Prelicensure Nursing Faculty Experiences with Debriefing Adjuncts in Simulation

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Abstract

The purpose of this study was to explore the experiences of faculty of prelicensure nursing students with debriefing and debriefing adjuncts in simulation. Debriefing adjuncts in simulation are active learning elements used during the debriefing process to optimize learning and maximize the impact of the debriefing experience (Sawyer et al., 2016). The nursing faculty shortage, limited clinical sites, and growing roles for nurses are compelling nurse educators to use simulated experiences to prepare prelicensure nursing students for safe nursing practice. Simulation with appropriate debriefing provides a bridge from didactic to safe clinical experiences that can facilitate transitions for nurses.

Debriefing is an important component of simulation, promoting understanding and transfer of learning from the simulation experience to real-life practice. Debriefing adjuncts, considered an active learning component of debriefing, in this study included written self-reflection, self-assessment, student as co-debriefer, the peer observer, virtual debriefing and audio-visual debriefing. While these concepts were discussed in the literature there were limited research about their use as active learning tools in simulation debriefing. The research questions for this study included: What are the experiences of faculty of prelicensure students with debriefing and debriefing adjuncts in simulation? What are faculty experiences of challenges and strategies of debriefing and debriefing adjuncts in simulation? What are faculty experiences in determining efficient resources and effective faculty approaches relevant to debriefing and debriefing adjuncts?

A qualitative thematic design with naturalistic inquiry was used to study the experiences of prelicensure faculty who use debriefing adjuncts in simulation. The study used purposeful sampling strategies to identify educators from prelicensure nursing programs. Forty-six educators, representing a statewide sample, were surveyed. Four completed a follow up

interview that supported the analysis. Surveys and interview questions were generated from the literature related to debriefing and debriefing adjuncts in simulation. Thematic analysis, organized by Systems framework components of process, structure, and output benefits, was used to identify key themes related to educator experiences with debriefing and debriefing adjuncts in simulation. Process themes focused on student considerations (student engagement; student interactions; and diverse students). Structure themes centered on faculty considerations (knowledge and experience; faculty time and faculty numbers; and space and equipment). Output/perceived benefits themes included reflection, fruitful discussion and further learning, and reinforced content for application.

Implications for nursing faculty and students, including further education and research about debriefing and debriefing adjuncts, exist. Debriefing adjuncts, as active learning strategies, can be further evaluated as faculty incorporate these methods into their simulation debriefing. Best practices for engaging students in simulation and debriefing is ultimately important for preparing nurses to provide safe patient care in a team-based profession.

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Chapter One: Introduction

In the current challenging healthcare environment, educators are expected to prepare a different type of nurse than in the previous decades. New graduates are expected to be independent, functional, and effective nurses much sooner than before. Simulation is a realistic and effective technique for preparing nursing students, which alleviates some of the challenges plaguing nurse educators (Jeffries, 2012). While debriefing is considered a standard simulation component (International Nursing Association of Clinical Learning and Simulation Standards Committee, 2016), there is a lack of evidence about the use of debriefing adjuncts to enhance the simulation process.

Educators in prelicensure programs face several common obstacles in educating nurses that make such education a difficult endeavor (Gaberson & Oermann, 2010). The National Council for State Boards of Nursing (NCSBN) reported the top problems faced in nursing education as lack of qualified faculty, clinical site shortages, low National Council Licensure Examination (NCLEX) student pass rates, and rapidly changing expectations of nursing education and practice (NCSBN, 2016). In addition to the main challenges of faculty and clinical site shortages, prelicensure faculty also struggle with extensive time commitments (Dufrene & Young, 2014; Nardi & Gyruko, 2013). In the current education climate, there is a need to address educational issues in order to solve these faculty challenges and optimize active learning strategies for students.

To provide high-quality clinical training while compensating for the lack of resources needed to do so, prelicensure program administrators often turn to simulation. Therefore, simulation is not a new topic in nursing education. Indeed, nursing schools have been adding simulation to curriculums for years. With increased simulation comes an increased need for the debriefing component, an important but time and resource intensive simulation component. The

main objective of simulation and debriefing should be to provide a safe, nonthreatening environment for students to learn clinical, critical thinking, decision making, and collaboration skills (Gaberson & Oermann, 2010). While broad and general debriefing guidelines exist, there is a lack of research about debriefing adjuncts in simulation, which also may be useful.

Simulation

Simulation is defined as any activity that provides realistic clinical environments, procedure demonstration, decision-making activities, and clinical judgment exercises (Jefferies, 2012). High-fidelity simulation extends the definition to include extremely realistic simulations that provide a high level of interactivity and realism (Davis, Kimble, & Gunby, 2014). In such simulations, students can practice complex clinical skills on a simulated patient. Nursing competencies—such as psychomotor, critical thinking, clinical judgment, and communication skills—can be promoted through the effective teaching strategy of simulation (Gaberson & Oermann, 2010). Simulation participants analyze their actions and reflect on thought processes, psychomotor skills, and emotional states to improve future performance. Such activities can help prepare them for an ever-changing healthcare environment.

Jeffries (2005) developed the first nursing simulation model that included debriefing. Since then, this model has been updated and is now referred to as the National League for Nursing (NLN) Jeffries Simulation Model (2015). This model's educational strategies allow educators to amend the simulation and debriefing plan to benefit student learners and provide appropriate feedback during the debriefing phase. Other models and frameworks have been developed, many using the NLN Jeffries Simulation Model, including simulation standards from the International Nursing Association of Clinical Simulation and Learning (INACSL), NCSBN, and Elsevier.

Debriefing

Debriefing in nursing simulation is broadly defined as a time of reflection in which participants can process the event, discuss it with peers, learn, and modify their behaviors (Jeffries, 2012). Debriefing has been used widely to prevent the development of psychological issues from traumatic or stressful events for counselors, disaster workers, and individuals serving in the military (Gardner, 2013). Literature and national guidelines advocate for the use of debriefing when it is performed correctly by trained facilitators (Wickers, 2010; INACSL Standards Committee, 2016). In a debriefing session, a facilitator's key role is to create a safe environment for students to learn through meaningful, focused discussions. While most educators acknowledge the value of debriefing as an integral active learning process, there is debate in the literature as to which of the many debriefing models is the most effective.

Debriefing is an active process where learning is dependent on the integration of experience and reflection. Reflection during the debrief includes assimilating knowledge, skills, and attitudes with preexisting knowledge (INACSL Standards Committee, 2016). In simulation, the debriefing process allows students to think through and discuss the simulated experience to gain more insight into and appreciation of the knowledge and skills needed for future application (Wickers, 2010). Deep learning can occur during debriefing when exploring the simulation provides an opportunity for rich dialogue on how to prioritize patient safety, communicate with healthcare providers and patients, and gain clinical judgment skills (Palaganas, Fey, & Simon, 2016).

The INACSL Standards Committee has outlined expectations for a typical debriefing. Their document, *Standards and Best Practices: Simulation Debriefing*, provides a detailed description of the process and associated terms (INACSL Standards Committee, 2016). The

INACSL Standards Committee (2016) outlined five criteria that need to be met to satisfy their standards for debriefing:

1. The debrief is facilitated by a person(s) competent in the debriefing process;

2. The debrief is conducted in an environment that is conducive to learning and supports confidentiality, trust, open communication, self-analysis, feedback, and reflection;

3. The debrief is facilitated by a person(s) who can devote enough concentrated attention during the simulation to effectively debrief the simulation-based experience;

4. The debrief is based on a theoretical framework for debriefing that is structured in a purposeful way; and

5. The debrief is congruent with the objectives and outcomes of the simulation-based experience (p. S21-22).

Debriefing Adjuncts in Simulation

Debriefing adjuncts in simulation are described as active learning elements used during the debriefing process to optimize learning and maximize the impact of the debriefing experience (Sawyer et al., 2016). Individual adjuncts offer a variety of supplementary approaches that can be used to amplify debriefing methods. While debriefing is discussed in simulation literature, few studies examined models incorporating debriefing adjuncts (Dufrene & Young, 2014). In their study, Kessler, Cheng, and Mullan (2015) described the American Heart Association's (AHA) use of debriefing adjuncts. The AHA recognized adjuncts as viable debriefing tools for critical healthcare events and incorporated video and other technological data into debriefs. While relying solely on participants' memories in a high stress environment can lead to recall errors and missing actionable items, effective adjuncts can help decrease these errors. The AHA's work led to a new framework entitled, Promoting Excellence and Reflective Learning in

Simulation (PEARLS). In addition to focused discussion and feedback, the PEARLS framework integrated specific educational strategies during debriefing, including learner self-assessment. The PEARLS debriefing tool also includes scripted language to guide debriefing (Eppich & Cheng, 2015).

Sawyer et al. (2016) identified several debriefing adjuncts: codebriefers, scripted debriefing, and audio- and video-assisted techniques. In a critical literature review, he addressed debriefing adjuncts in simulation along with more traditional debriefing considerations including timing, facilitation, and conversational structures used in healthcare simulation.

Effective debriefing methods require extensive educator time, including the time needed for preparation and implementation (Sawyer et al., 2016). While there may not be one best way of debriefing, the methods simulation educators choose depends on the context of the simulation exercise, as well as their own skills and preferences (Sawyer et al., 2016). There may be potential for debriefing adjuncts to help alleviate faculty workload and improve debriefing effectiveness.

Waznonis (2015; 2016) contributed to the discussion of simulation debriefing through her national survey describing the debriefing practices of faculty in baccalaureate nursing programs. Her survey data indicated that many debriefers are full-time faculty who not only facilitate many debriefings with limited resources, but also lack ways to evaluate a debriefing session's effectiveness. These survey respondents reported some use of adjunct methods, such as written self-reflection, post-simulation assignments, video-assisted debriefing, virtual debriefing, student as peer-observer, and student as codebriefer.

Specific Approaches

While limited research describes all debriefing adjuncts, there are some studies of select debriefing adjuncts. Results on these methods are mixed, and more information is needed to

understand their use and effectiveness in simulation debriefing. The following examples and descriptors of debriefing adjuncts from Waznonis (2014) were considered for this study.

Written Self-Reflection

This method is defined as the student becoming an observer of their own experience and then reflecting on it to see what they have learned (Pierson, 1998). Nursing students have the opportunity to reflect on the simulation experience, their performance, and how it translates to practice outside of the classroom/laboratory environment. With this method, the faculty burden is decreased, and debriefing can continue past the predetermined time frame.

Student Codebriefer

This method is defined as the purposeful matching of students with faculty to facilitate conducting a debriefing session (Lundberg, 2008; Sawyer et al., 2016). Incorporating student codebriefers into the debriefing experience provides a view from the student perspective.

Peer Observer

This method is defined as active engagement in a simulation experience by a student without hands-on activity (O'Regan et al., 2016). The peer observer experiences the simulation by watching. Including these peer observers in the debriefing brings in other viewpoints and ideas, enlightening the student playing the nurse role to their reality (Bonnel & Hober, 2016). This method may be suitable for large groups when resources such as time, faculty, and space are limited.

Audio- and Video-Assisted Debriefing

This method pairs video playback of the recorded simulation sessions with verbal discussion (Chronister & Brown, 2012). Ha (2014) noted that this method can influence

technical skills, improve nontechnical skills, increase desired activities, and promote problem-solving abilities.

Virtual Debriefing

Miller, Farra, and Simon (2018) consider this method a process that incorporates performance feedback in monitored online discussion forums that can occur after a virtual or in-person simulation. Virtual debriefing can occur any time after the simulation, ranging from imediately after two days or even weeks later (Miller, Farra, & Simon, 2018; Verkuyl et al., 2018).

Post-simulation Assignment

Waznonis (2016) described post-simulation assignments as an opportunity for additional reflection time. Journaling is one approach to active learning requiring participation from each student. Further research is warranted for this approach, as few studies discuss activities assigned outside of simulation environments (Waznonis, 2016).

Summary

Prelicensure faculty are expected to prepare well trained nurses in short time periods. Faculty shortages, limited access to clinical sites, and increased time commitments make completing simulation with quality debriefing increasingly difficult. Understanding prelicensure faculty's experiences with using simulation debriefing and debriefing adjuncts could produce information about the best practices for using as wells as promote more widespread use of these methods.

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Purpose of the Study

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While research findings related to simulation environments, faculty, and guidelines exist, very little research has been conducted on specific debriefing approaches and debriefing

adjuncts. Using debriefing adjuncts in simulation could provide nursing faculty active learning activities to enhance debriefing, while also allowing nursing students to engage more fully in order to assimilate knowledge and skills into their nursing practice. The purpose of this study was to explore the experiences faculty had using debriefing and debriefing adjuncts in simulations with prelicensure nursing students.

Research Questions

The following research questions guided this study.

1. What are the experiences of faculty of prelicensure students with debriefing and debriefing adjuncts in simulation?

2. What are the experiences of faculty of prelicensure students regarding challenges and strategies when using debriefing and debriefing adjuncts in simulation?

3. What are the experiences of faculty of prelicensure students in determining efficient resources and effective faculty approaches relevant to debriefing and debriefing adjuncts?

Significance

The aim of this study was to understand a sample of prelicensure faculty's experiences with debriefing and debriefing adjuncts. Potential exists for debriefing adjuncts to help with effective debriefing when resources are limited, help students assimilate knowledge and skills from active learning processes, and promote effective debriefing habits for students to use outside of simulation. Therefore, exploring these experiences could lead to better understanding of how debriefing adjuncts could benefit nursing education.

Researcher's Experience and Assumptions

Professionally, the researcher has seven years prelicensure simulation experience in design, implementation, and debriefing. While the researcher resides and teaches in the state, she has gained education from other states, facilities, and organizations. Her experience includes 13 years of nursing, five years of simulation, and two years in nursing education. Her current faculty position is in a small, rural, private institution in West Tennessee. Classes and simulation experiences are held in a former Sunday school building that was donated to the university. Simulation experiences range from low fidelity (with static mannequins) to high-fidelity and include interprofessional simulations with multiple programs. As with many other nursing programs, faculty in this program struggle with limited resources. The researcher assumed that study participants would be willing to share their experiences using debriefing and debriefing adjuncts and would be open, honest, and accurate in their descriptions.

Definition of Terms

- Simulation – activities that provide realistic clinical environments for procedure demonstration, decision-making activities, and clinical judgment exercises (Jeffries, 2012).

- Simulation debriefing – a time of reflection during which the participant can process the event, discuss it with peers, learn, and modify behaviors (Jeffries, 2012).

- Debriefing adjuncts in simulation – additional active learning elements used during a debriefing process to optimize learning and maximize the impact of the debriefing experience (Sawyer et al., 2016).

- Student codebriefer – the purposeful matching of students with other students or faculty to facilitate conducting a debriefing (Lundberg, 2008; Sawyer et al., 2016)

- Student written self-reflections – exercises in which students become an observer in their own experience and then reflect to see what can be learned (Pierson, 1998).

