions could be completed. The Google form link was translated into a QR code so that faculty could scan the code to complete the pre- and post-survey. For the prebriefing tool, additional site permission was received from the simulation lab manager to utilize the program's current prebriefing tool for the QI Project. The tool was reviewed to ensure that it aligned with best practice standards addressed by the International Association for Simulation and Clinical Learning.

Once the planning phase was completed, the QI Project team could move to step two or the Do stage of the PDSA cycle. In this step, the project was executed. I was notified by the clinical site point of contact regarding which faculty members desire to participate in the project. Adjunct faculty were notified by their course coordinator regarding the QI Project to assess their willingness to participate. Each faculty member who volunteered to participate in the project received brief training regarding the prebriefing tool and led a simulation briefing for their assigned simulation activity. Questions were answered regarding each step in the

Simulation Implementation Readiness Assessment Tool (SIRA-T) to prepare the faculty volunteers for the project. All 8 full-time faculty members volunteered to participate in the project. No adjunct faculty members volunteered to participate in the project.

Participants were assigned a simulation to complete the simulation briefing. Both morning and afternoon simulation sessions allowed multiple opportunities for the faculty members to participate in the project. Faculty were instructed to complete the pre-implementation survey before completing the QI Project. After the faculty members completed their simulation briefing, they were instructed to complete the post-implementation survey. The pre and post-surveys are the same so that the evaluator can assess any change in faculty's self-perception of their competency in facilitating simulation briefing.

A possible barrier to completing the previously identified project was that faculty participants might not complete the pre- and post-surveys. The survey was assessed to check for the number of submissions throughout the project timeframe. If the number of submissions was inaccurate, a reminder via e-mail was sent to all participants asking them to complete the surveys if they had not done so. Outside of assessing the number of submissions, no other part of the survey was reviewed prior to the completion of the project. This maintained the anonymity of the survey submissions and protected the project's integrity. The Google form surveys were reassessed at the end of the project time frame to determine whether all submissions had been received.

Step three of the PDSA cycle is described as the Study stage. This step assessed whether the project participants had completed all pre- and post-surveys. The PI utilized the Gibbs Reflective Cycle to complete a debriefing session with project participants. The results were then viewed by question and translated into a pie chart. A comparison chart was created

to review the pre- and post-surveys that the project participants had completed. The results were de-identified and then reviewed by a question. This data was placed in an Excel spreadsheet. A comparison chart was created to review the pre- and post-results. Statistical testing was done to analyze the project results. The results of the QI Project will be further discussed in later in the project manuscript.

The final step in the implementation framework is the Act stage. In this stage, we evaluated the data analysis to determine the long-term impact of the QI Project on the clinical site. The first step in preparing for this stage was to contact the simulation manager to discuss the results of the QI Project. The project's impact was presented, and further discussion occurred regarding reinforcing the use of the prebriefing tool. The results of the QI Project were also shared with the clinical site point of contact and the faculty participants. Faculty members were given the opportunity to reflect on their participation in the QI Project and provide insight into their current perspective on prebriefing.

Sample and Setting

An assessment was completed to determine whether the clinical site would be appropriate for implementing the QI Project. The site is part of a multi-campus associate degree nursing program. The program is in the process of standardizing the structure of its simulation program across four campuses. Further discussions with the simulation lab manager identified multiple deficits related to faculty training regarding facilitating a simulation experience. Specifically, prebriefing was identified as an area where many faculty lacked confidence, experience, and competency. The nursing program had a standardized prebriefing tool created by one of the simulation specialists who works in the program. This tool, however, was

minimally utilized by the faculty members. It was identified that this would be an appropriate area to implement a quality improvement project.

No clinical site agreement existed between the clinical site and Arkansas State University. Documentation to complete this clinical site agreement was initiated, and the agreement was established. Arkansas State provided IRB approval to complete the QI Project at the clinical site (see Appendix A). The clinical site also approved the IRB's completion of the QI Project (see Appendix B). The clinical site had adequate resources to complete the QI Project at its location. They had a small but functional simulation lab with high-fidelity simulation manikins. All supplies and equipment needed to complete the designated simulations were available at the clinical site. In addition, the clinical site has additional resources, such as whiteboards for the faculty to provide visual aids to the students when needed. This is useful when completing the simulation briefing as faculty can write notes related to each step from the standardized prebriefing tool.

The IRB approval only permitted the QI Project to be completed at one of the four locations of the nursing program. This limited the sample size of the intervention population to the faculty members who participated in the simulation at this campus. The campus had eight full-time nursing faculty members and 5 adjunct faculty members eligible to participate in the simulation experience. This includes having less than two years of simulation experience utilizing best practice standards as a simulator facilitator. It is important to define inclusion criteria since many of the faculty have participated in simulation for many years; however, they have not followed best practice standards when doing so. Additional inclusion criteria included that each participant be a nursing faculty member. This eliminated the inclusion of any staff members in the project. The nursing faculty was the targeted intervention population since the

deficit related to leading simulation briefings was identified within this population.

The clinical site point of contact, the program chair, notified all course faculty about the QI Project. One faculty member is assigned to be the course coordinator for each nursing course in the nursing program. Course coordinators notified adjunct faculty about the QI Project. Adjunct faculty were instructed to notify their course coordinators if they were interested in participating in the QI Project. Full-time faculty were to notify the clinical site point of contact or course coordinator if they were interested in participating in the QI Project. Course coordinators communicated their desire to participate with the clinical site point of contact or the project lead. Identifying participants was necessary to create appropriate training time frames for those included.

The QI Project impacts a variety of stakeholders at the clinical site. The nursing faculty acting as simulation facilitators represented the microsystem for the QI Project. The impact of the QI Project would promote improved competency when leading a simulation briefing utilizing the standardized prebriefing tool. This would benefit the learners representing the meso-system and the QI Project's targeted population. The simulation facilitators must be competent in delivering a simulation briefing as they can significantly impact the targeted population and their confidence in completing the simulation activity. Failure to implement this quality improvement project could potentially hinder the learning experiences for the students at the clinical site. If an untrained faculty member provides a poor simulation briefing, the learners will be less prepared to complete simulation-based experiences and are less likely to reach the outcomes for the simulation scenario. If these types of experiences occur frequently, it lessens the likelihood that the learner will engage in the simulation scenarios. This reduces the effectiveness of utilizing simulation in nursing academia. An essential component of what

makes simulation practical is the simulation design and the level of engagement from the learner (Olaussen et al., 2020).

For the macro system, implementing the QI Project further reinforced evidence-based research that identifies prebriefing as a critical component of the simulation process. It supports using a structured tool to guide the prebriefing process and ensure consistency and efficiency in leading a simulation briefing. It has been identified that novice simulation facilitators often struggle with multiple aspects of the simulation process, including prebriefing. Failure to prebrief the learners appropriately can decrease psychological safety within the simulated environment, which could hurt the learners (Jefferies, 2020). Implementing this project at the clinical site supports the overall mission of national simulation organizations and benefits the simulation community by promoting simulation best practice standards. Other stakeholders, such as simulation staff members and nursing administration, can benefit from the project by seeing the prebriefing tool's positive effects on the faculty's competency levels when leading a simulation briefing. This enhances the benefits of simulation usage within the program, which ultimately helps the learners reach the end-of-program student learning outcomes.

Instrumentation

The outcome of the QI Project demonstrates that the novice faculty simulation facilitator will have improved self-perceived competency as it relates to delivering a simulation briefing utilizing a standardized prebriefing tool. A valid and reliable evaluation tool was chosen to measure this outcome, and it specifically addressed competency levels related to prebriefing. A team of expert simulation educators developed the Facilitation Competency Rubric (see Appendix D) to address the lack of evaluation tools available to assess the competency of a

simulation facilitator (Leighton et al., 2018). The team utilized Benner's Novice to Expert theory to develop the tool. Over the course of several years, input was received from simulation educators at various simulation conferences to develop the tool further. Specific constructs were created that were each considered critical to the facilitator role by the simulation faculty. The five constructs included: preparation, prebriefing, facilitation, debriefing, and evaluation. Once the tool's development was completed, it was assessed for content validity by simulation educators recognized as experts in their field (Leighton et al., 2018).

The psychometric testing of the evaluation tool was completed with 18 participants at four separate nursing programs (Leighton et al., 2018). Some participants were allowed multiple opportunities to facilitate simulation results in 107 observations. The testing included self-evaluation and evaluation of the facilitator by a rater. The Goodman Kruskall's G "demonstrated good agreement of .84 (95 percent CI [.71, .97]) between facilitator self-ratings and facilitator scores using the FCR" (Leighton et al., 2018, p.6). The generalizability theory methodology for data analysis was utilized to review the study. Interrater reliability was rated from good (20% and 24%) for two institutions to excellent (8% variance for one of the institutions). The FCR tool was determined to be a well-constructed and valid tool based on the variance percentage of the FCR items being below 35% at all testing sites (Leighton et al., 2018). The initial intent of the study was to develop an evaluation tool that allowed the facilitators to be observed. An unexpected finding of the study was that the facilitator's self-rating was like the rating they received when evaluated through observation. This led the authors to believe the instrument could be an effective self-evaluation tool for simulation facilitators.

The prebriefing construct of the FCR evaluation tool played a crucial role in the QI Project, allowing for adequate evaluation of the briefing process. This portion of the evaluation

tool focused on key components of the briefing process, including expectations, learning objectives, role identification, and learning environment. The first question evaluates whether the facilitator informs the learner of the expectations or whether they give rationales for the learner's expectations. The second question addresses whether the facilitator states the learning objectives. A higher level of competency is achieved if the facilitator reviews the learning objectives and addresses any misconceptions. The third question addresses role identification. Facilitators who analyze their learners and the roles for the simulation before assigning roles receive a higher level of competency. The final component of the FCR reviews the learning environment. This question focuses heavily on establishing psychological safety for the learners. Learners who achieve higher levels of competency monitor the learner's emotions throughout the simulation experience to determine whether they may interfere with the learning process (Leighton et al., 2018).

The outcomes of the QI Project were measured to determine whether the standardized prebriefing tool influenced the self-perceived competency of the novice faculty simulation facilitators. The FCR tool was instrumental in the pre-and post-test assessments, enabling a comprehensive comparison. It is worth noting that the instrument's author used the term prebriefing to discuss the briefing portion of simulation prebriefing. This instrument was developed in 2018, before the updated INACSL Healthcare Simulation Standards of Best Practice that listed prebriefing as an individual standard and separated it into the preparation and briefing phases.