- Peer observer role – active engagement in a simulation experience by a student without hands-on activity (O'Regan et al., 2016).

- Video-assisted debriefing – debriefing method that incorporates video playback of the simulation session along with verbal discussion (Chronister & Brown, 2012).

- Virtual debriefing – an evolving process that incorporates performance feedback in monitored online discussion forums (Miller, Farra, & Simon, 2018).

- Post-simulation assignment – activities assigned outside of the simulation environment to actively engage students in learning preparation.

Summary

Nursing programs face challenges such as faculty shortages, limited clinical sites, and limited time. Debriefing that incorporates debriefing adjuncts may help faculty use limited resources efficiently and effectively while providing active learning for students. Limited research on the effectiveness of debriefing adjuncts in simulation exists (Chronister & Brown, 2012). Additionally, there is limited evidence to support any best practices for using these methods (Nardi & Gyruko, 2013). Further research on debriefing and debriefing adjuncts is needed. Determining faculty experiences with debriefing and debriefing adjuncts in simulation, including challenges and strategies is an initial step. A better understanding of debriefing and debriefing adjuncts in simulation can lay groundwork for future research and help build the science of nursing related to debriefing and debriefing adjuncts in simulation.

Chapter Two: Review of the Literature

The purpose of this literature review was to provide study background on debriefing and the use of debriefing adjuncts in simulation. While many studies address simulation and debriefing, none provide a comprehensive exploration of debriefing and debriefing adjuncts in simulation. Results from this review highlight the gaps in the literature faculty use of debriefing and debriefing adjuncts in simulation.

A search was conducted using the CINAHL, CINAHL Complete, EBSCO, and Google Scholar databases. The limits applied to the search were language (English) and year of publication (1990–2019). The key terms used during the search were *simulation*, *debriefing*, *self-reflection*, *self-directed learning in nursing*, *self-reflection in nursing*, *self-assessment in nursing education*, *peer debriefing in nursing education*, *observer role in simulation*, *reflective observer*, *team nursing*, *debriefing adjuncts*, *adjuncts in debriefing*, and *nursing education*. The discussion is organized in the following themes derived from the literature: simulation debriefing methods; organizational guidelines for simulation and debriefing; self-reflection and self-assessment as a debriefing component; active learning and debriefing adjuncts in simulation; other debriefing literature and considerations; theory; and the strengths and gaps of the literature related to debriefing adjuncts.

Simulation Debriefing Methods

Over the past several decades, the active learning method of simulation has become a mainstay in clinical education to promote team training and learning (Hunter, 2016). To best engage participants in simulation, faculty need to recognize the fact that humans think about reality in three modes: physical, conceptual, and emotional/experiential. The art and science of simulation skillfully blends the three. It is possible for a single simulation activity to trigger more

than one mode. Moreover, different types of simulations address each of the three modes in distinct ways (Rudolph, Simon, & Raemer, 2007).

Debriefing has been well documented as an important component of simulation used in the development of clinical reasoning skills (Dreifuerst, 2012). Debriefing is considered a time of reflection during which participants can process the event, discuss it with peers, learn, and modify behaviors. All of the debriefing models addressed in the literature include some type of guided reflection and facilitated group discussion (Hunter, 2016). Self-reflection and practice improvements are considered central components of effective debriefing. Debriefing models offer guidance for providing constructive, real-time feedback to students (Hunter, 2016). Methods are evolving as experts in the profession continue to develop new effective debriefing strategies. NCBSN (2016) has recognized the INACSL guidelines as the standard for simulation best practices.

Debriefing is a vital activity for active learning in simulation education. Deep learning occurs during debriefing when exploration of the simulation provides an opportunity for rich dialogue on how to prioritize patient safety, communicate with healthcare providers and patients, and develop clinical judgment (Padden-Denmead et al., 2016). The debriefing process allows students to think through and discuss the simulated experience so they can gain more insight into and appreciation for the knowledge and skills needed for future applications. Sharing constructive feedback is an essential component of learning in simulation and debriefing. The facilitator's role is to create a safe environment for students to learn through meaningful, focused discussions. Despite the documented importance of this type of environment (INACSL Standards Committee, 2016), the existing literature provides little guidance on faculty approaches to create a setting where the participants feel safe and challenged enough to engage in simulation learning.

Debriefing methods or models that are built upon reflective practice—a method used to scrutinize one's assumptions and professional work practices that occur in a collaborative setting—provides one approach to this situation. A positive environment in which dialogue from facilitators includes open-ended and leading questions allows participants to arrive at their own learning (Rudolph et al., 2016).

Rich data on simulation debriefing practices was obtained by Waznonis (2015), using a mixed-methods study surveying 205 faculty. Of the 205 faculty surveyed, 23 participated in the study's interview portion. The researcher found many debriefers were full-time faculty who participated in several debriefings with limited support and resources. Training gaps were found in several areas including confidentiality factors, student engagement, prebriefing, and evaluation. Three themes also emerged from the data: having students' best interests at heart, getting over the emotional hurdle, and intentional debriefing evolving into learning. Debriefing deficiencies included insufficient faculty development, and limited use of a structured framework and debriefing evaluation (Waznonis, 2015).

In a summary of the debriefing literature, Waznonis (2014) described 22 possible debriefing aspects including addressing learning objectives, recall, discussing feelings, exploring meanings, reviewing behavior, guided reflection, oral assignments, written assignments, structured guides, video, media, lecture, games, expressive arts, storytelling, and peer feedback. Waznonis noted that current debriefing research focuses on best practices for debriefing session length, environment, atmosphere, faculty experience, faculty role, student role, objectives, methods, phases, approaches, evaluation, and challenges (Waznonis., 2014). She noted that simulation debriefing methods, phases, approaches, elements, and evaluation all are interconnected. While some similarities exist in debriefing components and approaches currently

used by faculty, she stated that debriefing should be designed within the context it is being used. This approach leads to considerable variations in debriefing tactics. While Waznonis (2014) summarized the literature with a general description of these methods, very little research addressed specific guidelines or best practices. The literature review strongly highlighted the dearth of study results addressing best practices for debriefing.

Waznonis (2015; 2016) described the simulation debriefing practices of faculty in accredited, traditional, baccalaureate nursing programs in the U.S. While best practices include debriefing by a competent facilitator in a safe environment, Waznonis (2015) found that many debriefers were full-time faculty facilitating a large number of debriefers with limited support and resources. Waznonis (2016) also noted that best practices included using a structured framework, however, often this is not included in faculty education. Other reported gaps were found in training, confidentiality, student engagement, prebriefing and evaluation of debriefing. She also noted that these approaches may not be used consistently in all nursing education.

In their phenomenological study with 28 students divided into focus groups, Fey et al. (2014) reported that students found that establishing a safe environment, drawing from multiple perspectives, and reflective conversation were crucial to learning during debriefing. Debriefing helps students assimilate knowledge into practice, making safer nurses and improving patient care (Fey et al., 2014).

Organizational Guidelines for Simulation and Debriefing

As simulation and debriefing continue to be used throughout nursing education, nursing organizations have begun to develop standards and policies for their use. Following is a discussion of several guidelines being used today.

Promoting Excellence and Reflective Learning in Simulation

The PEARLS framework, used by the AHA, integrates three educational strategies into debriefing: learner self-assessment, facilitated focused discussion, and information in the form of directive feedback and/or teaching. The tool includes scripted language to guide the debriefing process. The framework offers a structured framework that is adaptable to debriefing simulations with a variety of goals. The framework and scripts fill a need for many healthcare educators who are just learning to facilitate debriefing in simulation. Eppich and Cheng (2015) discussed the PEARLS framework generally (e.g., when crisis or emergent situations required debriefing). These researchers also broadly described the use of adjuncts (video and technology) in debriefing, as well as other methods dictated by specific experiences.

The International Nursing Association for Clinical Simulation and Learning

INACSL is an organization designed to advance the science of healthcare simulation. The goal is to provide professional development, expand networking opportunities, advance the science of healthcare simulation in academics, practice and industry. INACSL operationalized its mission by developing the first standards for effective simulation practice (INACSL International Association for Clinical Simulation and Learning, 2020).

To help nursing school faculty implement simulation programs, the INACSL Standards Committee developed eight standards for effective simulation and debriefing including the *INACSL Standards of Best Practice: Simulation Debriefing*. As discussed in Chapter One, this standard consists of five necessary criteria needed for simulation debriefing, ranging from facilitator competency to a purposeful approach to meeting objectives. Not following this stander can lead to unsuccessful debriefing sessions and a create a potentially uncomfortable student experience. While these standards address all aspects of simulation including debriefing

(INACSL Standards Committee, 2016), debriefing adjuncts, including methods for actively

engaging students in simulation, are not clearly addressed.

The Society for Simulation in Healthcare

The Society for Simulation in Healthcare (SSH) developed a Healthcare Simulation

Dictionary that defines many common terms used in simulation and debriefing such as

debriefing, *guided reflection*, and *reflective thinking*. The dictionary describes debriefing as

formal, collaborative, and reflective process within a simulation activity (SSH, 2016). While

active student engagement is included in this dictionary's definitions, it does not provide specific

guidelines for achieving this aim.

National Council of State Board of Nursing

Recognizing the need for educational, evidenced-based simulation practices, the NCSBN

conducted a study to explore the effectiveness of simulation when used in place of clinical

experiences (Hayden et al., 2014). Their findings indicated that baccalaureate nursing students

could be safely prepared for practice when up to 50% of their clinical time is replaced with

effective simulation. For study purposes, the NCBSN used INACSL guidelines (INACSL

Standards Committee, 2016) and SSH definitions.

The National League for Nursing

The NLN developed education for prelicensure faculty who wish to maintain best

practices in simulation and debriefing. On-line and in-person NLN training modules provide

templates and paperwork for the educators. The simulation template includes guided questioning

to help faculty actively engage students in debriefing. These questions were developed to follow

INACSL's debriefing guidelines (INACSL Standards Committee, 2016; NLN, 2010).

Elsevier Education Guide

      The Elsevier Simulation Guide was developed by the publisher with input from faculty experts. Elsevier's recommended debriefing structure and standards are outlined in the guide's debriefing chapter (Bristol et al., 2019). This guide uses an updated PEARLS framework that integrates INACSL and NCSBN simulation and debriefing standards.

      Within nursing education, INACSL is currently considered the standard for simulation and debriefing guidelines. As noted, NSCBN's (2019) best-practice recommendations consider INACSL guidelines (INACSL Standards Committee, 2016) the standard for nursing education. However, further work is needed to determine if these guides can help faculty engage students in active learning.

Self-reflection and Self-assessment as Debriefing Components

      The activities of self-reflection and self-assessment consistently are included in descriptions of debriefing. A meaningful descriptor of reflection is turning experience into learning (Bonnel & Hober, 2016). Reflection is an active thinking process for nursing students, and a valuable tool that contributes to clinical judgement. Reflective practices have been shown to facilitate learning by combining experience and consciousness (Bonnel & Hober, 2016). Self-reflection allows student nurses to make sense of an experience and gain strategies for future success in clinical practice.

      Glass and Ward (2018) studied mental health students' ability to self-reflect on their performance. During and after clinical experiences, these students (n=40) used reflection with the help of a written guide for performing self-assessments. Students freely expressed their opinions on their clinical experiences, and what they gained from their placements. Students tended to rate themselves critically, underestimating strengths and overestimating areas needing

improvement. In fact, most students rated themselves more critically than did their clinical educator. Even though these students were willing to participate in the self-assessment process, they questioned their ability to reflect on and review their competencies effectively (Glass & Ward, 2018).

Browning and Cruz (2018) studied reflective debriefing in acute care nurses following a traumatic event. They found that 100% of participants wanted to continue reflective debriefing as part of their work after a traumatic event because it improved their job satisfaction and overall well-being (Browning & Cruz, 2018).

Using a qualitative approach, Addleman et al. (2014) interviewed nine faculty members about their use of self-reflection with culturally responsive teaching approaches. After participating in debriefing, participants were asked to reflect on four prompts using reflective writing. While the findings indicated that self-reflection facilitated culturally responsive teaching, they also revealed the presence of judgmental leading questions, superficial discourse, hesitancy to share as well as a lack of open and honest questions and emotional or cognitive engagement (Addleman et al., 2014). These researchers suggested that students may not feel completely comfortable with written self-reflection as a debriefing method and posited that guidelines and environment play a part in this method's success.

Lavoie, Pepin, and Boyer (2013) studied five intensive care unit nurses who pilot tested a teaching intervention that combined reflective debriefing with a simulated critical care experience. Students' learning and satisfaction perceptions were collected using an open-ended questionnaire administered after the simulation. Participants reported that reflective debriefing helped them understand their thinking during the simulation and contributed to the development of their clinical judgment, care prioritization, and assessment capabilities. The study results

indicated that reflective debriefing could be a safe and effective way for novice critical care nurses to learn about a specific experience and improve their clinical judgment (Lavoie, Pepin, & Boyer, 2013).

Active Learning and Debriefing Adjuncts in Simulation

The literature indicated a variety of teaching-learning methods educators employ for simulation debriefing. As noted by Waznonis (2014; 2015; 2016), while some debriefing methods appear to be more popular than others, there is no such thing as a typical debriefing. As supported by the literature, active learning approaches best support learning.

Active learning is student-centered as it relies on students' participation and investment in content knowledge throughout all phases of the learning process. Educational activities engage students in learning opportunities that are adapted to the learning situation (Billings & Halstead, 2012). Debriefing adjuncts can be considered active learning techniques. Active learning strategies, incorporating multiple ways of learning, have the potential to enhance information retention, improve assimilation of learning, provide a deeper understanding of course material, enhance teamwork, and improve critical thinking and problem-solving skills (Billings & Halstead, 2012).

Debriefing adjuncts in simulation—considered additional or optional elements used during the debriefing process to optimize learning and maximize the impact of the debriefing experience—fall into the category of active learning strategies (Sawyer et al., 2016). Following is a discussion of six active learning and debriefing adjunct examples covered in the literature: written self-reflection, student as codebriefer, peer observer role, audio- and video-assisted debriefing, virtual debriefing, and post-simulation assignments.

Written Self-Reflection

Written self-reflection is defined as the process in which a student becomes an observer of their own experiences and then reflects on these experiences to determine what they have learned (Pierson, 1998). Using a qualitative grounded theory approach with a sample of nursing students (n=6), Davies (1995) found that the active learning strategy of written self-reflection helped shift the focus from student learning to patient care. Engaging in written reflective journaling after the clinical day allowed students in this study to accept responsibility for their own learning needs and actively seek information and learning resources. In contrast to passive learning, students using written self-reflection for clinical debriefing and journaling took a more active role in their learning.

Padden-Denmead et al. (2016) studied written reflective journaling when they conducted a descriptive correlational study to determine the relationship between critical thinking and students' reflection level. Twenty-three baccalaureate students were evaluated on the written reflective journal entries, that they produced after two simulation exercises that included a written guided debriefing activity. The results supported the use of guided reflection after significant learning experiences.

A study by Reed (2014) compared three debriefing types, two of which involved writing: discussion alone, discussion followed by journaling, and discussion followed by blogging. Undergraduate nursing students participating in a simulation were randomized to one of these three debriefing type groups. Following completion of the debriefing activities, students completed the Debriefing Experience Scale, a valid and reliable quantitative tool designed to evaluate students' debriefing experiences. In this study, results indicated that students preferred discussion debriefing over discussion debriefing with a written component (Reed, 2014).

Using a convenience sample of 123 senior nursing students, Kan and Yu (2018) compared the effectiveness of written self-debriefing (in problem solving, team effectiveness, debriefing assessment, and debriefing satisfaction) between an experimental group (who had student self-debriefing and instructor debriefing) and a control group (who had only instructor debriefing). The experimental group, using written self-debriefing, showed significant improvements in problem solving and debriefing satisfaction, compared to the control group, but not in debriefing assessment or team effectiveness (Kang & Yu, 2018).

Student as Codebriefer

Student-led debriefing is another type of debriefing that has limited study. Tutticci et al. (2017) studied the use of instructor- and student-led debriefing using a three-arm nonequivalent control group design (n=346) and three measures: The Reflective Thinking Instrument, Visual Analog Scale [ranging from 0 to 100], and General Self-Efficacy Scale. Higher levels of critical reflection were found when student debriefings were facilitated by an instructor or an instructor and a student. Therefore, debriefing partnerships between instructors and students can facilitate students' use of reflection as a debriefing method (Tutticci et al., 2017).

Additional studies comparing student peer lead debriefing to faculty debriefing were found in the literature (Roh,Kelly,& Ha, 2016; Kim & Gagne, 2018; Doherty-Restrepo et al.. 2018; Boet et al., 2016). While totally peer led debriefing may be a future consideration, INACSL standards currently indicate the need for faculty presence.

Peer Observer Role

In simulation, the observer role allows nursing students to practice the reflective position and offers an effective approach for extending the number of participants allowed in a simulation. The reflective observer is given the opportunity to practice the clinician's role in

promoting self-assessment, peer review, and team quality. Using a descriptive qualitative design, Bonnel and Hober (2016) conducted a secondary data analysis of the observer role in simulation. These reflective observers (N=23) reported the importance of their roles and felt part of the care team. These roles also were valued as active learning opportunities. Moreover, the observer role allowed learners to see the big picture during simulation (Bonnel & Hober, 2016).

Reime et al. (2017) used a concurrent mixed-method study to evaluate observer and participant experiences in interprofessional simulation training. These postgraduate and graduate nursing students and medical students (n=262) were organized into 44 interprofessional teams. This evaluation was completed using qualitative methods including questionnaires, observations, and focus group interviews. The qualitative data highlighted the importance of participation in different roles, multiple training opportunities, and interprofessional training to enhance realism. Observation in simulation training also was considered a valuable learning experience. With proper instruction, the observer was not passively viewing performance, but actively seeking to understand and learn from others in the simulation (Reime et al., 2017).

Ensuring the use of solid, evidenced-based practice is important as more learners are being used in an observer role. In their systematic review, O'Regan et al. (2016) focused on observers' learning from and satisfaction with simulation. Their results showed that learning outcomes and role satisfaction were improved by learner engagement and the use of valid and reliable observer tools. Observers can have an active role in learning either through hands-on learning or active observer roles (O'Regan et al., 2016).

Levett-Jones et al. (2015) studied the implementation of tag team simulation as an innovative approach for improving participant and observer engagement during group simulations. Tag team simulation was considered when two or more participants took turns as

team members working towards a same goal. Evaluation was conducted with 444 nursing students, using the Satisfaction with Simulation Experience Scale. Findings suggested the tag team simulation, engaging the observer, was an effective approach for ensuring active involvement by all students (Levett-Jones et al., 2015).

Norman (2018) studied nursing students (n=121) and the difference in learning outcomes of observer students who had an observational guide during a simulation-based experience versus those without a guide. The observational guide was designed by the researcher and based on the simulation's learning objectives. Data analysis from this quasi-experimental study found no significant improvement in knowledge, self-confidence, or collaboration in those who used an observational guide versus those who did not. Students without the guide reported lower satisfaction with the simulation, however, there were no differences in learning outcomes. Study results highlighted the need for more research is on student involvement in simulations as observers (Norman, 2017).

Johnson (2019) performed an experimental, pretest-posttest, repeated measures study to identify simulation experiences of full participant versus observer knowledge demonstration, retention, and application after a simulation and debriefing. A convenience sample of senior, baccalaureate nursing students (n=119) was used, with 59 students in the participant role and 60 in the observer role. No significant difference was found between the two groups for any measures. The researchers noted that while observers and participants appeared to construct knowledge in a similar way, more exploration is needed on the value of the observer role in simulation and debriefing (Johnson, 2019).

Audio- and Video-Assisted Debriefing

Audio- and video-assisted debriefing are described as methods used to incorporate audio/video playback of the simulation session into verbal discussion (Chronister & Brown, 2012). In his study, Ha (2014) using a Q-methodology, an analytical method of considering subjective viewpoints studied 44 third year prelicensure nursing students. He found that two components, understanding and respecting their attitudes toward video-assisted debriefing and encouraging reflection on their learning, were an important part of their active learning strategies. He recommends knowing students' learning styles and having proficient instructors for reinforcing students' attitudes toward video-assisted debriefing.

In his qualitative, interpretive descriptive study of integrating videos into debriefing, Bussard (2016) administered a nine-item survey to a sample of prelicensure nursing students (n=20). Results suggested that self-reflection with video-recorded scenarios could be beneficial to the development of clinical judgment. Students who effectively completed self-reflection had improved confidence, communication, and decision making after viewing their recorded high-fidelity simulation scenarios (Bussard, 2016).

Also related to video recording, Boet et al. (2011) completed a prospective, randomized, controlled study with a sample of anesthesiology residents (n=50). These participants were randomized to one of two groups: a video-assisted self-debriefing group or an instructor-led debriefing group. In the video-assisted self-debriefing group, students reviewed a pretest scenario using the Anesthetists' Non-Technical Skills scale as a guide. The instructor-led debriefing group reviewed their pretest scenario using the same guide, but with the help of an expert instructor. Immediately following their respective debriefings, subjects managed a second

simulated (post-test) crisis. Study findings suggested that video assisted self-debriefing can be effective teaching of nontechnical skills (Boet et al., 2011).

Chronister and Brown's (2012) comparative, crossover study contrasted two groups of undergraduate nursing students enrolled in a critical care course (n=37). Both groups received a standardized simulation, with one group receiving only verbal debriefing and the other group receiving verbal debriefing with video playback. Faculty scores of the students suggested that the quality and speed of student skills (assessment and psychomotor) could be improved by combining audio and visual debriefing. Authors noted that engaging both visual and aural senses during debriefing can pique student interest, increase engagement, and contribute to higher learning (Chronister & Brown, 2012).

Ballangrud et al. (2014) found positive results using an exploratory design (n=53) to study video debriefing. The Mayo High Performance Team scale, with a face- and content-validity, was used to have students evaluate themselves after a simulation and video-debriefing session. Scores from this tool supported that registered nurses' self-assessments using video were useful in raising awareness of team performance regarding patient safety (Ballangrud et al., 2014).

Virtual Debriefing

Virtual debriefing is described as an evolving process that incorporates performance feedback in monitored online discussion forums (Miller, Farra, & Simon, 2018). Few resources are available to guide effective virtual debriefing. Taking advantage of the unique characteristics of virtual debriefing likely will require simulation educators to shift their thinking and learn how to use this resource to optimize learning; development of best practices for virtual simulation and debriefing must be established (Verkuyl et al., 2017).

Sharing case experience in graduate nurse practitioner program, Gordon (2017) discussed how a synchronous, web-based internet conferencing platform was used to conduct debriefing sessions following immersion in an asynchronous learning environment. In this project, simulation faculty, developers, and debriefing facilitators applied and adapted INACSL standards and NLN guidelines; they documented successful approaches to debriefing in virtual environments using existing standards and guidelines. They reported students gained valuable knowledge about how to debrief their own experiences and performances to foster learning (Gordon, 2017).

Verkuyl et al. (2018) used a focus-group study methodology with a convenience sample of 24 nursing students to explore self-debriefing, virtual debriefing, and in-person debriefing methods after a virtual reality simulation. Participants were placed into a focus group based on the type of debriefing method used. Study results were categorized into four thematic areas: defusing, discovering, deepening, and environment. The skilled facilitators enhanced dialogue and engagement during debriefing, and helped students navigate perspectives and connect theory with practice. While the debrief questions facilitated the debriefing process, participants still searched for conversation and clarification from others. Authors noted the need to study furhter how to use the unique features of virtual debriefing to promote learning and reflection (Verkuyl et al., 2018).

Miller, Farra, and Simon (2018) used a descriptive approach to evaluate asynchronous online debriefing of virtual reality simulations, including the quantity and content of posts of 34 participants. Data from two focus groups also were analyzed qualitatively as part of the debriefing experience. Nurses debriefing responses focused more on the virtual reality simulation's format than on participant learning. The authors indicated there is potential for

monitored online asynchronous debriefing to be effective and beneficial if participants receive clear instructions and expert facilitation (Miller, Farra, & Simon, 2019). Further study is indicated.

Post-simulation Assignments

Post-simulation assignments are considered opportunities for student learning. The following study addresses using written debriefing after formal debriefing as well as other types of post-simulation assignments. Petranek (2000) proposed capturing the learning achieved through simulation and oral debriefing and using it as a foundation for attaining more learning from assigned written debriefing. Allowing students to reflect on an experience and their related emotions could help them put the experience in perspective. Written debriefing allows students to reflect on their behavior and privately communicate with their instructor, and faculty to assess individual student learning (Petranek, 2000). Although the benefits often outweigh the challenges, a difficulty noted with this method was the time required to evaluate the writing.

Aghera et al. (2018) evaluated the impact that integrating formal learning goal generation into standard debriefing processes had on further goal development and application of learning. A prospective multicenter randomized controlled study of 80 emergency medicine residents at three academic hospitals compared the process of setting goals for further practice as a debriefing component to standard debriefing methods that did not include this process. While no difference was found in goal quality between the standard debriefing group and the goal-setting group, educational actions were enhanced in the goal-setting group (Aghera et al., 2018).

In a theory-based article, Oermann (2006) discussed how short written assignments could be used in clinical nursing courses to promote the development of critical thinking skills. She suggested that many short-written assignments could be done as post-clinical conferences and be

critiqued by peers rather than faculty. The feedback could be used for instructional purposes or evaluated and graded by faculty. Short written assignments provide an alternative to some of the current assignments students complete in nursing courses and can promote critical thinking (Oermann, 2006).

<div align="center">**Other Debriefing Literature and Considerations**</div>

Debriefing Education

As described in the literature, the debriefer's level of debriefing education and training can influence the debriefing process. Debriefing is most effective when it performed correctly by trained facilitators (Wickers, 2010) who follow predetermined, structured guidelines (Mariani et al., 2013). Education and training can influence the debriefer's ability to convey factors identified during the simulation and engage students in learning during the debriefing process (Jeffries, 2012). Additionally, education may help debriefers acknowledge how their own beliefs could unintentionally bias their communication efforts during the debriefing process (Wickers, 2010).

The importance of faculty debriefing education is evident. All current educator textbooks and simulation trainings include debriefing as an important topic. Simulation vendors offer on-line webinars and in-person training in debriefing. National organizations provide guidelines and education for faculty involved in debriefing students.

The NLN has a full website on simulation education for faculty that includes debriefing. Sixteen courses are offered online, covering concepts ranging from the basics of designing debriefing simulations to conducting debriefing evaluation and research. Newer courses include interprofessional education, simulated patients, advanced debriefing, and advanced evaluation (NLN, 2019).

The INACSL Standards Committee (2016) suggests that debriefers receive initial education through a formal course, continuing education, or work with an experienced mentor. To maintain effective debriefer skills, educators should pursue continuing education and skills assessment (INACSL Standards Committee, 2016).

Cheng et al. (2015) discussed how little is known about how faculty development opportunities should be structured to maintain and enhance the quality of debriefing in simulation. These researchers discovered five issues key to the development of debriefing education: teaching appropriate methods, choosing appropriate methods to teach skills, learning the best way to assess debriefing effectiveness, knowing the best use of peer feedback in debriefing, and individualizing debriefing training to improve learning outcomes. Further research into these issues is needed to determine which concepts are the most important for improving debriefing skills for simulation activity (Cheng et al., 2015).

Cheng et al. (2017) introduced peer coaching as a method for integrating education into the flow of debriefing to enhance student skills. They used a feedback form to develop the who, what, when, where, why, and how of peer coaching. In their survey of faculty, ten items were identified as important in peer coaching: psychological safety, framework, method/strategy, content, learner centeredness, co-facilitation, time management, difficult situations, debriefing adjuncts, and individual style/preference (Cheng et al., 2017).

Debriefing Evaluation

Different approaches to evaluation of debriefing effectiveness were evident in literature. In their mixed-methods study with junior-level baccalaureate nursing students (n=86), Mariani et al., 2013 examined the effects of structured debriefing on clinical judgement. Data from focus group interviews suggested that structured debriefing was learner focused and was found to

increase proficiency in basic nursing skills, improve recognition of lab data, and promote efficiency in reviewing physician orders (Mariani et al., 2013).

In evaluating the effectiveness of debriefing methods, Dreifurst (2012) used an exploratory, quasi-experimental, pretest-posttest study with 238 nursing students. She concluded that nonstandardized debriefing methods may not provide effective debriefing and therefore require further testing. Shinnick et al. (2011) used a two-group, repeated measures, experimental design (n=162) to compare student knowledge scores pre and post debriefing. The scores indicated that knowledge improved only after the debriefing.

Fey et al. (2014) used a phenomenological study to investigate baccalaureate nursing students' perceptions of debriefing characteristics that contributed to their ability to learn. A focus group, consisting of 28 students, was conducted after simulation. Five themes emerged as supporting the students' ability to learn during debriefing: a safe environment, debriefing to explore thoughts, feedback from multiple perspectives, we are all in this together, and group facilitation (Fey et al., 2014).

Further study of debriefing approaches is important to assure the effectiveness of this often time-intensive process (Reierson et al, 2017). More research exploring the usefulness of debriefing adjuncts is warranted. Seeking to understand faculty experiences with debriefing adjuncts in simulation is a reasonable step in this process.

Systems Components as an Organizing Framework

Donabedian (1980) developed basic approaches to the assessment of quality healthcare: structure, process, and outcome. In his early work, structure is defined as the stable characteristics of providers, tools, and resources, and a physical or organizational setting.

Outcome was considered the change in a current or future status. Process was considered the relationship between structure and outcome.

In 2003, the definitions of structure, process, and outcome were updated. Structure was meant to designate the conditions under which care is provided. Process included the activities that constitute healthcare. Outcomes were changes in individuals or populations that could be attributed to healthcare (Donabedian, 2003).