The Simulation Implementation Readiness Assessment Tool (SIRA-T) (See Appendix F) is the model for implementing the change. It was developed after a system analysis of prebriefing standards and the availability of current prebriefing tools. The lack of tools aligned with best

practice guidelines and verbiage led to the creation of the SIRA-T tool. This tool mirrors the criteria in the prebriefing standard by INACSL and includes an opportunity for the learner to evaluate the simulation experience. It is divided into two phases, each with seven steps, addressing preparatory needs and the orientation on the day of the simulation experience.

To utilize Phase Two of the prebriefing tool, each step was explained to the faculty members who participated in the QI Project. Step one required them to introduce themselves and everyone participating in the simulation experience. This could include observers and simulation staff members. Step two required them to provide the day's logistics to the learners. This includes time periods for breaks, the simulation, and dismissal time. Step three introduces the simulation activity. It clearly outlines the objectives for the scenario, provides information regarding role assignments, and discusses student evaluation methods. Step four describes the simulation logistics to the learner. This is one of the most important steps as it outlines the location of supplies and equipment, orients the learner to the simulation environment and simulator use, and discusses communication methods during the simulation. This step is significant in ensuring the learner understands the simulation environment, which can help them better navigate the simulation scenario. If key information is missed during this step, it can cause the learners to become disengaged during the simulation experience. Step five discusses the debriefing process. During this step, the reasoning behind debriefing is reinforced, and the students are notified regarding the location and timeframe for when debriefing will occur. Step six discusses the use of simulation evaluations. The clinical site utilizes the Simulation Effectiveness Tool Modified (SET-M) to allow the students to evaluate the prebriefing, simulation scenario, and debriefing experience. The final step discusses professional integrity. The confidentiality of the simulation experience is discussed, and psychological safety is heavily

reinforced. This is another common area frequently missed during the prebriefing. In addition, the faculty highlights the expectations for the learners during this step.

Unrelated to the QI Project, this tool was presented to the lab manager one year prior by the DNP student acting as the simulation specialist for her place of employment. Following the presentation, the decision was made to implement the tool within the nursing program. After implementing the tool, it was noted at the clinical site that faculty facilitators adhered to Phase One of the tool but struggled to complete Phase Two. For Phase Two, the faculty facilitators either deferred the completion of the orientation to the simulation specialist or completed the briefing without following the steps listed in the prebriefing tool. Over time, the faculty became dependent on simulation specialists. Many felt inadequate to lead a simulation orientation. Since faculty were not fully utilizing the tool and were uncomfortable leading a briefing, the learners were not provided with important information needed for a positive simulation experience. When a faculty briefing was observed, essential components such as psychological safety and a complete orientation to the simulated environment were missed or poorly explained. This resulted in the learners having difficulty working through their simulation experience. These factors led to the development of the QI Project, which aimed to address whether implementing the use of a prebriefing tool specifically with the nursing faculty could positively influence their self-perceived competency in leading a simulation briefing.

The tool aligns with national recommendations for quality improvement measures for the use of simulation in nursing academia. These recommendations state that organizations should follow best practice guidelines related to the use of simulation. This is part of a broader effort to bring more regulation to the use of simulation in nursing education (Smiley & Martin, 2023)

Data Collection

A quality improvement project using a quasi-experimental design is a simple way to evaluate whether the implementation of a specific intervention was effective. They typically require fewer resources, which makes them easier to implement (Siedlecki, 2020). The pre and post-test methods are common ways to collect this data. The Facilitation Competency Rubric evaluation tool allowed the QI Project team to evaluate whether the intervention affected the deficit described in the problem statement. The problem statement for this project was: Due to the lack of use of a structured prebriefing tool during the delivery of briefing before a simulation activity, novice simulation facilitators have decreased competency related to leading a simulation briefing, which can result in a decrease in the learner's ability to reach the simulation objectives.

Once IRB approval was received, the data collection process began. To describe this process. The DNP student addressed the who, what, when, and how of the data collection process.

Who

The full-time nursing faculty members at the clinical site volunteered to participate in the QI Project. These participants were notified that they would complete the pre-and post-test assessment utilizing a QR code that they could scan with their personal mobile devices. Faculty were notified that they would also receive the survey through an email link to their faculty's email addresses. Participants in the QI Projects were the only individuals with access to the survey outside of the DNP student.

What

As previously described, the Facilitation Competency Rubric was translated into Google Form for the assessment survey. The demographics questions (nursing education experience,

education levels, and years completing simulation using best practice standards) were added to the survey. The Google Form was then translated into a QR code using Adobe Express and placed on a Microsoft Word document. This form was printed and placed in the simulation lab for each faculty member to scan and complete before their scheduled simulation activity. The exact process was completed to create the post-survey for the QI Project. Each Word document was clearly labeled to differentiate between the pre- and post-assessment surveys. Only the DNP student had access to the survey results. Each survey was submitted randomly, and no personal identifiers were used.

When

After IRB approval, the project was implemented. Data collection began in April 2024 and lasted eight days in total. Prior to completing their simulation experience, faculty completed the pre-survey. After completing the simulation briefing, faculty were instructed to complete the post-survey. Not all faculty members complied with this process, resulting in missing data when assessed. Faculty were sent a reminder email, and at the end of the project, faculty were given a final opportunity to complete the post-survey if they had not done so. All surveys were submitted by May 2024.

How

When the project was completed, the survey results were converted into pie charts from Google Forms and placed in an Adobe PDF file. The pie charts included a summary of the responses to the surveys. An Excel document was downloaded from Google Forms that included the individual responses to the survey. The DNP student de-identified the survey responses before downloading by removing the date of completion column. This information was then downloaded to a password-protected USB drive accessible only by the PI. The data is only

viewed on a password-protected PC owned by the clinical site and stored in a locked file cabinet. Once the data analysis phase of the QI Project is completed, the document will be deleted from the USB drive, and the survey will be removed from the Google account.

Data Analysis Methods

The statistical test chosen for the QI Project was a paired sample *t-test*. This type of *t-test* is a parametric test that compares the mean between two groups (Kim, 2015). This test is commonly used to analyze data from one sample group being evaluated before and after an intervention has been implemented. For this project, the analysis reviewed whether using a standardized prebriefing tool influenced the competency of novice faculty facilitators who lead a simulation briefing. Since this project evaluated the same group of participants pre- and post-implementation using the same instrument, the paired t-test was selected as the appropriate statistical test for the QI Project.

Both independent and dependent variables were defined for the QI Project. The independent variable was the SIRA-T prebriefing tool, which was utilized as the intervention for the project. This tool was chosen because it was an unutilized but existing tool available at the clinical site and aligned with current best practice standards related to prebriefing. The dependent variable was the competency levels of the project participants as it relates to simulation briefing. The Facilitation Competency Rubric (FCR) was used before and after the simulation briefing by faculty to evaluate their competency levels. This tool was chosen because one of its constructs specifically evaluates the facilitator's competency related to their prebriefing skills. In addition, demographic data was collected related to educational level, years of teaching experience in nursing education, and years completing simulations utilizing best practice standards.

The DNP student created a codebook to analyze the data using Intellectus Statistics software (see Table 3). Each participant's results were labeled utilizing random numeric values between one and eight for the pre and post-test. This was needed to calculate the mean response to each FCR question. Competency levels were determined based on the four components of the prebriefing construct utilized from the Facilitation Competency Rubric. These four components included role identification, expectations, learning environment, and learning objectives. Each component represented a variable and was assigned the following: (FCRExpectations, FCRLearningObjectives, FCRRoleident, and FCREnvironment). The Benner's scale was utilized for each component, with each item receiving a numeric value ranging from one to five. Benner's scale is a Likert-type scale that is recognized to be ordinal data because the data can be ranked. The codebook lists these variables: (1-Beginner 2-Advanced Beginner, 3- Competent 4-Proficient, 5-Expert). The final component of the codebook includes demographic data taken for the survey. This included their educational level, years of teaching experience in nursing education, and number of years completing simulations utilizing best practice standards (greater or less than 2 years). Each demographic question was assigned a unique variable (simlevel, edulevel and, teachexp).

For the data analysis, a paired sample two-tailed *t-test* was completed to analyze each of the four components of the FCR tool. No missing data for the surveys was noted; however, some discrepancies were noted. These discrepancies were discussed with the clinical site point of contact and will be further discussed in Section III, along with the results of the data analysis.

Data Management

It is imperative to protect the confidentiality of the data collected during the QI Project. As described in the Data Collection section, all surveys were submitted electronically and anonymously beginning in April 2024 and ending in May 2024. The QI Project lead excluded any unique personal identifiers from the survey to protect the project participants. The survey results were translated into an Excel document containing the participants' individual responses to prepare for data analysis. The DNP student removed the data column at the beginning of the analysis to de-identify the participants by their scheduled simulation day. The QI Project will complete the data analysis lead utilizing Intellectus Statistics software. Google Forms also converted the survey results into pie charts. Each pie chart summarized the results of each survey question. This was needed to review the demographics of the project participants. The pie charts also showed the percentages of the faculty responses to each FCR component.

The QI Project lead stored all data on a password-protected USB drive at the clinical site. This drive and password were only accessible to the DNP student. The USB drive was only used from a clinical site password-protected laptop and kept in a locked file cabinet. Only the DNP student had the key to access this file cabinet. In August 2024, following data analysis of the QI Project, the DNP student will delete all data from the USB drive. The surveys will be deleted from the Google Forms account that was utilized to create them. This will invalidate the QR codes utilized for the surveys, rendering the survey inaccessible.

Ethical Considerations

An extensive clearance process was completed to access the clinical site and complete the QI Project. Initial steps included completing CITI training modules to understand the ethical

requirements related to research. Furthermore, several documents were required to complete the QI Project at the clinical site. The initial barrier was that no clinical affiliation agreement existed between the clinical site and the university. To obtain the affiliation agreement, the clinical site point of contact was notified of a desire to utilize the clinical site for a QI Project. This individual provided a referral to the Health Science coordinator. The Health Science coordinator was contacted and sent the affiliation agreement form with the project title and clinical site name included. The coordinator contacted the clinical site's provost, who signed the affiliation agreement and sent it back to the coordinator with approval (see Appendix A).