The structure-process-outcome framework has been frequently used in nursing education. In education, systems have processes to accomplish educational goals. Simon (2009) posited that higher learning organizations tend to lean towards open systems that advance education culture and a productive community. The Systems framework provides a foundation for scientific education and an integrated approach to science education at a higher level (Simon, 2009).

Maintaining competence is a professional responsibility in any career and requires a team effort. These efforts promote continual professional nursing development with the concepts of growth, learning, and change. Bodin (2017) identified inputs as the learning and educator, throughputs as various learning activities, and outputs as learning, change, professional growth, and competence. The environment can be wherever the learning takes place (Bodin, 2017).

Hanson (2001) applied general systems theory to institutional environments. The model —with input, throughput, output, and an emphasis on feedback—is tied to its external environment. In an educational system, the external environment provides inputs, such as teachers, instructional materials, and state laws. Outputs are educated students heading to the workplace or another level of education. Feedback can come in many forms: acquired experiences, test scores, new tax dollars, and support. Formal and informal expectations,

regulations, information, norms, laws, and their impact on the school tend to develop a structuration, or connectedness (Hanson, 2001).

Strengths and Gaps of Literature Related to Debriefing Adjuncts

Debriefing is considered an integral part of simulation, which supports knowledge acquisition from a simulated activity. Research has shown the value of debriefing in helping students prepare for clinical practice. While national organizations have addressed the need for debriefing best practices, debriefing with active learning adjunct methods (including activities that engage students for learning) have not been well addressed. With further research, debriefing adjuncts for active learning in simulation may have a place in nursing education.

While select debriefing adjuncts for active learning in simulation have been described individually in the literature, few authors have described debriefing adjuncts collectively with debriefing in simulation. The usefulness of debriefing adjuncts as components of simulation, to extend student learning and faculty resources, needs further exploration.

Summary

Further research is needed to determine faculty experiences of debriefing and debriefing adjuncts in simulation, including their strategies and challenges. Consistent with new areas of study, qualitative approaches can provide a basis for further research on these methods. Enhancing students' knowledge, practices, and their ultimate provision of safe, quality patient care is the ultimate goal. The results of this study can provide a first step in raising awareness about and offering a better understanding of debriefing and adjunct debriefing practices for active learning.

Chapter Three: Methodology

The purpose of this study was to explore the experiences of prelicensure faculty using debriefing and debriefing adjuncts in simulation. The researcher, using a qualitative thematic approach, surveyed and interviewed nurse educators from one state to do this. This chapter describes this study's research methods including research questions, qualitative descriptive design, sample and setting, data collection and analyses, ethical considerations, rigor and trustworthiness, and study limitations.

Research Questions

The nursing faculty shortage, limited clinical sites, and growing roles for nurses are challenging nurse educators to prepare prelicensure nursing students for realistic nursing practice. New graduates are expected to be independent, functional nurses much sooner than in previous years. Because simulation provides a bridge from didactic to clinical experiences, all aspects of the process are ripe for research, including understudied simulation adjuncts. To help address the research gap, the following three researcher questions were used for this study.

1. What are the experiences of faculty of prelicensure students with debriefing and debriefing adjuncts in simulation?

2. What are the experiences of faculty of prelicensure students' regarding challenges and strategies when using debriefing and debriefing adjuncts in simulation?

3. What are the experiences of faculty of prelicensure students in determining efficient resources and effective faculty approaches relevant to debriefing and debriefing adjuncts?

Research Design

The researcher used a qualitative descriptive design with naturalistic inquiry for this study. Qualitative descriptive design provides a summary of everyday, factual data with an

understanding of a selected phenomenon (Colorafi & Evans, 2016). Qualitative descriptive studies are considered the least theoretical and tend to draw from naturalistic inquiry. The goal of qualitative descriptive studies is to produce findings as close as possible to the data as it was given, meaning the data are less transformed than, for example, those of grounded theories studies. This approach provides a comprehensive summary of an everyday event in nursing education. Researchers using this method stay close to the data and the surface of the words and events described by their participants (Sandelowski, 2010).

Qualitative description is helpful in health environment research because it provides factual responses to questions about how the participants feel in their environment. Novice health researchers are well-suited for this design because it can be used with a variety of theoretical approaches, sampling techniques, and data collection strategies. Qualitative descriptive design aligned with this study purpose by providing the researcher with a broad summary, including a reflective account of the debriefing method.

Naturalistic inquiry involves a commitment to studying something in its most natural state within the context of the research environment (Patton, 2015). The goal is to use research techniques that allow the phenomenon to present itself as if it were not under study (Sandelowski, 2011). In such inquiries, real-world situations are studied as they unfold naturally while the researcher remains open to whatever emerges (Patton, 2015). Naturalistic inquiry also shows that a close connection between scientific and philosophical theories should exist with the hope of developing an adequate description of knowledge and science as the research progresses (Godfrey-Smith, 2003).

In natural inquiry, there is no preselection of study variables, data manipulation, or prior commitment to a theoretical view (Sandelowski, 2011). For this study, naturalistic inquiry gave

the researcher a view into the actual experience of faculty using debriefing and debriefing adjuncts in simulation. The researcher did not attempt to affect, control, or manipulate what transpired naturally. She did not manipulate the study variables, but instead developed an adequate description of knowledge from the participant's natural state.

The researcher used both reflective dichotomous and open-ended survey questions to gain data and determine themes from the educators' perspectives. Dichotomous questions (e.g., use vs. do not use) are appropriate at certain times in qualitative research. The use of a dichotomous response is helpful to check the significance of a question and then ask additional questions to obtain more information (Patton, 2015). In this study, dichotomous questions were intended to help participants reflect and self-asses their own practices prior to answering open-ended survey questions (Patton, 2015). After the survey, follow-up interviews were used to confirm and extend survey findings.

This qualitative descriptive study provided a summary of prelicensure nurse educators' experiences with debriefing and debriefing adjuncts in simulation. The themes derived from open-ended survey and interview question data provided context and details relevant to these methods. Data collection focused on events detailed by prelicensure nurse educators with a straightforward summary of the data provided.

Sample and Setting

A purposive sample was used for this study as it allows researchers to study select participants who meet inclusion criteria in order to obtain rich information related to an interest (Patton, 2015). Data was collected from the Tennessee Nurse Educator Institute (TNEI), a statewide organization.

The State of Tennessee has 70 accredited prelicensure programs including 23 public practical nursing programs. The state's 19 associate degree programs and 28 baccalaureate degree programs are a mix of publicly and privately funded programs. Educators in these programs must obtain a degree higher than the program in which they are teaching (Tennessee Board of Nursing, 2019). Faculty members with graduate degrees and specialties are difficult to find and hire, making identifying the challenges and best resources for those currently teaching an important undertaking.

TNEI is a conference for nurse faculty developed by the Tennessee Deans and Directors of Schools of Nursing. The mission of the TNEI is to provide continuing education that is open to all nurse educators in the state. The conference consists of a one-day preconference and a two-day conference. Educators have the option to attend one or all days. Approximately 30 to 40 educators have attended this annual event over the past few years. Recently, conference organizers have changed their marketing efforts to increase attendance (J. Webb, personal communication, April 12, 2019). Fifty-six attended the conference. There were 46 responses with a response rate of 82%.

The sample for this qualitative study were selected from among TNEI 2019 participants. This group was chosen because of its attendees' diversity, as participants come from all over the state, including rural and urban areas. Additionally, participants have experience with on-line and on-ground simulation programs and would likely have concerns and experiences similar to those of other state educators. A diverse, statewide population may help better understand experiences relevant to debriefing and debriefing adjuncts in simulation.

To be eligible for this qualitative study, participants had to be prelicensure faculty (full-time, part-time, or adjunct faculty), in a practical, associate, or baccalaureate degree program in

Tennessee that participates in simulation and debriefing multiple times per semester. Participants had to be willing to complete a survey and were given the option to participate in an in-person interview. Exclusion criteria were educators who worked either in graduate-only programs or programs that did not use simulation.

The researcher contacted the conference coordinator to gain permission to speak with attendees as part of this study process (Appendix A). Attendees were invited to participate in a survey that was distributed at conference meetings. Participants also were invited to participate in a follow-up interview at a later time to validate and add detail to the survey findings.

While no specific sample size is recommended in qualitative research, smaller samples typically are used, as the intent is to understand the phenomenon, not assure population representativeness (Gentles et al., 2015). A sample size of 30–40 prelicensure faculty was sought for survey completion. This larger number was chosen purposefully, as the researcher sought to gain a broad sampling perspective for this new area of study. As noted, there were 46 respondents with a response rate of 82% of those attending the meeting.

Data Collection

Time Frame. Recruitment began after approval was obtained from the Human Subjects Committee at the University of Kansas Medical Center (KUMC). The researcher invited TNEI members to participate in a survey during meetings held August 2019. Data was collected using the procedures listed below.

- Participants were given a study invitation letter that explained the study purpose, data collection methods, and the opportunity to participate (Appendix B).

- Participants also received an informed consent form (Appendix C) and a hard copy of the survey (Appendix D).

- Participants were asked to leave the completed surveys in boxes positioned by meeting exits.

- With the survey, participants also received a separate form inviting them to leave their email for follow-up if they were interested in participating in a one-on-one interview (Appendix E).

- Interviews were conducted November 2019 after survey data analysis was completed.

Data Collection – **Survey**. Data was collected from the completed written surveys (Appendix D) designed to elicit prelicensure faculty's responses about their experiences with debriefing and debriefing adjuncts in simulation. The written survey consisted of 10 demographic items and 14 questions about debriefing and debriefing adjuncts in simulation.

The demographic data collected included years of simulation experience, program type, environment type, experience with adjunct debriefing, highest level of education, and geographic region of the state. The exploratory survey questions were developed from the literature review results. Waznonis' (2015) study on simulation debriefing activities was particularly helpful in providing a broad context relevant to debriefing and debriefing adjuncts in simulation.

The initial, broad, open-ended survey questions (four through ten) asked participants to describe their current experiences, guidelines, methods, training, and experiences with debriefing and debriefing adjuncts in simulation. Questions 11 through 13 asked about most recent debriefing practices. Questions 14 through 19 addressed specific adjunct methods and included both dichotomous and reflective components. Participants were asked first to reflect on their use of each method (Agree/Disagree), then to respond to open-ended questions about specific uses of and any challenges related to these approaches. Questions 20 through 24 addressed further resource needs and additional comments related to debriefing.

Faculty experts in qualitative research and simulation reviewed the survey to confirm that items were comprehensive and appropriate for the study population. In addition, three faculty

members from different programs piloted the survey prior to distribution. This strategy allowed the researcher to confirm the survey questions' ability to elicit responses that aligned with the larger research questions and clarify confusing and/or vague points.

Data Collection – **Interviews**. A subset of participants volunteered to be interviewed and were emailed using the contact information provided with the survey. After the researcher and faculty co-researcher completed collection and analysis of the survey data, interview participants were emailed to confirm an interview date. Consent (Appendix F) and an interview packet (Appendix G) were emailed prior to the interview. The interview packet contained summary tables that aligned with study themes and summaries of the survey questions. The interview script created to guide the interview was designed to seek confirmation and extend survey findings (Appendix H).

Semi-structured, face-to-face interviews were conducted individually with four participants to confirm, validate, and add depth to the findings. Additional questions were asked as needed to clarify statements based on the participants' responses (Patton, 2015). Interviews took place in a private office. Interviews were recorded using two devices (to ensure adequacy of the digital recording) and then transcribed. All data collection was completed by the researcher. The interviews also added data triangulation by bringing more than one source of data to a single point (Marshall & Rossman, 2016).

Artifacts. In qualitative research, artifacts are physical objects such as 3 dimensional documents or paperwork (Sandelowski, 2002). Documents can provide background information the helps understanding of a situation and material from texts such as textbooks can also be used to focus on the meanings of words, concepts, and content inferences (Marshall & Rossman, 2016). They are important because they allow participants to further share experiences and

provide further learning (Keats, 2009). In this study, survey responses that included specific tools or methods were reviewed by the researcher for knowledge and information. This included for example a survey participant's use of the Evolve's Faculty Debriefing tool for guided reflection. Evolve's tool provided guided discussion questions for students to reflect on their simulation experience and is considered a method to improve clinical judgment (Elsevier Evolve, 2020).

Interview participants who were scheduled to be interviewed were invited to email debriefing artifacts to the researcher. For this study, artifacts included debriefing assignments and rubrics used to guide debriefing activities. Two interview participants provided the same example of a debriefing assignment used following simulations for both verbal and written debriefing. This example used generic debriefing prompts (11 questions) provided by the NLN (2010). While the debrief was scripted, it could be adapted to the method of debriefing thought to be most effective for the select simulation experiences and student learners. The same generic prompts were used to lead the discussion and then used again for a written debriefing.

For this written debriefing, students were assigned to complete written reflections on the simulation following the verbal debriefing and submit these at an assigned date. When using this approach there were three to four students per debrief (20-30 total per class/activity), first and second semester students in fundamentals and medical-surgical nursing courses, across all debriefings. Faculty reported extending their debriefing questions with consideration to the student learners. For example, they used further discussion prompts if groups were quiet or additional reflective questions for students who made critical errors during the simulation. The artifacts helped the participants describe their experiences with the written self-reflection, debriefing adjunct, and gave the researcher additional information and a data triangulation opportunity.

Data Analysis

  Demographic information. Descriptive analysis was used to describe the demographic survey data. Means and standard deviations for continuous variables such as years using simulation were included. Frequency distributions and percentages were used for categorical variables such as types of program, types of environment, and highest level of education. Descriptive data related to the use and non-use of selected adjunct methods also were tabulated.

  Thematic and qualitative/quantitative survey analysis. Thematic qualitative content analysis was used as a flexible and useful tool that provides a rich, detailed, and complex account of the data, offering a systematic approach as well as allowing for combination of meanings within their context. (Vaismoradi et al., 2013). Data preparation included organizing and reporting data with the aim of being totally immersed in it in order to learn the events related to this experience (Elo & Kyngas, 2008). Survey quotes were restated/condensed using key words that can be used to help understand the contextual use of those words, a helpful approach for analyzing interview data (Hsieh & Shannon, 2005).

  Analysis was a circular movement in which the faculty team review data and provide feedback. Researchers were able to review and revise through an iterative and reflective process throughout a study (Bradshaw et al., 2017).

  The investigator used the electronic tool, Research Electronic Data Capture (REDCap) to transcribe data by each question. When all responses were recorded, data was exported to Excel to better group/reorganize responses during analysis.

  Data was repeatedly reviewed. The deductive analysis approach uses analytical categories, determined before analysis, aligning with an existing framework such as systems

theory. Inductive analysis is described as discovering patterns, themes and categories emerging from the data (Marshall & Rossman, 2016).

For this study, as data was initially reviewed, the appropriateness of Systems framework as an organizing frame was evident. Once data was sorted within the systems concepts of structure, process, and outputs, further themes emerged from that data. For example, within the process frame, student needs/issues emerged relating to the themes of student engagement, student interactions, and meeting diverse student needs. Systems framework was considered a useful approach to organize the data. Systems framework was chosen as a systematic method to organize the large amount of rich data into manageable pieces. Concepts from this theory help characterize and convey the interdependent nature of a people, a place and/or process. This includes how things are characterized, how they are done, and includes the desired accomplishments (Bonnel & Smith, 2017) This was a logical method to organize the large amount of rich data.

Appendix I provides a brief summary of this analysis. An Excel document was organized in the following columns to organize survey data: statements, restatement/condensed meaning unit, and formulated meaning codes (see sample, Appendix J). At this step, a faculty member with qualitative expertise provided peer debriefing.

For survey questions 11 through 24, themes were generated within each of the conceptual categories of Systems framework. This included reviewing, defining, naming, and then reporting as directed by Vaismoradi et al. (2013). Under these themes a range of responses were considered, and examples provided.

For survey questions 14 through 19 related to use of specific adjunct methods, a summary box of this analysis was completed for each adjunct method. Quotations or notes were included to help substantiate findings (Appendix K).

Data Saturation. Data saturation is achieved when no new data is being revealed (Mills & Burks, 2014). Saturation can be determined when patterns are repeated and the researcher senses that little more can be gained from further data collection (Marshall & Rossman, 2016). In this introductory study to gain better understanding of the status of debriefing and debriefing adjuncts, there was consistency in responses to the broad challenges. This sample well represented the three regions of Tennessee and the diverse baccalaureate programs; participants described challenges and strategies across diverse settings. As survey data was reviewed with interviewees, no new responses were attained, only elaboration on earlier ones.

Interview analysis. Four follow-up interviews were conducted to seek confirmation, validation, and add depth to the survey findings. Additionally, the follow-up interviews allowed the researcher to listen and learn about any additional experiences nursing educators had with debriefing and debriefing adjuncts in simulation. Interviews were transcribed verbatim. Transcriptions of the interview were repeatedly reviewed and analyzed to determine if study themes were accurately captured. Quotes were organized by themes to determine this concurrence. Separate data analysis of survey and interview data helped with data triangulation (Marshall & Rossman, 2016). Faculty peer debriefing of interview transcripts was completed. Study findings then were integrated with the literature and prior research on this topic.

Logbook. The researcher kept a logbook to document the study. Anecdotal notes were recorded immediately following the survey review, data analysis, and interviews as directed by Patton (2015). The logbook was used to reflect on the process, document an audit trail, record

notes and reflections, provide analytic memos, and notate decisions relating to data collection and analysis. Interview dates and times also were documented. Decisions about the coding scheme, based on study survey and interview data, also were recorded in the logbook.

Ethical Considerations

The proposed study was submitted for approval from KUMC's Human Subjects Committee. Informed consent for the survey was implied with survey completion. Consent for interviews was obtained prior to the beginning of each interview. The study design upheld ethical principles of respect. Participants were not compensated for their time or participation and were given no incentives to participate beyond helping extend nursing knowledge.

All electronic communications occurred through KUMC's secure system. Participant privacy was maintained. No identifiers were attached to survey data or interview responses. All responses were kept confidential. Digital data without identifiers is stored on REDCap. All study data is maintained and will be destroyed per KUMC Research Study Protocols.

Rigor and Trustworthiness

Methodological rigor was maintained through the following techniques: reflexivity, credibility, transferability, dependability, and confirmability. Reflexivity includes self-disclosure of the researcher's assumptions, beliefs, and biases. The researcher reported in the logbook any personal beliefs, values, and biases that could shape the inquiry (Creswell & Miller, 2000; Morse, 2015). Credibility was addressed using data triangulation. Method triangulation includes using analysis of interviews, artifacts and field notes. The designated faculty team participated in the data analysis, thereby providing investigator triangulation as guided by Carter et al. (2014). Peer debriefing allows for the participation of two researchers in the same study to provide multiple observations and conclusions, bringing confirmation of findings and different

perspectives (Carter et al., 2014). An audit trail, used to record any needed changes made throughout the study, provided dependability and conformability of the findings (Creswell & Miller, 2000; Morse, 2015).

Study Limitations

This study had several limitations. First, it used a purposive sample from participants from only one state. Participants also represented faculty with different levels of expertise that might have influenced their responses. Next, its use of voluntary participation could lead to sample bias. Additionally, survey and interview answers include remembrances that may not be accurate, but based on the desire to share best intentions, not actual occurrences. Finally, despite the use of a reflexive journal, the researcher, who has experience with simulation debriefing and debriefing adjuncts, could have imposed values, beliefs, and attitudes onto the data inadvertently.

Summary

The research methods have been described including the purpose, research questions, design, sample and setting, data collection methods, data analyses, ethical consideration, rigor and trustworthiness, and study limitations. Data gained from this study increases understanding about the use of debriefing and debriefing adjuncts in simulation.

Chapter Four: Results

Chapter Four presents the results of the study: a) demographic data about the sample of faculty participants, b) survey and interview results, and c) results of the thematic analysis. This chapter addresses the study's three research questions:

1. What are the experiences of faculty of prelicensure students with debriefing and debriefing adjuncts in simulation?

2. What are the experiences of faculty of prelicensure students regarding challenges and strategies when using debriefing and debriefing adjuncts in simulation?

3. What are the experiences of faculty of prelicensure students in determining efficient resources and effective faculty approaches relevant to debriefing and debriefing adjuncts?

Findings from the study were organized by the Systems framework components of process, structure and output/perceived benefits. Process themes were student centered and included: student engagement, student interactions and diverse student issues. Structure themes were faculty centered and included: knowledge and experience, faculty time and numbers and space and equipment. Output, or perceived benefits, were the reported benefits faculty found when using debriefing and debriefing adjuncts after simulation. The following major sections organize the chapter: demographics, current debriefing approaches and methods, broad considerations in debriefing and debriefing adjuncts, specific considerations with debriefing adjuncts, specific faculty educational needs, and further need for evaluation of debriefing. Within each major section, results are organized by the Systems framework, process, structure, and output.

Demographics

Forty-six surveys were submitted by participants who met inclusion criteria (n=46) representing each region of the state: East (n=26, 55%), West (n=11, 23%) and Middle (n=10, 21%). Faculty's years of experience ranged from 0.2 to 12 years with a mean of 4.1 and standard deviation of 3.2. Forty-six faculty (90%) taught in a university/college or medical center setting, and five were hospital based or other.

Participants reported that every simulation had nursing faculty present (100%) with number of faculty ranging from 1 to 5 with a mean of 2. Student numbers ranged from 3 to 40 with mean of 10. Observers were utilized 23% of the time (n=11), equipment operators 23% (n=11) and other individuals 17% (n=8).

Table 1

Educator Demographics

Type of program taught in	Numbers (Percentage)
BSN	35 (60%)
ADN	9 (16%)
LPN	4 (7%)
online	4 (7%)
clinical educators	3 (5%)
other	3 (5%)
Types of education	**Number/ Percent**
Masters of Science in Nursing	34 (72%)
Doctor of Nursing Practice	5 (11%)
Doctor of Philosophy in Nursing	3 (6%)
Baccalaureate in Nursing	2 (4%)
Non-nursing doctorate	2 (4%)
other	1 (2%)
Gained Education on Debrief	**Number/ Percent**
Graduate degrees	12 (26%)
Continuing education	20 (43%)
Simulation vendors	11 (23%)
Webinars	15 (32%)
Academic institutions	12 (26%)
Conferences	12 (26%)
Online	12 (26%)

Other	20 (43%)
Debriefing guidelines	Number/percent
Provided by the school	26 (55%)
INACSL	11 (23%)
NLN	10 (21%)
Other	11 (25%)

The majority of survey participants reported having a master's degree, with a very small number of Doctor of Philosophy in Nursing (PhD) prepared faculty. Over fifty percent (55%) came from East Tennessee to this mid-state conference. They reported most education on debriefing came from on the job training or "on the fly", followed by continuing education and webinars, as opposed to further graduate education. Many used guidelines provided by the school but were not sure where they came from or why they were being used. None noted "evidenced-based" as a reason for using their debriefing format.

Forty-three percent (n=20) reported "other" when responding to how they gained education on debriefing. These responses fell into three categories: none; on the job/doing; and faculty, colleague sharing. When identifying current debriefing guidelines use, 11 participants (25%) reported "other". Of these, six participants reported no standards, or "none" used when debriefing. Two reported using one or more of the listed guidelines in addition to guidelines not listed such as the Interprofessional Collaborative (IPEC).

Interviews consisted of faculty from diverse educational and professional perspectives. Six faculty volunteered to be interviewed, and four responded to emails seeking an interview. Of these four, ages ranged from 35 years to 65 years of age. Educational backgrounds included a PhD, Doctor of Nursing Practice (DNP), Nursing Masters, and Bachelor of Science in nursing (BSN) (working towards graduate degree). Debriefing experience included work with undergraduate nursing students on all program levels (fundamental skills to complex illness).

Current Debriefing Approaches: Overview and Methods

This section discusses faculty's current debriefing methods. Faculty describe the method they last used during a debriefing. They include who was present, when the debriefing took place, and where the debriefing occurred.

Descriptions of current debriefing methods ranged from complex debriefing plans to use of very informal debriefing methods and basic prompts and questions. The following organizes structurally the range of approaches related to persons involved and timing of debriefings.

- Debriefing faculty/facilitators: simulation coordinators; senior faculty; content specialty faculty; graduate assistants; faculty from other specialties; volunteers as standardized patients.

- Timing and location of the debriefing: immediately following the simulation; after all simulations were complete; in person, conference areas; round table discussions; and auditoriums.

There were diverse descriptions of debriefing approaches used by faculty, but these could be divided into scripted debriefing and broad questions for discussion. Scripted debriefing included the use of scripts, pre-guided based upon the simulation, and debriefing cards with questions about critical points in the simulation. All quotes are from survey data unless otherwise noted as an interview quote (I). Faculty were quoted:

- *Our simulation specialist leads debrief by a scripted approach and by asking students to reflect on their patient and experience. All simulations are recorded as well. (I)*

- *I used a pre-guided script located on "Evolve's" website… I set the rules for the students before starting and asked each of the students who actually participated in the simulation to reflect on their experience first and then I asked for feedback from the observers.*

Broad reflective questions and discussions included broad, open ended questions, unstructured post-simulation reflection, and individual and group discussions. Faculty were quoted:

- *Post-sim reflection is not structured; we ask basic reflective questions, we all (participants, observers and faculty) review and discuss the feedback forms, as well as asking students to write a brief reflection, to reflect on what went well, what they learned, and what they would do differently, reviewing what was done wrong or right; how could you improve.*

- *Group discussion about scenarios, issues, good catches, ways to improve, etc; What went well? what could have done differently? What did you learn?*

Broad Considerations: Debriefing and Debriefing Adjuncts

Broad considerations of debriefing and debriefing adjunct methods, using the organizing framework of process, structure, and output are summarized and further discussed below. Figure 1 outlines the themes and how they relate to process, structure and output/perceived benefits. As described, Systems framework was helpful to organize the data because of the broad, diverse adjuncts (Bonnel & Smith, 2017). Systems framework was a helpful way to organized survey responses. Using process, structure, and output characterized diverse issues and broad concepts into a unit that conveyed the interdependent nature of this system (Bonnel & Smith, 2017). As survey responses to these adjuncts were reviewed, benefit was noted in discussing these active learning strategies collectively by process, structure and output. Process related most to student learning considerations and needs. Structure related most to faculty resources issues and needs. Output, or perceived benefits, was considered relevant to faculty desired outcomes and reported

benefits. This highlights the importance of addressing both student learning and faculty resource issues and helps discuss the complex components of simulation debriefing.
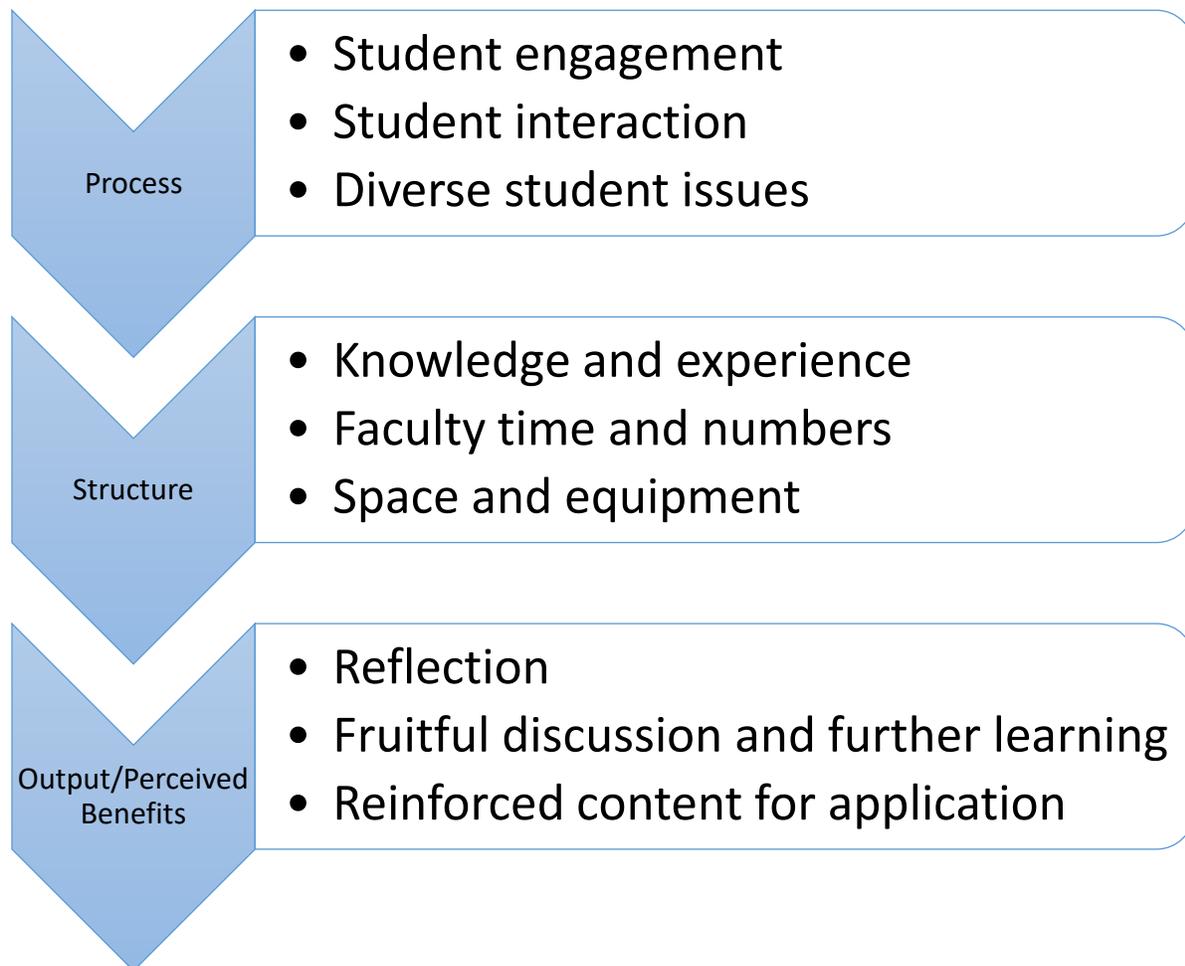
Figure 1. Considerations Related to Student Debriefing

Process Considerations

Process considerations are student centered. They include student engagement, student interactions, and working with diverse students. Further detailed examples and sample quotes follow.