The next step was to gain approval to utilize the clinical site for the QI Project. The form was again sent to the Health Science coordinator. This form initially could not be completed because the affiliation agreement was not in place. However, the Provost for the clinical site agreed to approve the use of the clinical site for the project contingent on completing the affiliation agreement process (see Appendix B). Having the clinical site permission form allowed for the preparation phase for IRB approval to begin. In addition to this form, several other documents were needed. The Facilitation Competency Rubric required permission to be utilized for the QI Project. The author was contacted via e-mail, and an approval letter was sent (see Appendix C). Specific permission was obtained to use the rubric's prebriefing construct and convert the evaluation tool into Google Forms for electronic access. The rubric was developed into a survey utilizing Google Forms and then converted into a PDF to be uploaded with the IRB documents (see Appendix D). The survey was duplicated to be utilized for both a pre-assessment and a post-assessment. These surveys were strategically titled, with specific instructions for each survey placed at the top of the form.

Once all the necessary agreements and permission letters were in place, we completed the IRB application. This application underwent multiple reviews by the program chair and course instructors, ensuring its thoroughness and adherence to ethical standards. Supplementary forms were also included, including permission to utilize the SIRA-T prebriefing tool (see Appendix F) from the clinical site and the lab manager's approval (see Appendix E). CITI module training certifications were obtained for each member of the QI Project team, further demonstrating our commitment to ethical research practices. A comprehensive data collection table was created, outlining each variable that would be measured in the survey. With all these items in place, we received IRB approval to complete the QI Project (see Appendix G).

The final step of the approval process was to obtain IRB approval from the clinical site. The clinical site has a specific department that reviews all requests to utilize the site for any research or project. All documents included in the original IRB approval and the Cayuse IRB approval letter were sent to the IRB department, where they reviewed and approved the project beginning in April 2024 (see Appendix H). The QI Project was then completed over a two-week time span.

Since the QI Project is classified as a quality improvement initiative, obtaining consent from the participants is not required. Although consent was unnecessary, all participants were given specific details regarding their involvement in the QI Project. During the recruitment process, it was emphasized that participation in the project was voluntary. To protect the psychological safety of the participants, an orientation was completed to ensure that each of them was comfortable utilizing the SIRA-T prebriefing tool for the QI Project. This orientation was individual and completed prior to the start of their simulation experience.

To utilize the SIRA-T appropriately, the participants were briefed regarding key

information related to their specific simulation assignment. This included the location of supplies and equipment and the objectives and logistics of the simulation with the simulation specialist. Since many participants were unfamiliar with explaining the function of the high-fidelity simulators, a lab staff member was made available to discuss this portion of the briefing with the students. A review of debriefing and how to emphasize psychological safety to the students was completed.

During the implementation of the project, a simulation staff member was present to act as a resource for project participants. The participants completed the simulation briefing independently; however, they could consult with the simulation staff member if they had questions. The simulation staff member was also present to protect the simulation participants. The staff member's job was to ensure that all necessary information was communicated to the learners by the project participants. Failure to ensure this information was provided could cause unintentional harm to the learners participating in the simulation, as it could hinder their ability to reach their learning objectives successfully.

The project is deemed a minimal risk to participants, and the probability and magnitude of harm or discomfort anticipated during this project will not be greater than any ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests.

Timeline, Resources, Sustainability, and Budget

Planning for implementing the Doctor of Nursing Practice (DNP) project was a critical process that required careful organization and interprofessional collaboration. Beginning in January 2024, research on the QI Project began with a clinical site review. The DNP chair and

DNP faculty first approved the project. The next steps were to gain permission to utilize the clinical site and gain IRB approval. After receiving A-state IRB approval, it was necessary to gain IRB approval from the clinical site. During this period, faculty were recruited to participate in the QI Project. Once the final IRB approval was received, the faculty volunteers received training before conducting their perspective simulation briefing. The QI Project was implemented over a two-week timeframe, April-May 2024. At the end of the project, data from the results were collected and analyzed electronically in May 2024. A timeline was created to show the progression of the QI Project (see Table 1).

The QI Project did not require direct financial resources from the QI Project student. A budget table was created to review the direct and indirect costs of the QI Project for the clinical site (see Table 2). The clinical site covered the direct cost by allowing the QI Project to be completed in their simulation lab space at no cost. The campus also allowed the use of their supplies, simulators, and equipment for the project, minimizing its financial cost. Faculty completed the simulation during their scheduled work hours, so no additional pay was needed. Indirect costs related to the project include the cost of utilities, lab space use, and the project participants' use of the lab whiteboard. Financial costs related specifically to the prebriefing component of simulation are minimal. Surveys for the project were electronically completed, so no printing cost was involved. In addition, the SIRA-T prebriefing tool had already been printed by the clinical site and was available to the faculty participants.

Aside from fiscal resources, the clinical site had the staffing resources needed to support the implementation of the QI Project. The lab manager at the clinical site manages both the skills and simulation program. The lab manager was integral in helping the project progress and was open to making potential adjustments to the simulation program based on the project results. The

clinical site point of contact was the department chair for the nursing program. The department chair was extremely supportive of the QI Project and acted as a liaison in various ways to assist with IRB approval and project integration.

The sustainability of the QI Project is promising. The prebriefing tool was already available at the clinical site but was underutilized by faculty. With this project, faculty received more exposure to the prebriefing tool and were given direct opportunities to use it. Completing the QI Project allowed the faculty to develop increased competency in leading a simulation briefing. Utilizing the Gibbs Reflective Cycle, faculty were able to navigate through the stages of the experience. After completing the QI Project intervention, the faculty could reflect on the experience and what they could have done differently. This aligns with the fifth stage of the Gibbs reflective model (See Figure 3). After this stage, it is common for an action plan to be put into place based on the experience (Ingham-Broomfield, 2021). After the QI Project, collaboration occurred with the lab manager at the clinical site to determine what action plan could be initiated to promote the use of the prebriefing tool further. The first step in the action plan was for the lab manager to disseminate the findings of the QI Project to the simulation specialist at the other campuses. As previously stated, the clinical site is one of four campuses for the nursing program. Allowing the faculty and staff at the other campuses to learn from the results of the QI Project may encourage them to participate more in the prebriefing process.

Summary

Section II reviewed the development and design of the QI Project. It discussed the path to utilize the clinical site and the project implementation. This included gaining permission to utilize the clinical site and the Facilitation Competency Rubric as the evaluation tool. The project

was guided by the Plan-Do-Study-Act (PDSA) implementation framework. The project involved utilizing the SIRA-T prebriefing tool to guide novice simulation facilitators through leading a simulation briefing. This tool was a guide available at the clinical site that the nursing faculty underutilized at the clinical site. A pre-and post-survey was completed anonymously using a Google Form accessible through a QR code. The survey utilized the Facilitation Competency Rubric (FCR), which focused on its prebriefing construct. This survey evaluated four areas of competency related to the role of a facilitator in prebriefing derived from the FCR and specific demographic data. The availability of the prebriefing tool at the clinical site, along with the willingness of the lab manager to support the change initiatives, improves the sustainability of the project intervention. Data related to the QI Project was meticulously processed and secured to protect the project participants. Access to the results of the QI Project was restricted to the DNP student. Protective measures included securely locking the data on a password-protected USB drive at the clinical site. Section III will further discuss the results and findings of the QI Project.

SECTION III: RESULTS AND DISCUSSION OF FINDINGS

Introduction

With the decreased number of faculty and clinical sites, simulation use within nursing education has continued to increase. This increased use of simulation in nursing programs has amplified the need to regulate simulation integration and follow best practice standards to ensure quality experiences for learners. Certain simulation aspects, such as debriefing, have well-established tools to guide facilitators through the debriefing process. These tools and theories were developed after research and literature reviews were completed to support their use.

Few tools or theories exist to guide the prebriefing process in healthcare simulation. In 2021, the International Nursing Association for Clinical Simulation and Learning (INACSL) published the prebriefing standard to define the components that should be included in effective prebriefing. The benefits of effective prebriefing have been clearly defined as well. They include increased psychological safety for the learners, balanced cognitive load, and allows the learners to have a more effective debriefing (McDermott et al., 2021).

The clinical site has recently developed a simulation program and employs one simulation specialist at its campus. This simulation specialist manages the development, setup, and evaluation of simulation-based experiences at the clinical site. A review of simulation experiences at the clinical site showed that the simulation specialist primarily completed simulation briefings. The briefing is the simulation orientation that occurs on the scheduled simulation day. The nursing faculty was uncomfortable leading a simulation briefing and relied heavily on the simulation specialist.

Low staffing in a nursing simulation program can lead to a range of negative consequences that impact the quality of education, student outcomes, and the program's overall efficiency. The faculty at the clinical site is crucial to maintaining the sustainability of the simulation program. Faculty members must have appropriate training and tools to be competent facilitators. McDermott et al. (2021) emphasized that to provide high-quality simulation experiences, educators must be knowledgeable regarding simulation pedagogy, including prebriefing. To address this concern within the simulation program a quality improvement project was developed to address whether the use of a standardized prebriefing tool could affect the competency of the nursing faculty when delivering a simulation briefing.

Eight nursing faculty members volunteered to participate in the QI project. The QI project utilized the Simulation Implementation Readiness Assessment Tool (SIRA-T) as the change agent. The tool navigated the faculty through the briefing process. Each faculty member was briefed regarding their assigned simulation utilizing the SIRA-T tool. The faculty completed the Facilitation Competency Rubric (FCR) before completing their simulation briefing. The PI received permission to specifically utilize the prebriefing construct of the FCR for the QI project. Demographic data regarding years of teaching experience, simulation experience, and educational background were also included in the survey. After the simulation briefing was completed, the same faculty again completed the FCR survey. The survey results were analyzed by the PI utilizing Intellectus Statistics software.

The PI will discuss the statistical analysis of the QI project and interpret the results. The PI will analyze whether using the prebriefing tool positively affected the nursing faculty's competency when leading a simulation briefing. The project's impact on the clinical site and its implications for future practice in nursing simulation education will be discussed.

Summary of Methods and Procedures

Eight nursing faculty members participated in the QI project. A pre-and post-test survey was completed before and after each faculty member completed the project intervention. The PICOT question for this QI project is: Among nursing clinical faculty completing simulation in a pre-licensure nursing program (P), how does utilizing a standardized prebriefing tool (I) compared to self-guided prebriefing (C) impact their competency as a facilitator (I) during the briefing phase of simulation (T) over a two–four-week timeframe? A two-tailed paired sample t-test and a Shapiro-Wilkes test were completed for the statistical analysis. The paired sample t-

test is a parametric test that is used when probability can be defined (Kim, 2015). The Shapiro-Wilkes test was utilized to assess for normality.