Student Engagement. Student engagement is active participation (Levett-Jones et al., 2015) where learning is student centered that promotes helping students to become actively engaged in learning opportunities (Shin et al., 2014). Students need to be actively involved in

their learning. Sample challenges that faculty noted to student engagement**,** or active learning approaches**,** included: some students did not provide in-depth discussion; some did not actively participate; some missed the learning opportunity; or some were more concerned with the grade.

Sample quotes: *Students are terrified of failing the simulation and miss the opportunity for learning that often occurs in the debriefing setting – most students are often way more concerned with passing or failing* (so not really engaged*).* Another faculty stated, *getting active participation, they are ready to leave so their attention span is often short.*

Student Interactions. Student interactions are considered the ways students engage with other students in the simulation. Challenges that faculty addressed included: some students were disrespectful of each other, would not interact with the group; were disconnected; or some were nervous and would not appear comfortable with other students in the experience. Faculty believed that students need to learn peer review and how to be civil with colleagues. Civil student interactions are critical to prepare students for working in healthcare teams. Faculty were quoted as saying (about students): *Some need to be reminded to be nice;* they found it challenging to *ensure respect of one another.* Another quote included: *personality differences and giving objective review of peers* was a challenge.

Diverse Student Issues. Working with diverse students refers to the ability to adapt/cater/change learning activities to meet the needs of the variety of **s**tudents participating. AACN reports that nearly 73% of undergraduate nursing student are considered diverse, meaning they fall into one or more of the following categories: aged 25 or older, commutes to school, enrolled part time, is male, is a member of an ethnic or racial minority group, speaks English as a second or additional language, has dependent children, and holds a general equivalency diploma (GED) or has required remedial classes (Bednarz, Schim, & Doorenbos,

2010). Faculty need to acknowledge that students learn differently and diverse approaches to debriefing can meet diverse learning needs. Challenges that faculty addressed included: some students were not up to the challenge; student sometimes were just tired; there was not always a good mix or balance among the students, such as weaker or stronger students.

Sample quote from interview: *I think that there's a generational difference going on right now that maybe we could spend some more time understanding those (student) differences and maybe that would help us in better understanding how to avoid those problems going on between the students (I).* Another survey response: *Some students 'take over' (usually the stronger students), while others 'lay back' and do not comment (typically weaker students or students that are often not very engaged).*

Structure Considerations

Structure considerations centered around faculty resources as noted in the discussion below. This included faculty knowledge and experience, faculty time and faculty numbers, and space and equipment themes. Faculty want teaching/learning approaches that meet these challenges.

Knowledge and experience. Faculty knowledge/experience is considered as the training or preparation faculty received related to simulation and simulation debriefing. Further education on overall good teaching/learning practices including debriefing adjuncts is needed. Administrative support for these resources were also wanted. Challenges that faculty reported included: large gaps in faculty knowledge; inexperience; lack of consistency and quality across debriefing experiences. Waznonis (2015) noted specific debriefing approaches were not consistently used in nursing education, leading to considerable variation in approaches to debriefing. Gaps she reported included: training (confidentiality factors, student engagement,

prebriefing, and evaluation), limited faculty development, and limited use of a structured

framework and debriefing evaluation (Waznonis, 2016). While Wazonis (2014) summarized the

literature with a general description of debriefing method issues, very little research addressed

best practices.

Sample quote: *Many of the people who participate in the simulations are grad students*

without experience in the specialty. I am an OB instructor so I would be the content expert but

am usually running a simulator – it would be better to have one who actually knows the specialty

available to debrief. Faculty also stated in the survey, *I don't know when I'm interjecting myself*

too much into the debriefing process. I have to catch myself before I take the opportunity away

from the students.

Faculty time and numbers. Faculty time is the amount of time faculty are assigned per

semester such as their workload. Faculty numbers are the number of trained faculty available to

participate in the simulation and debriefing experience. Participants noted a lack of trained

faculty to perform high quality debriefing in simulation.

Sample quote: *It's* (debriefing) *very difficult to do with one faculty member and a large*

student lab group, no opportunity to get much one to one time while running the sim mannequin,

the scenario, and trying to guide the observers (students)! Faculty also stated, *for our university*

the largest challenges is having enough faculty to run. we have 15-21 sections of students of 10

to schedule around other semesters students with the same number of students. A participant also

reported simulation is *very difficult to do with 1 faculty member and a large lab group, no*

opportunity to get much one to one student time while running the sim mannequin, the scenario,

and try to guide the observers!

Space and equipment. Challenges that faculty reported included: needing more space and equipment. Equipment needed included video and better technology. Similar to the Waznonis (2015) findings describing the lack of resources as limited or no designated space for debriefing, old or lacking equipment, limited faculty, limited finances, large class sizes, complex scheduling, and a lack of time for preparation, ongoing education, simulation, and debriefing. For example, Waznonis (2015) found many debriefers were full-time faculty who participated in many debriefings with limited support and resources.

Sample quote: *I am the only person that works fulltime in the simulation area - that means that I do every job: technician, the set-up guy and everything. Manpower resources are a big issue for us…*Faculty members reported they *have few mannequins* and *video equipment failures.*

Output/Perceived Benefits

Perceived benefits of an effective debriefing session as reported by faculty participants discussed in the following paragraphs. Themes that emerged as potential outcomes were reflection, reinforced content for application, fruitful discussion and further learning opportunities.

Reflection. Benefits of these debriefing adjuncts included reflecting on the experience, processing information, learning to self-evaluate, and everyone being allowed to have input to the experience. A sample comment included: *Reflection allows the students to process and learn and self-evaluate their performance.* Another comment included*…prompts that guide the students' reflection on the simulation helps keep the conversation on track and leads to fruitful discussions.*

Fruitful Discussion and Further Learning. Benefits included real time discussions and a comprehensive debrief. A sample comment included: *we use guiding questions and statements to learn the underlying reasons for decisions student make and understand the clinical reasoning methods they are using.* They also reported *each group/student gets to be an active participant and a peer observer. they provide feedback to one another, as well as receive my feedback.*

Reinforced Content for Application. Benefits included reinforced major concepts and principles, areas to improve including critical thinking, increased understanding and skill apprehension, decision making, and immediate remediation. A sample comment included *the student has the opportunity to address important aspects of sim that are often missed when participating.* Another comment stated *this also allows use to see gaps in knowledge and dictates if these gaps are individual or widespread. Once identified these gaps can be filled on an individual or group level.*

Summary

Faculty participants described students lacking engagement (being involved with the content and activity), having challenges with interaction**s** (civility with peer interactions), and showing diverse learning needs. Faculty reported three areas of structural challenges to debriefing and debriefing adjuncts: knowledge and experience, time and numbers, and space and equipment. Perceived outputs of a good debriefing session included student reflection, reinforced content for application, fruitful discussion, and further learning opportunities.

Specific Considerations: Debriefing Adjuncts

Previous sections discussed an overview of faculty perspectives of their current debriefings. This section focuses on the specific debriefing adjuncts used**.** Table 2 orders responses about their use of debriefing adjuncts from most to least used. The number of faculty

that used the specified method along with the number of faculty that found it effective is noted. Following this table, a discussion organized by the Systems framework (process, structure, and perceived benefits) is provided. As described above, Systems framework was helpful to organize this complex data (Bonnel & Smith, 2017).

Table 2

Debriefing Adjuncts Usage and Effectiveness

Method	Used Number (Percentage)	Debriefing Adjuncts Effective Number (Percentage)
Written self-reflection	24 (52%)	18 (75%)
Audio-video assisted debriefing	14 (30%)	10 (71%)
Student as peer-observer	12 (26%)	9 (75%)
Post-simulation assignments	10 (22%)	8 (80%)
Virtual debriefing	5 (11%)	2 (40%)
Student as co-debriefer	4 (9%)	3 (75%)

The debriefing adjuncts written self-reflection (n=24) and audio-video assisted debriefing (n=14) were reported most often. Virtual debriefing (n=5) and student as co-debriefer (n=4) were used by only a small number of faculty. Peer observer and post simulation assignments fell in the middle. In terms of effectiveness, all but virtual debriefing was considered by at least 71% as effective.

Process Themes – Student Considerations

Just as with the broader challenges and considerations related to simulation debriefing discussed above, data responses organized by adjunct method process factors, related primarily to student learning needs. Relevant to debriefing adjuncts, the following themes emerged as both challenges and successes with all adjunct methods: Student Engagement, Student Interactions,

and Working with Diverse Students. Table 3 provides an example of these benefits and

challenges considering the active learning potential of the adjuncts.

Table 3

Process Factors Across Adjunct Methods – Active Learning Opportunities

Student engagement:	
Benefits	Challenges
- Opportunity to further engage the students - encouraged to participate in their own learning - reflected on concepts learned and applied - students could self-assess; evaluating what could be done differently, such as good vs. bad decisions - engaged students as part of the simulation debriefing	- sometimes felt rushed to use the methods - keeping students' attention; getting students to participate and reflect; lack of reflection - Getting students to add depth to responses; sometimes addressed aspects not relevant to the scenario or anticipated goals
Student interactions:	
Benefits	Challenges
- allowed students to help other students - students could speak up and help other students	- problem interactions - not always open with each other - tried to help other students too much or not enough; some students not forthcoming - some students anxious - some students defensive/ uncomfortable with negative feedback
Diverse students:	
Benefits	Challenges
diverse approaches for diverse student learning needs	- some students don't understand the assignment - some students not taking it seriously - weaker students lacked skill in meaningful participation

Student Engagement. Responses relevant to benefits/challenges of adjuncts included

this theme as a key need to keep students actively involved. As noted, the debriefing adjuncts are

active learning approaches to help engage students. Students retain knowledge and assimilate

knowledge into practice when they are engaged in the learning (Fey et al., 2014). *One interview participant stated they used debriefing adjuncts with all learners, because a lot of our students are active, engaged hands on learners; they just learn better that way. And also stated Each group/student gets to be an active participant and a peer observer. They provide feedback to one another, as well as receive my feedback.*

Student Interactions. While all debriefing adjunct approaches had potential for student interactions, those most obvious student interaction factors were the observer and peer debriefer. To better prepare future clinicians, students need to be civil with each other and faculty. Learning how to peer review and be civil with colleagues will be important in the workplace (Bonnel & Hober, 2016; Clark, 2019). Since students are typically working as teams and groups in simulation, working further on this in debriefing makes sense Also further study of best practices is needed. Participant examples included challenges such as: *ensuring respect of one another (students);* and *sometimes the student observers tried to help in the simulation*.

Diverse Student Issues. Reponses relevant to benefits and challenges of all adjuncts were noted in this. Faculty need to acknowledge not all students learn the same and use this to guide education, including simulation debriefing and debriefing adjuncts (Bednarz, Schim, & Doorenbos, 2010). Diverse approaches to debriefing including debriefing adjuncts may better help meet diverse learner needs (ie written reflection may be better for those who have trouble speaking up in groups; video may be a way for students to gain self-assessment skills). A participant example included: *I also agree that it* (adjuncts) *does meet diverse learning needs because you can meet different types of student learners. You can meet those who maybe are a little more introverted and aren't going to speak out. (I)* Another faculty member noted that

students (may) *lose focus about the SIM when reviewed at a later time,* meaning post-simulation assignments or delaying to another time may not be beneficial for all students.

Structure Themes – Faculty Considerations

Just as with the broader challenges and considerations discussed above, data responses organized by adjunct method structure factors, related primarily to faculty issues and needs perspective, including faculty need for adequate supports in their simulation debriefing. Faculty consideration themes were determined from responses/data that were coded by structure. The three themes identified across adjunct methods included knowledge and experience, faculty time and numbers, and space and equipment.

Table 4

Structure Factors Across Adjunct Methods - Challenges

Knowledge and experience challenges:
- not enough experience   - lacked training on how best to use adjuncts such as the observer role.
Faculty time and numbers challenges:
- not enough time; concerns about too much time to grade   - limited faculty; not enough faculty to grade   - if follow-up with students was indicated
Space and equipment challenges:
- technology   - lack of space   - lack of readily usable equipment

Faculty experiences and education. Responses emphasized a lack of trained faculty. Faculty want further education on overall good teaching/learning practices along with more experience with debriefing adjuncts before using them with students, and administrative support to help provide these education/resource needs. Sample quote: *I think some more education, and maybe a more standardized approach to it would help me to see all those (tools) available and help other faculty here and help them find which one works best for them and myself. (I)*

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Another survey response indicated the need for *more practical tools I can take home and use in debriefing. It would also be nice to see methods for choosing the proper strategies to use in different situations.*

Faculty time and numbers. Faculty reported lack of time to grade, time to teach the student how to do perform their role in the debrief and follow up with students when using these debriefing adjuncts. Faculty workloads and time issues are not new to nursing education. However, time related to simulation and simulation debriefing are new topics and workload/scheduling may not have had time to "catch up" or consider these factors.

Faculty noted there is often not enough faculty to grade, follow up with students, and teach students how to participate in other roles. Use of best practices with these debriefing adjuncts could alleviate some of these issues where faculty issues. Further research or ideas on how to incorporate faculty and staff into simulation and simulation debriefing are warranted. A participant example was: *We wouldn't do a lot of written reflections because it adds a lot on someone's plate to have to grade all of that. (I)* Survey responses indicated numerous times that it was *time consuming to grade* and required *reminding students to complete.*

Output/Perceived Benefits

While faculty responses related more to challenges and issues, perceived benefits were noted including reflection, discussion with further learning, and reinforced content for application. Faculty indicated that reflection allowed students to reflect on their experiences, process information and practice self-evaluation, and provided everyone the opportunity for input. Real time discussion with a comprehensive debrief provided fruitful discussion and the opportunity for further student learning. Debriefing adjuncts reinforced content for application, , allowing students opportunity to consider areas with needing improvement, increase student

understanding and skill, improve critical thinking and decision making, and the opportunity to remediate after the experience.

Summary. Faculty perceive these considerations as attempting to do good debriefings with limited resources. While faculty reported challenges and issues with debriefing, they also noted the benefit to the students.

Debriefing Adjuncts - Specific Considerations and Questions

The following section discusses key points made from each of the debriefing adjunct methods. Methods are discussed together because of the similarities in the way these active learning tools are used.

Written Self-Reflection and Post-Simulation Assignments

Written self-reflection and post-simulation assignments both present active learning approaches for engaging students in simulation debriefing. Faculty often used written self-reflection as post-simulation or assignments. They reported written self-reflection was used after simulation, clinical, lab and recordings. Post-simulation assignments were used to help students self-evaluate, reflect on concepts from class and applied to simulation, and reevaluate aspects of the simulation that the student missed or did not focus on. As noted by one participant, written self-reflection provided students an *opportunity to reflect on experiences.* Also, *students write a reflection following identified questions after the live group debriefing to tell what they did.* Students also had the opportunity to *discuss how they made that decision and talked about pros and cons of it.*

Process Considerations. Challenges related to written self-reflection and post-simulation assignments relevant to student issues included:

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- ***Student engagement.*** Student actions were noted as sometimes limited or not deep enough reflection; students could tend to rush the assignments or not participate in them.

- ***Student interactions.*** Faculty lacked the ability to see the student's emotion during the debrief. Students could also work as a group instead of completing the written reflection individually (which not all faculty liked).

- ***Diverse student issues.*** Faculty reported that students were not always taking the debriefing assignments seriously. They sometimes would not complete them in a timely manner or did not understand the purpose of the assignment.

Structure Considerations. Challenges related to written self-reflection and post-simulation assignments related to faculty issues included the following:

- ***Knowledge/experience.*** Faculty reported they did not always feel they had enough experience with the adjunct methods to use them effectively.

- ***Time and Faculty numbers.*** Faculty reported written work to be time consuming to grade, not enough faculty to grade, and time-consuming follow up.

Sample quotes related to written self-reflection and post-simulation assignments included:

- *some students are not as forthcoming with information as others and want to provide generic recaps of the campus experience.*

- *You can meet those students (t*hrough writing*) who maybe are a little more introverted and aren't gonna speak out. (I)*

- *You'll get more out them in a written reflection. (I)*

Output/Perceived Benefits. As described by participants, benefits of the written, post simulation assignment included additional time for debriefing, and provided another way to engage diverse learners. Students that may not have spoken up during the face-to-face debrief have the opportunity, in a safe environment, to reflect on experiences and lessons learned.

Audio-Video Assisted and Virtual Debriefing

Audio-video assisted debriefing and virtual debriefing are combined in discussion because both involve technology and provide opportunity for engaging active learning. Audio-video assisted debriefing typically followed recorded simulation of students' simulation scenarios. Examples included: tape played back, put onto course site for all students to peer review, and for students to evaluate his/her performance and self-evaluate. Some reported having students watch the audio-visual recording and then write a reflection based upon their strengths and weaknesses. A participant provided the example in which students recorded themselves giving a Situation, Background, Assessment, Recommendation (SBAR) report**;** watched their video; and then wrote a self-reflection for faculty to review.

Virtual debriefing was different from audio-visual adjunct debriefing but was another type of technologic approach. Faculty reported that students used this format to submit a written discussion assignment from scripted debriefing prompts; to submit peer review of recorded simulations; or to complete other debriefing related assignments online.

Process Considerations. Process challenges related to audio-video assisted follow:

- *Student engagement.* Faculty reported that it was difficult to keep the students' attention with audio-video assisted debriefing (length of recording). It also proved difficult to add depth to the responses from students.

- *Diverse Student Issues.* Faculty reported that students watched themselves and peers could sometimes make the students anxious

Structure Considerations. Structure challenges related to audio-video debriefing adjuncts follow.

- *Knowledge/experience.* Faculty reported difficulty with learning and/or remembering the technology.

- *Time and Faculty Numbers.* Faculty reported that these methods sometimes took too much time to watch and too much time to grade. The time it took to follow up with students was an issue.

- *Space and equipment.* Equipment was not always easy for faculty to use. The technology guidelines could be hard to remember, and technology could be cumbersome or difficult to use.

Sample quotes related to structure and process of audio-video assisted debriefing and virtual debriefing include:

- *seeing other classmates that participate* (as watch the video) *can be a source of anxiety.*

- *It (the technology) is very cumbersome (and took a long time). Students felt the simulation went really fast, but when they watched the tape, they realized how slow it really goes. (I)*

Output/Perceived Benefits. Benefits of this method included opportunity for right and wrong responses to be addressed; students learned how to review themselves and self-assess; and the tape provided opportunity for review if there were grading questions. Interestingly few faculty in this study reported using online or virtual debriefing. Overall, there were limited

comments about issues related to virtual debriefing. While academia currently tends to focus on technology teaching/learning opportunities, it may be that this approach was not yet being used.

Student as Peer-Observer and Student as Co-Debriefer

The role of peer observer and co-debriefer are combined for discussion. Both present active learning approaches for engaging students in simulation. Often, they were reported as used in the same manner and for the same purpose. Students as peer observers were used to allow students to sit in on the simulations or when there were extra students in a group. Additionally, as co-debriefer students were encouraged to participate in discussions and give input during the debrief. In both roles, students were encouraged to complete peer reporting to fill in gaps about the simulation from shared observation. Interesting to note, faculty did not comment on the use of online discussions as a debriefing option.

Process Considerations. Process challenges specifically related to student as peer observer and co-debriefer follow.

- *Student engagement.* For these methods, faculty reported that students sometimes were not fully engaged, or the peer observer focused on or addressed aspects not relevant to the scenario or anticipated goals.

- *Student interactions.* Faculty reported that students were not always open with each other; sometimes they tried to help other students too much or not enough; and sometimes they displayed encountered problematic interactions, even to the point of incivility. Sometimes students were uncomfortable giving negative feedback to their peers and in some cases, students receiving feedback from their peers were defensive.

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- ***Diverse student issues.*** Faculty reported that students were not always forthcoming during the debriefing. They noted that weaker students often lacked the skill or ability to be a leader in the debrief. Sometimes students were uncomfortable giving negative feedback to their peers and in some cases, students receiving feedback from their peers were defensive.

Structure Considerations. Structure challenges specific to the observer role and peer debriefing follow.

- ***Knowledge/experience.*** Faculty felt that they lacked training or education on how best to use the observer role. Many had not used the co-debriefer role.

- ***Time and Faculty Numbers.*** Structure challenge included the need for adequate faculty to orient and supervise students in these roles.

Sample quotes related to process and structure for student as peer observer and student as co-debriefer are noted below:

- *the student as codebriefer, can be a good benefit, especially when done in a nonthreatening mechanism for the students. (I)*

- *I definitely agree that students need to learn how to do the peer review and how to remain civil and how to not get defensive. (I)*

Output/Perceived Benefits. Faculty noted that these roles allowed students to be part of the simulation; that they could be used when there were a high number of students; and that they allowed students to help other students learn. Related to the observer role, faculty noted: *Students have the opportunity to address important aspects of sim that are often missed when* (they are busy) *participating in the sim*. Another faculty reported *Asking student to be an observer for teamwork, prioritization and delegation issues is a plus.*

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Summary. Faculty reported challenges with all debriefing adjuncts, but also benefits were noted. These tools present active learning opportunities for engaging students in simulation debriefing. Debriefing adjuncts provide faculty additional methods to help diverse students learn.

Results Related to Specific Faculty Needs

The following section discusses further needs related to specific faculty needs. Faculty described the need for further simulation and debriefing education related to best practices, diverse methods of instruction, and educational resources. Faculty also discussed the need for better approaches of debriefing evaluation.

Simulation and Debriefing Education

In Table 5, faculty described diverse educational needs.

Table 5

Faculty Educational Needs in Simulation and Debriefing

Needs	Examples
More about best practices	- What others are doing - Better understanding of standards for debriefing - Most effective debriefing methods - How to implement peer review - What to take back and use
Diverse methods of instruction	- Individualized training - Post graduate courses - Classes: Online or in person - Practice opportunities - any interactive scenarios - Application approaches - Better Strategies for diverse specialties - Content – more methods, ways to incorporate - More strategies for reflective questioning - Assignments that help students learn

Educational Resources	• Ideas of where to look for help
	• Better debriefing scripts/prompts for leading a debrief
	• Simulation and debriefing training for students
	• More debriefing training for faculty

Strong support for further education was also described in the follow-up interviews. Faculty support for more education included:

- *Understand standards and debriefing guidelines; being able to look at curriculum guides like INACSL making sure that you're being consistent there.*

- Education regarding terminology or just "being on the same page" is still an issue: *terminology confusing for faculty and for students creating a barrier in understanding expectations or roles in simulation and debriefing. (I)*

- *It would also be nice to see methods of evaluating debriefing strategies.*

- *Most conferences I have attended have a debriefing class, but they are very general and do provide learners, with tools to take home and apply. They seem to focus on the philosophy of debriefing instead of ways to actually do it.*

Further Need for Evaluation of Debriefing Methods

Faculty reported beginning work on evaluation of their debriefs from three main avenues: student evaluations, faculty peer evaluations, and self-evaluations. Examples follow. Student approaches included:

- student reflections

- end of course evals of their experiences

- listening to students

- evaluation of student learning.

Faculty self-evaluation included:

- self-evaluation for effectiveness

- self-reflection

- self-evaluate each experience

- self-evaluate with student responses

- journal about the experience.

Peer evaluations included:

- feedback from other faculty

- compare to standards/guidelines.

One faculty reported that even though they don't use faculty evaluation of debriefing, they saw a benefit for it. Faculty quoted the need for better development of evaluations: *as far as evaluation, I think self-reflection is good, but I think it would also beneficial if we had peer evaluation of how our debriefing goes for the student. I think it would be good thing if we had like a check off, or debriefing evaluation tool to evaluate how we are doing.*

Conclusion

This chapter has summarized the data analysis and results. Findings from the study were organized into process (student engagement, student interactions and diverse student issues), structure (knowledge and experience, faculty time and numbers and space and equipment), and output/perceived benefits (reflection, fruitful discussion and further learning, and reinforced content for application). While faculty reported challenges or issues with debriefing and debriefing adjuncts, strategies and benefits were also reported. Faculty requested more education regarding adjuncts and practice when applying these methods. Future research is still needed. Chapter Five discusses implications for this study.

Chapter Five: Conclusions and Recommendations

The purpose of this study was to explore the experiences of faculty of prelicensure nursing students with debriefing and debriefing adjuncts in simulation. This chapter provides a discussion, implications, strengths, limitations, and recommendations for future research. This study was guided by three research questions:

1. What are the experiences of prelicensure faculty with debriefing and debriefing adjuncts in simulation?

2. What are faculty experiences of challenges and strategies of debriefing and debriefing adjuncts in simulation?

3. What are faculty experiences in determining efficient resources and effective faculty approaches relevant to debriefing and debriefing adjuncts?

As described in Chapter Four, insight was gained into the experiences of faculty with debriefing and debriefing adjuncts in simulation. Faculty found debriefing adjuncts as helpful and valuable in the education of undergraduate nursing students, but also challenging. This study supported the need for further research regarding best practices for debriefing, as well as debriefing adjuncts and the way they can be used to enhance student learning and help alleviate the challenges faculty face. Chapter Five includes: discussion of study themes (organized by process, structure and outcomes), further reflection of findings (organized by process, structure, and outcomes), implications for nursing education and future research needs.

Discussion of Study Themes

Nursing educators should be engaged in continuous evaluation and feedback to improve the process and quality of simulation debriefing. As described in this study, simulation debriefing can be considered a complex system. Multiple players (students with diverse needs, faculty with varying backgrounds and experience, and often limited resources) contribute to the

complexity of debriefing. Additionally, the multiple structure considerations such as need for faculty time, adequate faculty numbers and reasonable space and equipment contribute. Educators are still trying to understand this complexity and how to manage it effectively. In this study, the Systems model of process, structure and output provides a frame for better understanding these diverse considerations and concepts**.** This lays the groundwork for further research and faculty guidance.

Process Themes –Student Preparation for Clinical Practice

Process themes in this study described the experiences of faculty with students during debriefing. The three process themes from this study include: student engagement, student interactions, and diverse student issues. These themes are further discussed in relation to literature on diverse adjunct methods and related issues.

Student engagement. Students should play an active role in their learning. For debriefing to be effective, students should be mentally present in the activity. Moving from knowledge to application is best when patient centered debriefing is student focused (NLN , 2015a). Consistent with the literature, important components of active engagement can include written reflection, students in observer roles and peer debriefers and using audiovisual resources. Further discussion of this literature follows.

Written Reflection. In their phenomenological study specific to debriefing, Fey et al. (2014), determined that **e**stablishing a safe environment that incorporates multiple perspectives and reflective conversation is crucial to learning during debriefing. While not all students may feel completely comfortable with self-reflection as a method of debriefing, specific guidelines and the environment can play a part in the success of this method. Davies (1995) used a

qualitative grounded theory approach to determine that students using written self-reflection for clinical debriefing and journaling took a more active mode of learning rather than passive.

Allowing students to reflect on the experience and their emotions may better help them put this in perspective. Smith (2019) found in her study that reflective writing had a positive impact on clinical judgment and clinical reasoning. In his qualitative, interpretive descriptive study, Bussard (2016), found students that effectively self-reflected improved confidence, communication, and decision making after viewing recorded high-fidelity simulation scenarios, and supporting the potential to improve future clinical nursing practice.

Reflection, an active learning method, is a valuable tool for improving clinical judgement. Bonnel & Hober (2016) found support that reflection can facilitate learning by combining experience with consciousness. Reflection offers learning opportunity to support a life-long learner that can reflect on experiences, process information, and self-evaluate.

Observer Roles and Peer Debriefing. Consistent with this study's findings, potential exists for observer roles to provide active engagement for students in simulation debriefing. In the Reime et al. descriptive study (2017), the observers reported not passively receiving a performance, but actively seeking to understand and learn from others in the simulation. In an exploratory study, Reierson et al. (2017), found the post simulation reflections of observers compared to students acting as nurses, were more assertive and students' feedback were more specific and comprehensive. Related to the peer debriefer role, using a pretest – posttest design, Doherty-Restrepo et al. (2018) found students can assume the facilitator role and provide an effective debriefing session using faculty guidelines. Students perceived peer- and faculty-facilitated debriefing as equally effective on students' confidence and perceptions of simulation effectiveness.

Audiovisual resources and debriefing. Consistent with the findings from this current study, video assisted debriefing that includes student reflection on their learning, can promote active learning. Using qualitative and quantitative methods, Ha (2014) studied students' learning styles and found proficient instructors can be key for positively reinforcing students' attitude toward video assisted debriefing and the development of video assisted debriefing. Multimedia, audio visual resources, may be valuable adjuncts to centers when debriefing expertise is not available (Welke et al., 2009).

Related to online debriefing, the Gordon (2017) study, students used an online learning platform to gain knowledge related to how to debrief their own experiences and performances. Nurse practitioner students in an online graduate program used a synchronous, web-based internet conferencing platform to conduct debriefing sessions following immersion in an asynchronous learning environment. Students were provided a writing rubric that detailed the expectations of the writing post even though it was not graded. Innovative methods need exploration, research, and shared among education, to effectively accommodate the ever change debriefing landscape.