The pre-and post-surveys were completed through Google Forms and were accessed through a QR code. The survey included demographic descriptions of the participants. Nominal data included the participants' educational experience, years of teaching experience, and years utilizing simulation best practice standards. Using a Likert-type scale, the Facilitation Competency Rubric (FCR) assessed four areas of simulation briefing. This data is considered ordinal/scale data. Benner's novice-to-expert scale was utilized to measure competency in each of the four areas assessed using the FCR tool. The four areas included role identification, expectations, learning environment, and learning objectives. The Benner Scale measurements include 1=beginner, 2=advanced beginner, 3=competent, 4=proficient, and 5=expert. Once the pre- and post-surveys were completed, the data was downloaded into an Excel spreadsheet to assess individual responses. The PI de-identified the data by removing the date of completion column before reviewing the survey responses. The individual responses were reviewed for the data analysis to calculate the mean and standard deviation for each FCR question. The mean of each pre- and post-survey response for each FCR question represented the paired samples that were compared using the paired sample t-test. The PI completed the data analysis of the QI project utilizing Intellectus Statistics software.

Following IRB approval, the simulation schedule for the clinical site was reviewed to determine which activities would be used for the QI project. Three simulation activities were chosen. Each of the simulations was broken into multiple time slots to allow a small number of students to come and participate at one time. This provided enough opportunities for the eight faculty participants to lead a simulation briefing. The faculty were each assigned to a simulation

time based on their availability. Once the participants were confirmed, they were given access to the pre-survey via a QR code and an email link. Faculty were instructed to complete the survey prior to their simulation briefing. Each faculty member was briefed on their assigned simulation experience utilizing the SIRA-T prebriefing tool as a guide. Utilizing a whiteboard in the simulation lab, each step of the SIRA-T tool was written out, including items specific to the assigned simulation. Faculty were educated on key components related to prebriefing, including emphasizing psychological safety and setting the ground rules for the simulation experience. Once students arrived for the simulation experience, the faculty member was introduced as the facilitator to lead the simulation briefing. The simulation specialist was available in the room to support the faculty facilitator if needed. After the faculty member had completed the simulation briefing, the students were dismissed to report to their assigned simulation area. The faculty members were given access to an identical post-survey after completing the project. The expected outcome of the QI project was that the faculty member would experience improved self-perceived competency after leading a simulation briefing utilizing the standardized prebriefing tool. All eight of the faculty members completed the pre- and post-surveys.

Summary of Sample and Setting Characteristics

The setting for the QI project was a nursing skills and simulation laboratory space located on a community college campus in the Dallas/Fort Worth area. The accessible population for the QI project consisted of 8 full-time faculty and 5 adjunct faculty members. The clinical site point of contact was the liaison for recruiting the project participants. The clinical site point of contact communicated with the course coordinators to determine which faculty members met the inclusionary criteria for the QI project. Once this was determined, volunteers were requested by

the course coordinators and clinical site point of contact. All eight full-time faculty members volunteered to participate in the project. The five adjunct faculty members declined to participate, resulting in roughly 61% of the accessible population participating in the QI project.

The pre- and post-surveys' demographic data (see Figures 5 and 6) were reviewed. The first demographic question addressed the years of experience the faculty had completing simulations utilizing best practice techniques. This demographic was necessary since many of the faculty have completed simulations for many years but have not utilized best practice standards when doing so. This question had two options. The faculty members could select if they had less or more than 2 years of experience. During the recruitment process, all faculty volunteers stated that they were introduced to simulation best practice standards within the last two years. This made them eligible to participate in the project. However, the pre-and post-survey results showed that 87.5% of the participants stated they had less than 2 years of experience, and 12.5% stated they had more than two years of experience. One participant notified the clinical site point of contact that she selected the incorrect option for this question in the surveys. Rather than have the participant repeat the surveys, the PI acknowledged this occurrence in the project manuscript.

The next question was related to the highest degree of education. In both the pre-and post-survey, 75% of the participants had a master's degree, and 25% had a doctorate degree. The final demographic question addressed the number of years of teaching experience each participant had. This data should have been consistent between the pre-and post-test since the same individuals were utilized but were not. In the pre-survey, 25% of the participants stated they had 3-5 years of experience, and 25% had more than 10 years of experience. The other 50% had between 5-10 years of experience. In the post-survey, 37.5% stated they had 5-10 years of experience, 12.5% indicated they had more than 10 years of experience, and 50% stated they had

3-5 years of experience. This discrepancy is likely an oversight by one or more of the participants.

Major Findings

The QI project compared the results of two data groups from the same sample population. This distinction allowed for the use of the paired sample t-test. A Shapiro-Wilkes test was completed to assess normality. Based on an alpha level of 0.05, the Shapiro-Wilk test was considered insignificant for all 4 questions, indicating that the normality assumption was met (see Figure 4). Individual results were not compared. Instead, the mean of the responses to each survey question was calculated. This data was compared in the pre-and post-survey using the paired sample t-test. Intellectus Statistics software was utilized to complete the data analysis. The findings for each question included in the prebriefing construct of the FCR will be discussed below. When reviewing the data, it was important to remember that lack of statistical significance does not necessarily mean the intervention was ineffective. This is because statistically insignificant results can have multiple explanations that should be explored (Hewitt et al., 2008). The statistical results for each FCR component can be found in Tables 4 through 7.

The results of the paired sample t-test for pre- and post-survey-related to Expectations were not statistically significant (p= .279) based on an alpha value of 0.05. The mean of the participant's responses increased from 2.75 to 3.38 (See Table 4). Using Benner's scale, this showed that the participants' overall competency improved from advanced beginner-2 to competent-3. This indicates that the nursing faculty had developed improved competence in discussing the learners' expectations during a simulation experience. This is an important component of prebriefing that facilitators should be able to describe to the participants, as mentioned in the INACSL prebriefing standard (McDermott et al., 2021).

The results of the paired sample t-test for pre- and post-survey-related to Learning Objectives were not statistically significant (p= .329) based on an alpha value of 0.05. The mean of the participant's responses increased from 2.75 to 3.38 (See Table 5). Using Benner's scale, this showed that the participants' overall competency improved from advanced beginner-2 to competent-3. Again, this indicated improved competency for the nursing faculty in discussing learning objectives with simulation participants. Learners must understand the simulation's objectives to achieve the learning objectives for the simulation scenario successfully.

The results of the paired sample t-test for pre- and post-survey related to Role identification were not statistically significant (p= .138) based on an alpha value of 0.05. The mean of the participants' responses increased from 2.5 to 3.5 (See Table 6). Using Benner's scale, this shows that the participants' overall competency related to role identification improved from advanced beginner-2 to competent-3. Orienting the learner to their role assignments before the simulation experience is crucial to ensure they understand their responsibilities during the simulation activity. Failure to clearly identify roles can result in confusion and distraction during the simulation experience. Moreover, a competent facilitator, as described in the FCR prebriefing construct for role identification, not only assigns the roles (beginner/advanced beginner) but also thoroughly explains the role to the learners, which is essential for a clear understanding and effective role performance (Leighton et al., 2018).

The final data analysis reviewed the paired sample t-test for pre- and post-survey related to the Learning Environment. These findings were also not statistically significant (p= .285) based on an alpha value of 0.05. The mean of the participants' responses increased from 3.15 to 3.5 (See Table 7). Using Benner's scale showed that the participants' overall competency had minimal change, falling into the competent-3 category for both the pre-and post-survey. The

prebriefing standard described by McDermott et al. (2021) elaborates on the need to protect the psychological safety of the simulation participants. A key component of this is monitoring the emotions and behaviors of the simulation participants to address concerning behaviors early. The FCR tool describes a competent facilitator as one who can address participants' concerns and model positive behaviors for the learners (Leighton et al., 2018). The statistical analysis results demonstrate that the faculty members rate themselves as consistently competent in monitoring the learning environment during a simulation event.

Several of the measured variables showed an overall increase in competency after utilizing the tool. The results of the quality improvement project aligned with the literature that supports the use of structured prebriefing in simulation. In addition, the tool's implementation supports best practices as described in the NLN Jefferies Simulation Theory. This theory emphasizes the relationship between the facilitator and the student and encourages the facilitator to utilize appropriate educational and preparation techniques to guide the learner through the simulation experience (Jefferies, 2020). Utilizing the SIRA-T prebriefing tool in the QI project was a catalyst for driving the use of best practice standards when utilizing simulation within the nursing program. The QI project successfully addressed the problem statement, which discussed addressing the decreased competency among novice facilitators during simulation briefings by implementing a quality improvement intervention. Integrating a standardized prebriefing tool helped improve the facilitators' skills and confidence.

The QI project was successfully implemented, thanks to the dedicated efforts of the faculty. Faculty at the clinical site recognized the need for the project to help improve the sustainability of the nursing program. They were receptive to learning about and implementing the prebriefing tool in their assigned simulation activities. Despite some barriers, such as

scheduling and completing the project surveys promptly, the faculty's commitment was unwavering. Each nursing faculty had different clinical and didactic schedules, making scheduling the simulation briefing challenging. Faculty modified their office hours or schedules to ensure they could complete the simulation briefing for their assigned simulation. In addition, some faculty did not remember to complete the survey when instructed. Those faculty members were sent the survey via email. All faculty participants completed the pre- and post-survey, demonstrating their dedication and commitment to the project.

In the next section of the manuscript, the DNP student will discuss the implications and recommendations based on the analysis and interpretation of the QI project. The recommendations will address strategies that can be implemented at the micro, meso, and macro-system levels. The goal of the recommendations by the DNP student is to continue to improve the competency of the faculty simulation facilitator at the clinical site by highlighting resources that should be available to assist the faculty with simulation professional development.

Implications for Practice

The QI project solves a potential barrier to implementing quality simulations at the clinical site. If more faculty members are competent in facilitating a simulation briefing, it will help improve the simulation program's sustainability. Understanding the simulation prebriefing helps to improve the quality of the facilitator. The content discussed during the simulation briefing is monitored closely throughout the simulation experience. Having a basic understanding of the importance of psychological safety and environmental awareness helps the facilitator manage the simulation experience more effectively. This is an unintended positive effect of the QI project on the clinical site. The implications of the quality improvement project

on the clinical site set a foundation for developing cost-effective simulation training for the nursing faculty. These efforts can be continued with the implementation of a sustainability plan.

To sustain the impact of the QI project on the clinical site, measures need to be implemented to allow the faculty facilitators continued opportunities to facilitate a simulation briefing. To create a sustainability plan, specific goals should be created to address each area of prebriefing as described in the FCR. The goal should focus on advancing the facilitators' competency in each area over time. The FCR tool is an excellent tool to utilize to determine what additional steps the facilitator should focus on to advance their competency. For example, per the FCR, a facilitator who is considered competent in discussing expectations describes the simulation event and discusses any misconceptions the learners may have. To advance to the proficient or expert level, the facilitator must discuss the rationale for the expectations during the simulation briefing. To address this, the facilitator at the clinical site should actively collaborate with the simulation specialist to ensure that rationales are included in their written prebriefing for their simulation activity. The simulation manager was encouraged to review each area of the FCR prebriefing construct to address barriers that may keep their faculty from advancing to a proficient or expert level.

As part of disseminating the QI project, the lab manager recommended a plan to sustain the results. This included collaboration with the simulation specialist and nursing faculty to create more opportunities for faculty facilitation. The lab manager also wanted to discuss the QI project's results with the simulation specialist at the three other nursing program campuses. The goal is for these simulation specialists to implement the project on their campus to improve the competency of their faculty facilitators.

Recommendations

The data analysis showed that the QI project helped to improve the competency levels of the novice faculty facilitators. The faculty's competency levels improved from advanced beginner to competent in three of the four categories in the FCR prebriefing construct. To continue the professional growth of the nursing faculty as facilitators, there are measures that the clinical site should consider. The faculty facilitators or micro-systems need more opportunities to practice leading a simulation briefing. It was recommended to the simulation lab manager that faculty work with their assigned simulation specialist to determine opportunities for them to lead their simulation briefing. The faculty could also co-facilitate with the simulation specialist at their campus. This allows the faculty member to collaborate with an experienced simulation educator who can provide mentorship and guidance during the facilitation process.

Another recommendation was to evaluate facilitator competency objectively using the FCR prebriefing construct. The QI project's results were based on the facilitators' self-evaluation. This allows the opportunity for a bias evaluation to occur. Utilizing the tool as an objective instrument for evaluation allows the simulation program to address specific deficits recognized within its faculty simulation facilitators.

The learners at the clinical site or mesosystem currently evaluate the prebriefing delivery utilizing the Simulation Effectiveness Tool- Modified (SET-M). An additional recommendation is that the learners continue to evaluate this process, and the lab manager should monitor this data to determine the impact of the prebriefing on the learner. The SIRA-T Prebriefing Tool aligns with current literature that discusses the benefit of utilizing a standardized prebriefing tool. The quality improvement project promotes the use of best

practices when using simulation as described by macrosystems like the International Nursing Association for Clinical Simulation and Learning (INACSL).

An unexpected variable that arose was scheduling conflicts during the completion of the QI project. The faculty all have different schedules based on their assigned didactic course, clinical course, skills course, and office hours. Due to the timeframe for IRB approval, not all faculty could complete simulation briefings for their assigned course. These faculty members were assigned to a different course's simulation activities to be able to complete the simulation briefing. The originally assigned faculty then took over the simulation as the facilitator. This resulted in some participants being unable to see the effects their briefing had on student performance. It is recommended in future observations that the faculty member who provides the briefing acts as the facilitator throughout the simulation experience. This allows them to evaluate whether the prebriefing was impactful and helps them identify areas for self-improvement.

Discussion

The PI strongly believes the project implementation was a successful quality improvement intervention for the clinical site. The clinical site's simulation program requires additional resources to remain a sustainable program. One of these resources includes additional simulation staffing. Several factors affect the nursing program's ability to hire additional staff members. This includes a lack of financial resources and stakeholder buy-in. Until these factors can be addressed, all faculty and staff participating in simulation activities must be well-trained in the different simulation components. While it may not be realistic to require faculty to understand how to manage all the technical aspects of simulation, it is feasible to require them to be competent in facilitation skills such as prebriefing. The results of the QI project demonstrated

that with guidance from a well-trained simulation educator and a standardized tool, the faculty can facilitate simulation briefing effectively. With additional practice opportunities, the PI believes the faculty's competency level will continue to improve. The clinical site should consider the recommendations made by the PI to continue to provide opportunities for the nursing faculty to facilitate a simulation briefing. Regular feedback should be provided using the FCR evaluation tool to help the faculty to continue to improve their facilitation skills.

The strength of the QI project includes the strong reception of the clinical faculty and simulation staff to the project implementation. All parties recognized the need for the quality improvement project and facilitated its implementation. The QI project helped to address a deficit in simulation facilitator training noted at the clinical site. Limitations of the QI project included the sample size. Simulation implementation following best practice standards is still a new process at the clinical site. The structure required for a quality simulation experience can be intimidating to a novice facilitator. Adjunct faculty have less exposure to simulation experiences than full-time faculty at the project site. These factors may have contributed to the reason why none of the adjunct faculty volunteered to participate in the QI project. In addition, the project was implemented at only one of the four campuses for the nursing program. If IRB approval had been received for the entire nursing program, the PI may have had a larger sample size for the QI project, and the project could have had a larger impact on the nursing program.

Conclusions and Contributions to the Profession of Nursing

The use of simulation within nursing academia will only continue to increase as research demonstrates its benefits to the learners. It provides a consistent hands-on experience for students that mimics the clinical setting. It addresses common problems in nursing education, such as

clinical site shortages. Regulating the simulation process ensures that the learners receive high-quality simulation experiences that will encourage self-reflection and the development of clinical judgment.

While simulation use is beneficial, many barriers prevent the teaching strategy's effectiveness. One of those barriers includes untrained simulation educators and facilitators within nursing programs. Jefferies (2020) recognized that many educators within nursing programs are self-trained, and many are unaware that best practice guidelines exist that guide the implementation of healthcare simulation. Administrative stakeholders within nursing programs often are unaware of what is required to develop, set up, and manage a simulation experience. In addition, few resources are allocated to maintaining the simulation lab space or providing continuing professional development for their faculty and staff members. These issues hinder the ability of the simulation program to provide a simulation experience that will indeed benefit the learner. Simulation leadership must continue to advocate for the nursing simulation program by utilizing current evidence-based research as their guide.

In conclusion, the QI project provided a cost-effective solution to provide additional training for the nursing faculty regarding simulation briefings. The clinical site should continue to work to develop other professional development opportunities that emphasize best practice techniques and rationales for their use. The QI project demonstrated that using the SIRA-T prebriefing tool improved the competency of novice faculty facilitators. For the tool to remain effective, faculty should continue to utilize the tool and be supported by the simulation specialist. Faculty should be required to actively participate in simulation facilitation and receive annual feedback to promote professional growth. Receiving ongoing professional development regarding simulation best practices is a key component of being a competent simulation

facilitator (Persico et al., 2021). The project addressed current evidence-based practice, which promotes using best practice standards when integrating simulation into nursing education programs.

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Table 1

QI project Table

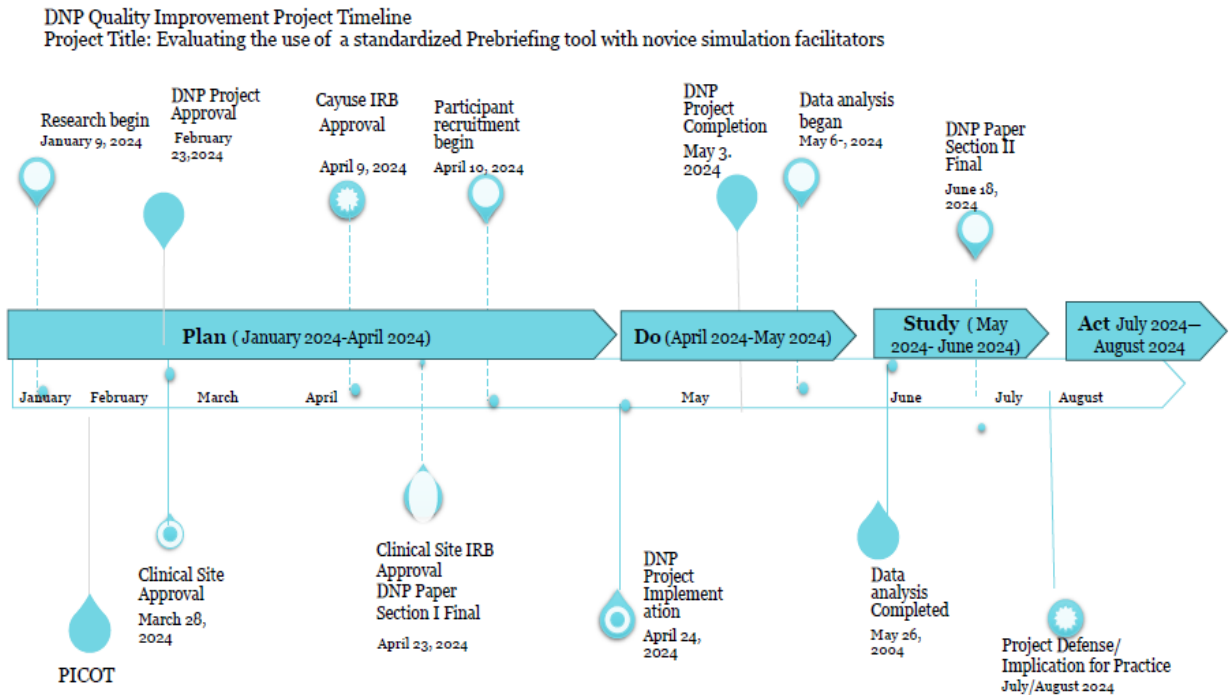

Table 2

QI project Budget

Direct costs		**Cost**	**Responsible Party**
Faculty salaries		$50,000 (base) X 8 = $400,000	Clinical Site- Department of Nursing
Printed Materials (SIRA-T)		$.28 per page (double-sided) X 10 = $2.80	Clinical Site
Simulation Equipment (beds, medication carts, headwalls, crash cart)		Simulation bed - $5500 Medication Cart- $18,000 Headwall- $1,700 Crash Cart- $900 = $ 26,100	Clinical Site- Department of Nursing
Prebriefing training		Included in faculty salaries	Clinical Site- Department of Nursing
Simulator use (SIMMAN 3G, SIMMAN Essential, SIMMOM, Nursing Anne)		SIMMAN 3G- $80,000 SIMMAN Essential $49,000 Nursing Anne- $5,500 SIMMOM- $40000 + $174,000	Clinical Site- Department of Nursing
Indirect costs			
Simulation Lab space		Variable	Clinical Site
Lab white board and markers		$500	Clinical Site- Department of Nursing
Lab manager salary		$100,000	Clinical Site- Department of Nursing
Clinical site point of contact salary		$110,000	Clinical Site- Department of Nursing
Simulation Specialist salary		$75,000	Clinical Site-

			Department of Nursing
TOTAL BUDGET:		**$885,600**	

Table 3

QI project Codebook

	DNP Project Codebook					
ariable Name	**Variable Description (Questions from survey)**	**Value Labels**	**Comments**		**Missing Data**	**Variable Type**
cultgid	Unique identifier for each participant				N/A	Nominal
mlevel	1. How many years of experience do you have completing simulation utilizing INASCL best practice standards for healt	1. Less than 2 years	N/A		N/A	Nominal
		2. Greater than 2 years	N/A		Accidental response by participant . Correct answer	Nominal
fulevel	2. Educational experience- Select your highest degree of education	1. Associate	N/A		N/A	Nominal
		2. Bachelors	N/A		N/A	Nominal
		3. Masters	N/A		N/A	Nominal
		4. Doctorate	N/A		N/A	Nominal
achexp	3. Number of years of experience working in nursing education	1. 0-2 years	N/A		N/A	Interval
		2. 3-5 yers	N/A		Inconsistet pre/post test	Interval
		3. 5-10 years	N/A		Inconsistet pre/post test	Interval
		4. Greater than 10 years	N/A		Inconsistet pre/post test	Interval
CRExpectations	4. Expectations (e.g. confidenality, code of conduct, participation, respect)	Benner's (beginner-expert 1-5)	Benner 1. beginner 2-advanced beginner 3. Competent 4. Proficient 5		N/A	Ordinal
CRLearningObjecti	5. Learning Objectives	Benner's (beginner-expert 1-5)	Benner 1. beginner 2-advanced beginner 3. Competent 4. Proficient 5		N/A	Ordinal
CRRoleident	6. Role identification	Benner's (beginner-expert1-5)	Benner 1. beginner 2-advanced beginner 3. Competent 4. Proficient 5		N/A	Ordinal
CREnvironment	7. Learning Environment	Benner's (beginner-expert 1-5)	Benner 1. beginner 2-advanced beginner 3. Competent 4. Proficient 5		N/A	Ordinal

Table 4

Two-Tailed Paired Samples t-Test for the Difference Between Expectations_pre and Expectations_Post

Expectations_pre		Expectations_Post				
M	*SD*	*M*	*SD*	*T*	*p*	*D*
2.75	1.16	3.38	1.19	-1.17	.279	0.42

Note. N = 8. Degrees of Freedom for the *t*-statistic = 7. *d* represents Cohen's *d.*

Table 5

Two-Tailed Paired Samples t-Test for the Difference Between Learning_Objectives_Pre and Learning_Objectives_Post

Learning_Objectives_Pre		Learning_Objectives_Post				
M	*SD*	*M*	*SD*	*t*	*p*	*d*
2.75	1.39	3.38	1.51	-1.05	.329	0.37

Note. N = 8. Degrees of Freedom for the *t*-statistic = 7. *d* represents Cohen's *d.*

Table 6

Two-Tailed Paired Samples t-Test for the Difference Between Role_Identification_pre and Role_identification_post

Role_Identification_pre		Role_identification_post				
M	*SD*	*M*	*SD*	*t*	*p*	*d*
2.50	1.20	3.50	1.41	-1.67	.138	0.59

Note. N = 8. Degrees of Freedom for the *t*-statistic = 7. *d* represents Cohen's *d.*

Table 7

Two-Tailed Paired Samples t-Test for the Difference Between Learning_Environment_Pre and Learning_Environment_Post

Learning_Environment_Pre		Learning_Environment_Post				
M	*SD*	*M*	*SD*	*t*	*p*	*d*
3.12	0.99	3.50	1.20	-1.16	.285	0.41

Note. N = 8. Degrees of Freedom for the *t*-statistic = 7. *d* represents Cohen's *d.*

Figure 1

Kurt Lewin's Change Theory

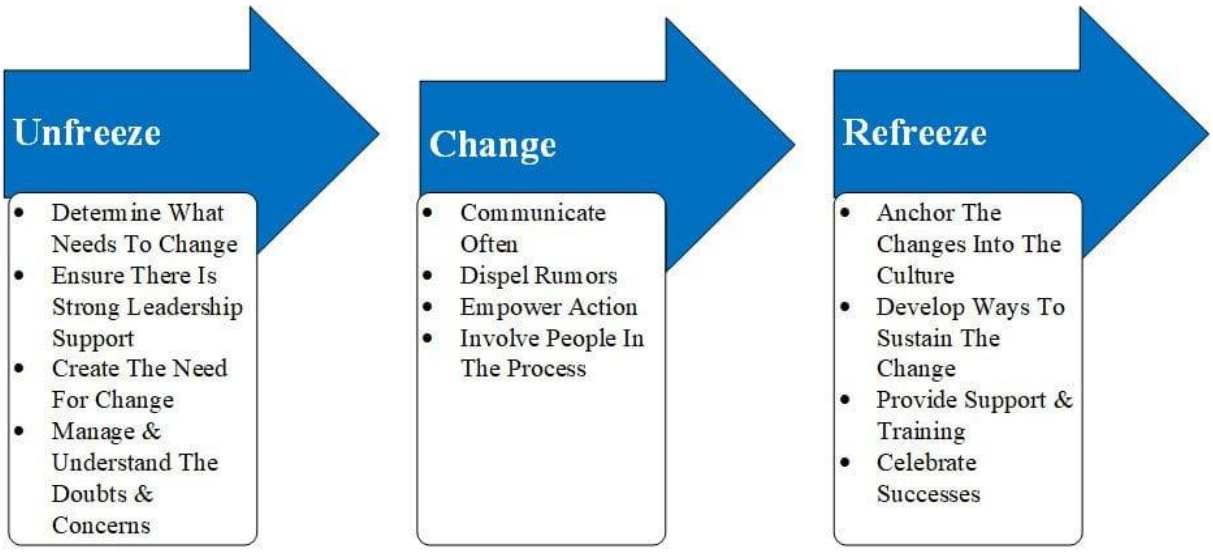

Figure 2

NLN Jefferies Simulation Theory

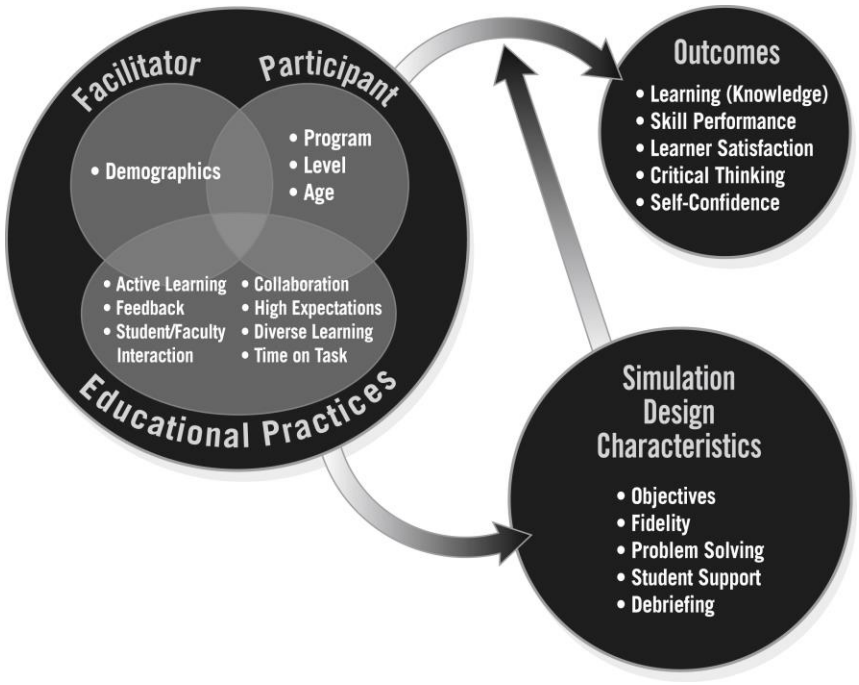

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Figure 3

Gibbs Reflective Cycle

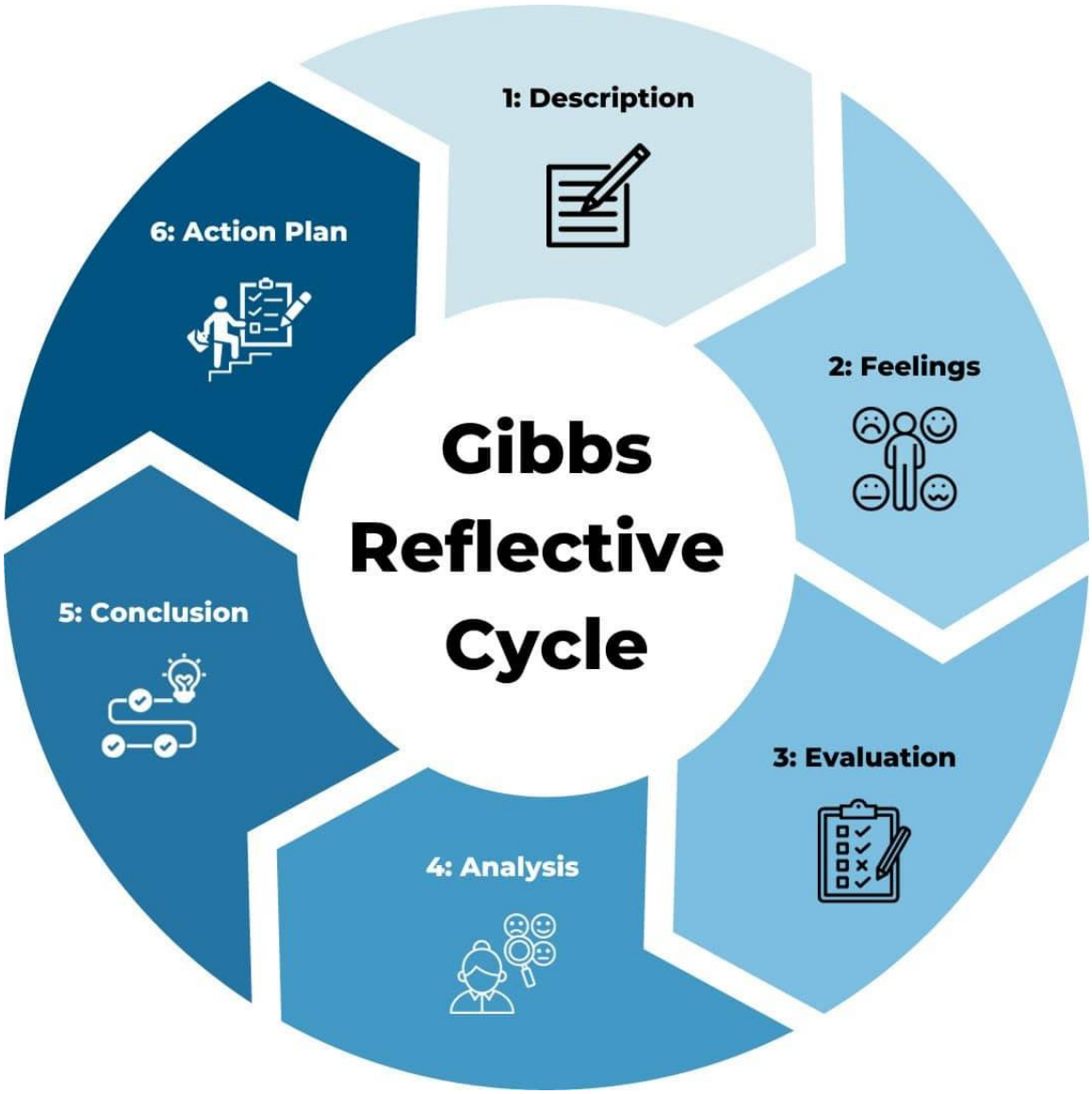


Figure 4

Shapiro Wilkes Data Results for FCR Prebriefing Construct Survey Questions

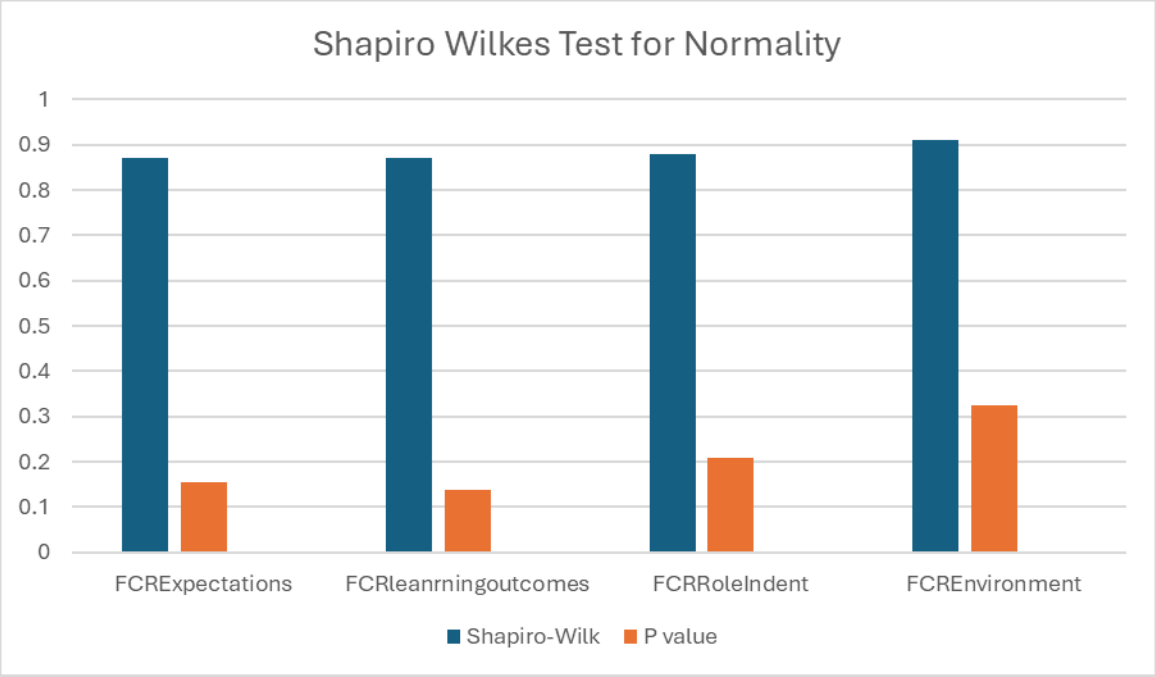


Figure 5

Demographic analysis – Pretest

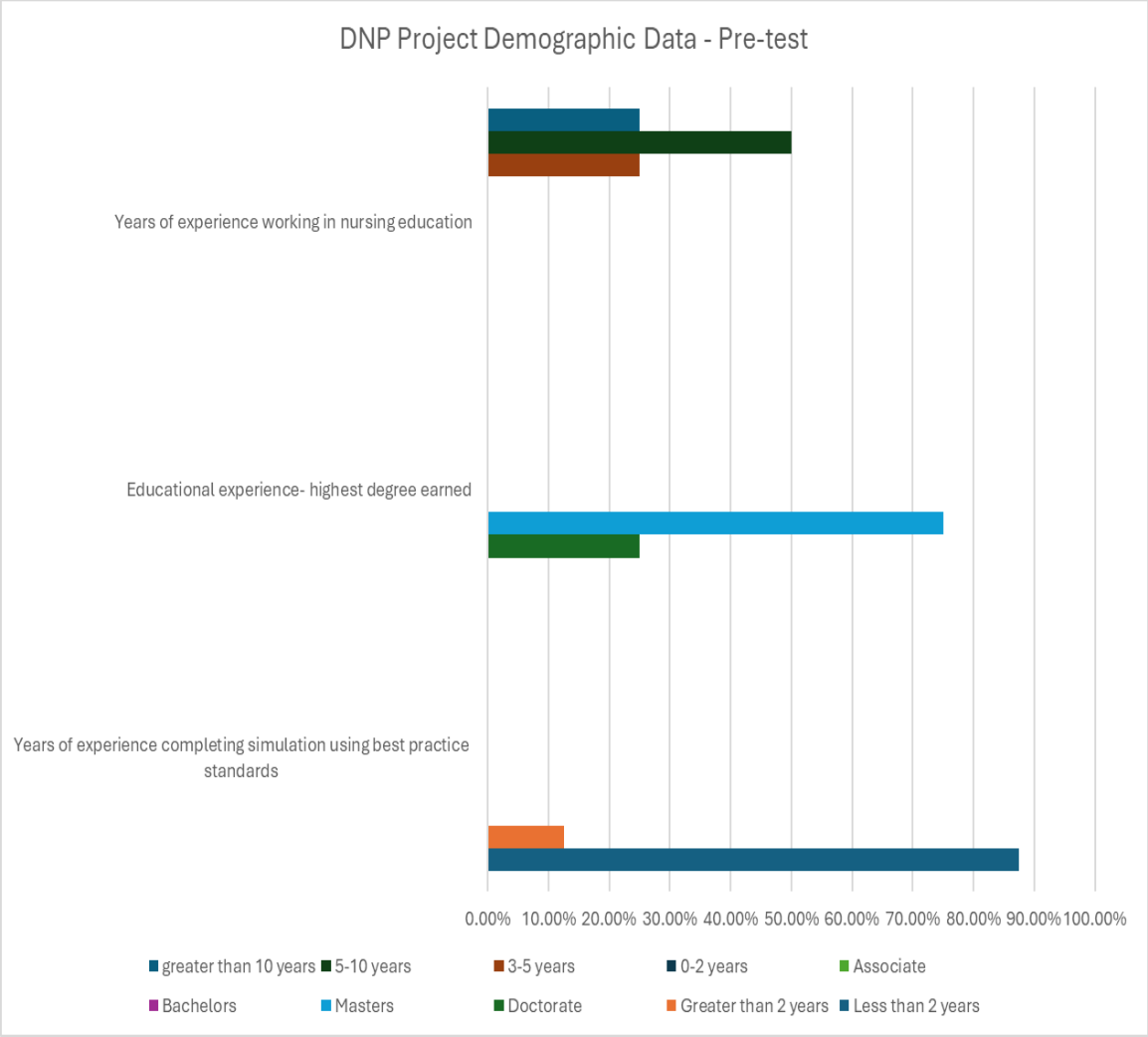
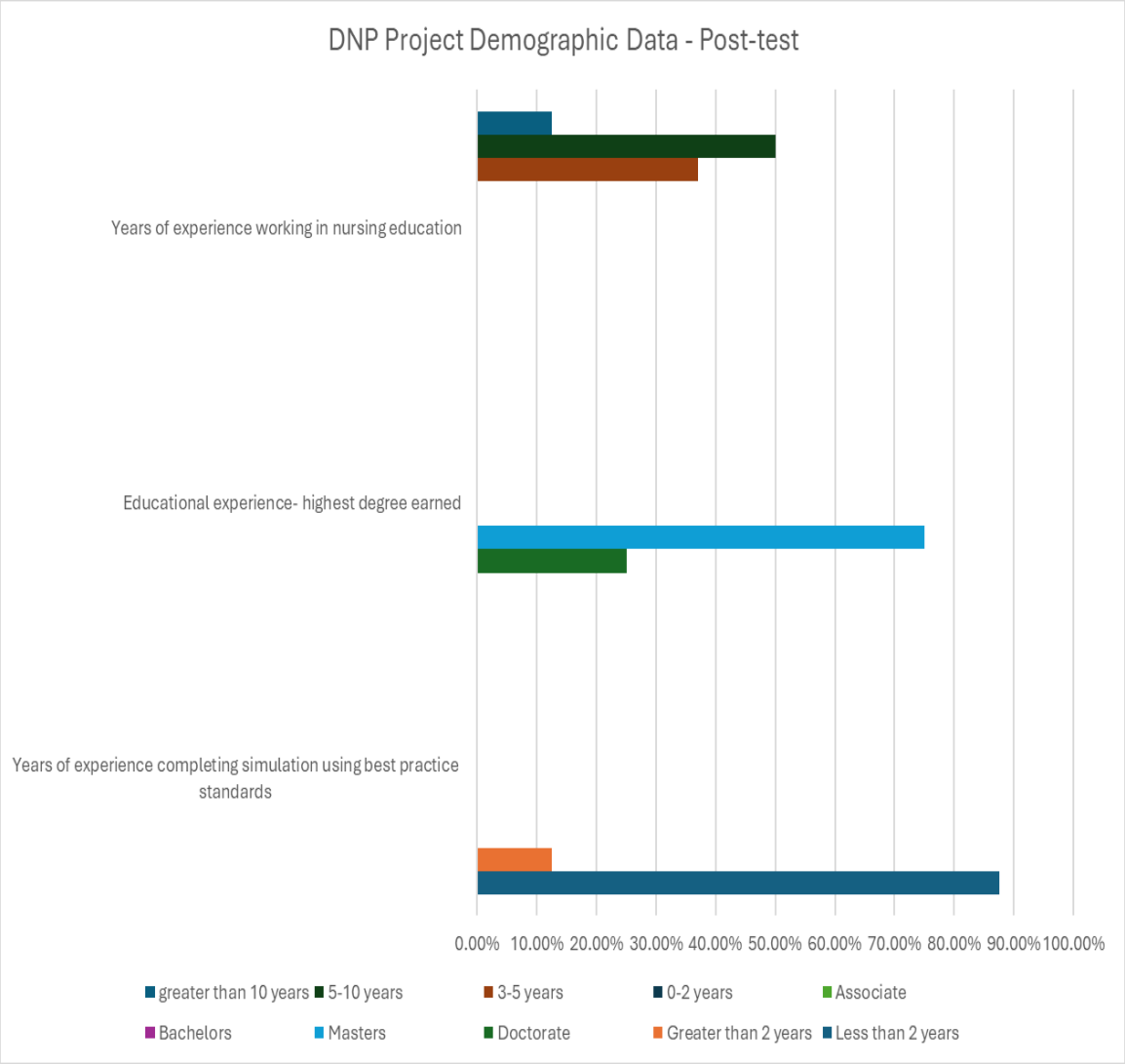


Figure 6

Demographic analysis- Post Test



Appendix A

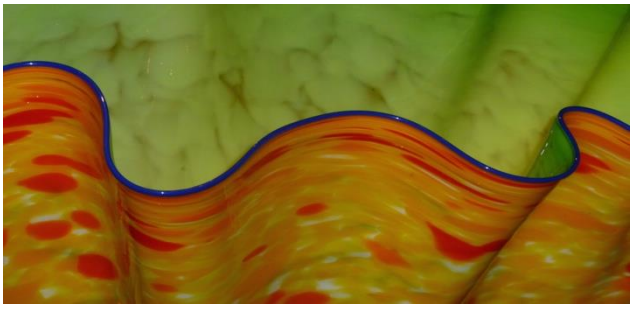
Clinical Site Affiliation Agreement

Appendix B

Clinical Site Permission Form

Appendix C

Facilitation Competency Rubric Permission Letter



Evaluating Healthcare Simulation

March 13, 2024

Dear Ciara,

The authors of the Facilitator Competency Rubric (FCR) are pleased to grant permission for you to use the FCR for your scholarly practice project for your DNP, focused on prebriefing.

Warm regards,

Kim

Kim Leighton, PhD, RN, CHSE, CHSOS, ANEF, FSSH, FAAN
huskerrn@gmail.com
+974 5032 7202

Appendix D

Facilitation Competency Rubric- Prebriefing Construct

FACILITATOR COMPETENCY RUBRIC

CONCEPTS	COMPONENTS	BEGINNER (1) TO ADVANCED BEGINNER (2)		COMPETENT (3)	PROFICIENT (4) TO EXPERT (5)	
Prebriefing	Expectations (e.g. confidentiality, code of conduct, participation, respect)	Informs participants of what to expect during the SCE		Addresses any participant misconceptions regarding expectations	Provides rationale for the expectations of all participants	
		1	2	3	4	5
	Learning Objectives	Provides learning objectives to participants prior to scenario		Reviews learning objectives with participants prior to scenario	Clarifies misconceptions, ensuring participants understand the learning objectives prior to the scenario	
		1	2	3	4	5
	Role Identification	Assigns roles to participants		Provides thorough explanations and/or scripts for each role	Analyzes which role should be given to each participant, to optimize learning, based on identified strengths and weaknesses	
		1	2	3	4	5
	Learning Environment	Addresses participant concerns as a group without singling out one person		Role models positive, encouraging behaviors that promote learning	Monitors degree of emotions, throughout SCE, to determine if they interfere with learning process	
		1	2	3	4	5
Scores		Total Column		Total Column	Total Column	

Prebriefing Section Score Guide for Total of All Three Columns:
0-8 = Beginner to Advanced Beginner (requires mentoring by Proficient to Expert facilitator)
9-15 = Competent
16-20 = Proficient to Expert (may provide mentoring to Beginner to Advanced Beginner facilitator)

Cite: Leighton, K, Mudra, V., & Gilbert, G. E. (2018). Facilitator Competency Rubric. Retrieved from https://sites.google.com/view/evaluatinghealthcaresimulation/fcr

Appendix E

Simulation Implementation Readiness Assessment Tool (SIRA-T) permission letter

To whom it may concern,

The Simulation Implementation Readiness Assessment Tool is utilized by the Dallas College Nursing Simulation Program to prepare students for pre-briefing during their simulation-based experiences. This letter permits Ciara Berry- an Arkansas State doctoral student, the permission to utilize this tool in her DNP project. If you have any further questions please feel free to contact me.

Christina Dewberry Heard MSN, RN

Christina Dewberry-Heard

Digitally signed by Christina Dewberry-Heard
Date: 2024.04.04 19:07:56 -05'00'

Lab Manager- Dallas College Nursing Program

Email- christinadh@dallascollege.edu

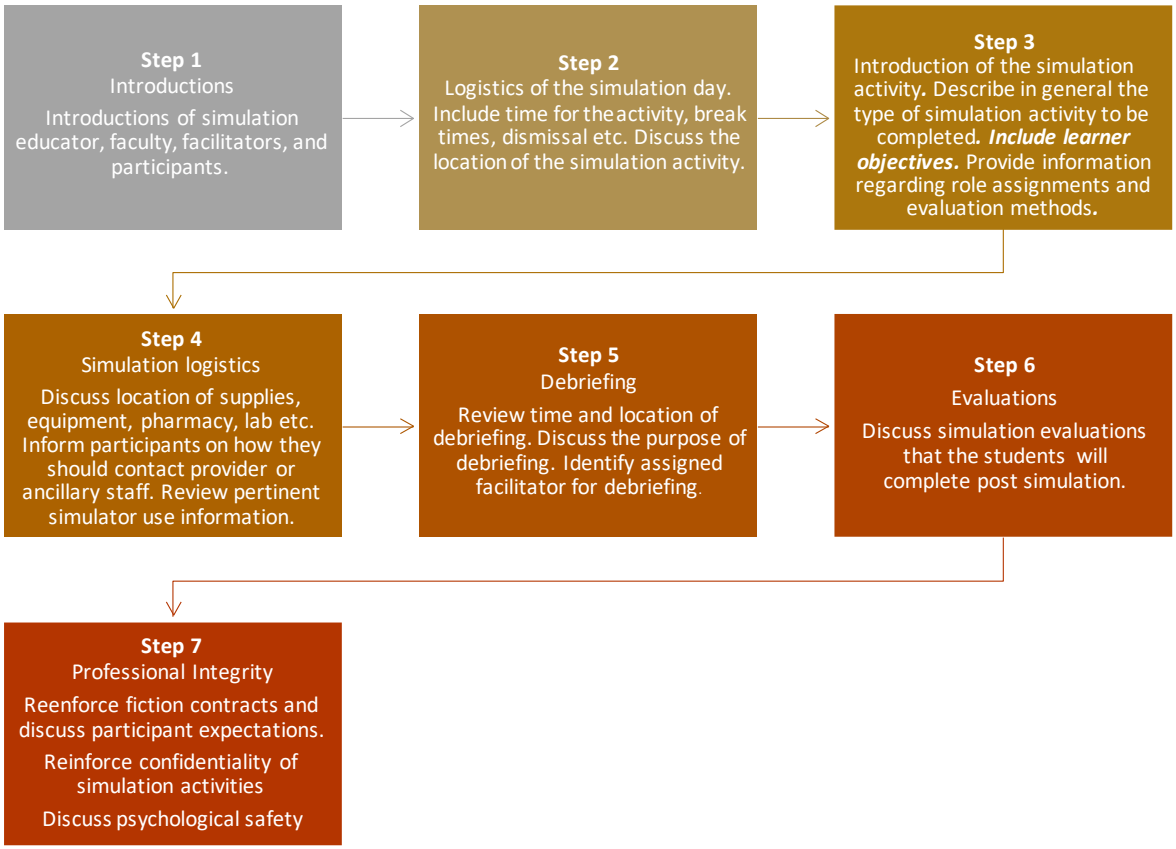
Appendix F

Simulation Implementation Readiness Assessment Tool (SIRA-T) Phase 2

Simulation Prebriefing Tool

***Faculty or simulation facilitators should follow phase 2 of the SIRA-T tool to develop a standardized and structure orientation (briefing) process for their simulation- based experience*.**

Phase 2: Briefing



This tool has been developed to ensure simulation of the facilitators follow the guidelines for prebriefing as established by the International Nursing Association for Simulation and Clinical Learning (INASCL).

Appendix G

IRB Approval Letter- Arkansas State

RESEARCH AND TECHNOLOGY TRANSFER
P.O. Box 2760, State University, AR 72467 | o: 870-972-2694 | f: 870-972-2336

April 9, 2024

Principal Investigator: Ciara Berry Board:
IRB (Institutional Review Board)
Study: FY23-24-557 Evaluating the use of a standardized Prebriefing tool with novice simulation facilitators.
Submission Type: Initial
Board Decision: No Human Subjects Research Approval
Date: April 9, 2024

Thank you for your submission of New Project materials for this project. The Arkansas State University-Jonesboro Institutional Review Board (IRB) has reviewed the submission and determined that this project does not meet the Office for Human Research Protections' definition of research involving human subjects. Therefore, this project is not subject to ongoing IRB review. Please proceed.

This determination applies only to the activities described in this submission. If the project changes and there are questions about whether IRB review is needed, please submit a modification to the IRB for a determination.

If you have questions or concerns, please contact the Director of Research Compliance at (870) 972-2694 or IRB@astate.edu. Please include your study title and study label.

Sincerely,

Eric Cave, Ph.D.

Chair, Institutional Review Board

Appendix H

Clinical Site IRB approval