Student interactions. Found to be a theme in this current study, civil, team focused interactions were sometimes problematic. Students need to learn to be civil in team work to prepare them for future in work in healthcare teams. Debriefing provides an opportunity for students to work on communication with a faculty moderator. It also allows a safe place for faculty to address and work on interaction challenges that might present themselves during the simulation. Literature on teamwork, communication, and civility, as further discussed, supports this.

Teamwork and Communication. IPEC developed four core competencies with the goal

of helping prepare future health care professionals for team-based care of patients and improving

population health outcomes. These competencies included: focusing on respect and shared

values; knowledge of team roles; and applying good team dynamics including communication

for quality patient care (Interprofessional Education Collaborative, 2016). Limited research was

found that focused on simulation debriefing as an opportunity to enhance these competencies.

Teaching effective methods of communication among student peers and faculty during this

debriefing time can improve the debriefing and help students gain communication skills for

better teamwork and patient care.

Civility. In this current study, faculty reported students were not always capable of being

nice to each other during the simulation and simulation debriefing. This has implications for

future nurses and their care of patients. Incivility in healthcare care can have a negative impact

on the individual, teams, organizations and patient safety. Faculty have an ethical responsibility

to ensure students possess the knowledge, skills and attitudes that are needed to foster healthy

work environments for safe patient care. Evidence suggests that integrating the concepts of

civility, professionalism and ethical practice into simulation provides nursing education a method

to equip faculty to address this issue (Clark, 2017). Results of this current study support the need

and benefit of teaching civility and professionalism as a part of debriefing.

Diverse Student Issues. As supported by this current study, faculty need a range of

teaching-learning approaches when working with diverse students. Debriefing methods that are

not active approaches, will likely not be beneficial to student learning. Debriefing methods need

to reflect evidence-based methods and adapt to diverse student learning needs. Having a range of

approaches for diverse students has relevance for preparing diverse students for a culture of safety.

Diverse active learning strategies can help maintain the focus on student learning for quality patient care and safety. An effective debrief helps cement simulation learning about how to prioritize care, communicate with the healthcare team and patients, and develop clinical judgement (Padden-Denmead et al., 2016). For example, in a study of the reflective observer role in simulation debriefing, students noted value in focusing on team roles, including focusing on safety issues, communication, and monitoring the healthcare team (Bonnel & Hober, 2016).

Related to the Systems framework used to organize this study, the themes from this study related to process and student learning (promoting student engagement; student interactions; and working with diverse students) provides guidance in enabling students to work in a team environment and communicate effectively to be competent/safe nurses.

Structure Themes - Faculty Resource Needs

As supported by this current study, faculty resource needs related to debriefing and debriefing adjuncts were often lacking. The three structure themes included: knowledge and experience, faculty time and numbers, and space and equipment. The majority of participants expressed the need for more staff and faculty and more time.

Knowledge and Experience. As discussed in Chapter Four, faculty described the need for further knowledge and experiences specific to simulation debriefing and debriefing adjuncts. While some noted use of specific models, none commented on "evidenced-based" approaches as a reason for using their debriefing format. Waznonis (2015; 2016), in her faculty survey of simulation debriefing, reported faculty training gaps such as best student engagement practices and evaluation. She noted debriefing deficiencies included insufficient faculty development,

limited use of a structured framework, and limited evaluation of debriefing (Waznonis, 2015).

Cheng et al. (2015) discussed how little is known about the most important education needs and

best educational approaches related to debriefing. This continues to be apparent with findings

from this study.

Faculty time and numbers. Lack of faculty time and numbers is not a new issue for

nursing education. However, as education changes, so should faculty requirements and workload

be considered. Faculty would not send students to clinical without proper oversight; simulation

and debriefing should fall into that same category and approach. These will likely need the same

time and attention as traditional clinical experiences. Debriefing resources may need to be

updated for better utilization with a scheduling criterion considered and definition of workloads

with debriefing standards in mind. INACSL Standards Committee (2016) provides standards

that help guide simulation and debriefing methods in a general way. However, specifics related

to faculty workload have not been addressed.

Space and equipment. Faculty reported the need for more space and equipment. Many

faculty reported general concern for more space and better technology. Faculty also reported the

need for keeping technology up to date. While some schools are resource intense, others, such as

might be expected in rural areas, are not.

Virtual debriefing may be underutilized which is surprising considering the widespread

use of technology in other areas. Successful approaches have been documented when using the

INACSL Standards Committee (2016) standards and guidelines while debriefing in virtual

environments.

Faculty will need to explore how to use the unique feature of virtual debriefing that

promote learning and reflection (Verkuyl et al., 2018a. Virtual debriefing, a relatively new

Faculty Resource Needs – Administrative Support. Debriefing is a systems issue within nursing programs. All faculty, including administration, need to take part in addressing the process and structure considerations. Keeping in mind the department as a system, administration can approach simulation, debriefing and debriefing adjuncts as interdependent components. The NLN (2015a; 2015b; 2015c) has put forth three position statements regarding the use of simulation and debriefing in nursing education. In each position, administrative support for faculty is at the forefront. Deans and chairs of nursing programs can work creatively to alleviate some of the issues that faculty report; the NLN has provided suggestions and opportunities for administrative support of simulation and debriefing issues.

Output/Faculty Perceived Benefits

For this study, output was referred to as faculty perceived benefits and desired outcomes of debriefing and using debriefing adjuncts. Considering the challenges and issues described in this study, faculty in general still reported the use of debriefing adjuncts as effective ways to engage students. It may be that this study can help faculty gain ideas for ongoing quality improvement. Themes outlined in this study may provide useful for further faculty discussions as well as further research.

Further Reflection of Findings

Further survey findings, along with interview support, described the need for considerations in education and evaluation of debriefing. This study supports the need for discussion regarding the lack of education and specific strategies to assist faculty to not only manage debriefing, but to make debriefing an engaging learning opportunity for students. The following section discusses educational considerations for debriefing and debriefing adjuncts, including curriculum guidance. Evaluation of debriefing methods is also discussed.

Educational Considerations

Debriefing is an essential skill for quality student learning that is complex and can be challenging for simulation faculty. Multiple and complex priorities for the debriefer's attention can contribute to a high mental workload that can challenge the debriefer's performance. Further education on debriefing in general, specific methods for more experienced faculty, and practice with application opportunities are needed for faculty across the curriculum.

Education and training influence the debriefers ability to accurately convey factors identified during the simulation and to engage students during the debriefing (Jeffries, 2012). Existing literature discusses how little is known about how faculty development opportunities should be structured. Cheng et al. (2015) in their qualitative study found five key issues in developing education for faculty: teaching appropriate methods, using appropriate methods to teach skills, best assessment of debriefing effectiveness, best use of peer feedback in debriefing, and individualization of debriefing training to improve learning outcomes. Further work with each of these issues is indicated.

National Council for State Boards of Nursing (2016) identified a lack of educationally prepared faculty for simulation and debriefing in nursing education. Continuing education is also important for a debriefer to maintain the skills and knowledge needed to be effective (INACSL Standards Committee, 2016). INACSL and the NLN promote the importance of debriefer education and provide criteria and classes for the debriefer (INACSL Standards Committee, 2016; NLN, 2019). Further development of curriculum guidance for debriefing skills is needed. Program administrators will need to discuss with faculty their needs for simulation and debriefing education (Fraser, et al., 2018).

Curriculum guidance. Limited research on curriculum guidance with debriefing and debriefing adjuncts exists. Broad references such as Billings and Halstead (2012) outline design components, implementation, integration, and evaluation of strategies for simulation and debriefing. National guidelines such as INACSL (INACSL Standards Committee, 2016) address debriefing. Their guidelines provide a standard for debriefing, however, guidance for actively engaging students is not clearly addressed. The NCSBN (2019), in their comparison study of simulation with clinical hours, provided guidance when utilizing simulation for clinical; they considered effective debriefing as essential when replacing clinical with simulation. The method they used to train and evaluate debriefing faculty is worth noting. In their study, the debriefing method was demonstrated, practiced, performed, and then evaluated by peers before using it with students in simulation experiences. The need for continued work on best approaches to educate faculty on debriefing, as well as the importance of evaluation of its effectiveness, is noted.

Evaluation of Debriefing

In this current study, numerous responses supported the need for debriefing evaluation. Waznonis (2015; 2016), in her faculty survey on debriefing, identified limited use of debriefing evaluation. She considered that best debriefing practices include debriefing by a competent facilitator in a safe environment using a structured framework and including evaluation of debriefing.

She further described that simulation debriefing methods, phases, approaches, elements, and means for evaluation are all interconnected. While literature provides a general description of evaluation, very little addresses specific guidelines or best practice for evaluation of debriefing (Wazonis, 2014).

Debriefing courses, such as those at the NLN (2019) website on simulation education, include how to evaluate debriefing. While INACSL (INACSL Standards Committee, 2016) addresses the framework of debriefing, their guidelines do not address the evaluation of the debrief.

Implications for Nursing Education

Nursing education has the potential to benefit from using best evidence on debriefing and debriefing adjuncts with simulation. Groups that could benefit include nursing students and faculty; ultimately healthcare teams and patients can benefit. The following section address, student learning opportunities, faculty and administration needs, and quality improvement and debriefing.

Student Learning Opportunities

Results of this study, consistent with the literature, support that debriefing adjuncts can be positive additions to the debriefing that follows simulation. Adjunct methods have the potential to actively engage students and extend student learning beyond the initial debriefing time. Study results support the potential for simulation debriefing and select adjuncts as useful tools for teaching civility and teamwork. Students need clear expectations related to interactions with students and faculty. Acceptable and unacceptable behavior, along with rationale for feedback, needs to be clearly outlined in guiding students.

Students may need more thorough orientations for simulation and debriefing to include debriefing adjunct expectations. Additionally, every student learns differently, and diverse students need diverse learning opportunities. Debriefing adjuncts provide this in providing diverse active learning approaches that can appeal to all diverse learning types, and they can faculty to adapt methods to fit the learning styles of students. Further study on how to incorporate best teaching/learning practices using debriefing adjuncts is warranted.

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Faculty and Administration Needs

Faculty can seek help from administration and professional organizations to fill educational gaps. Faculty need to "think outside of the box" for resources, including relationships with faculty from other departments not limited to nursing, healthcare, and clinical facilities. Good teaching-learning practices, based on best evidence, should be utilized. Faculty should ideally have a sense of satisfaction with teaching-learning practices selected. Using a Quality Improvement process allows faculty the opportunity to adapt or change methods if not successful.

Administration needs to be open to partnerships with other departments, clinics, hospitals, and facilities for additional resources. Reasonable workloads with the demand of simulation and debriefing need to be kept in mind when scheduling faculty. Administration can also support faculty to further education by budgetary support, work incentives, scheduling support, and assigning debriefing experts to support other faculty members.

Quality Improvement and Debriefing

As noted, debriefing is a complex entity that requires successful interplay of multiple factors to be effective. Faculty can use quality improvement techniques guided by a Systems framework, to improve the simulation debriefing for the context needed. Faculty evaluation of their own delivery methods can help determine modifications or adjustments needed. Sample questions for further faculty consideration of their own debriefing could include:

- What ways does this study's student related process themes (engagement, interactions, and diverse students) apply?

- What ways does this study's student related structure themes (knowledge and experience, faculty time and numbers, and space and equipment) apply?

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- What ways are simulation debriefing approaches, including debriefing adjuncts, considered to be integral curriculum components? How is this included in the curriculum discussions as a whole?

- Who are the current faculty champions for simulation and debriefing? What supports or incentives do these individuals need?

- What further professional development is needed for faculty? How do faculty best gain this?

Future Research Implications

As limited research regarding debriefing and debriefing adjuncts exists, continuing research in this area is needed. Study themes suggest further study needs including best practices to engage student in debriefing, how to promote civility and positive communication during debriefing, and how best to support diverse learners needs. For example, more research is needed about how to best promote student civility in simulation debriefing, as faculty clearly described incivility as a problem. Further research is also needed to determine how debriefing adjuncts can best contribute to effective learning outcomes for students.

Faculty reported a lack of resources including faculty time and numbers, space and equipment resources, and debriefing education. Technology issues were reported as a concern by some faculty and students as well. The NLN (2015) supported the use of a faculty expert or faculty champion in simulation and debriefing, but further study on how best to implement this is indicated.

Further research is needed to address educational issues and the best method to educate faculty and students on simulation and debriefing. This study supports the need for further

research to alleviate these issues while engaging students to promote learning. As supported by this study and earlier research best-practices for evaluation of debriefing methods is also needed.

Strengths and Limitations of the Study

Using a qualitative thematic approach was a valuable method for learning about faculty experiences with debriefing and debriefing adjuncts in simulation. This approach allowed for organization of valuable data from participant surveys and interviews. A greater understanding of debriefing and debriefing adjuncts was provided through a rich description that would not have occurred otherwise.

Strengths of this study included a purposive sample with a wide range of participants; schools from across the state were represented. All participants had interest in the study area. The researcher used peer debriefing with experts in nursing education and qualitative research to minimize imposing beliefs during survey analysis. Peer debriefing with an expert in nursing education and member checking during interviews were also used to avoid imposing beliefs on to the data.

As with all surveys and interviews, limitations may include, memory challenges in participants recall (Polit & Beck, 2012). Another limitation of the study was that data was collected from faculty in only one state, limiting generalizability. While generalizability is limited, the findings can provide beginning guidance and help generate future research questions for nurse educators.

Conclusion

This qualitative research study addressed simulation debriefing and the challenges and benefits of debriefing adjuncts for pre-licensure nursing faculty. Findings from this study provide initial guidance for faculty to consider in their own debriefing relevant to the study themes of process (student engagement, student interactions, and diverse student issues), structure

(knowledge and experience, faculty time and numbers, and space and equipment) and output

(reflection, fruitful discussion and further learning, and reinforced content for application).

Debriefing adjuncts in simulation can be valuable active learning methods for students and

provide faculty tools for engaging diverse students for learning. Faculty shared their perspectives

and expressed their desire for more knowledge and experience with using debriefing adjuncts.

Preparing future nurses with skills acquired from simulation debriefing is important for

providing safe patient care in a team-based profession. Debriefing adjuncts are relatively new

active learning approaches that provide opportunity to optimize student learning. With limited

research available, this qualitative study described the value of considering current debriefing

approaches and debriefing adjuncts as useful teaching-learning strategies with nursing students.

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Appendix A: Permission from Conference Coordinator of Tennessee Nurse Educator Institute *

On Apr 8, 2019, at 9:24 PM, Jenny Webb <webbje@bethelu.edu> wrote:

….I have one faculty member who is beginning her dissertation. Would it be possible for her to give a quick presentation regarding her dissertation and have those in attendance complete a survey in order to help her with data collection? …..

Thanks! Jenny

On Tue, Apr 9, 2019 at 3:33 PM Jennifer M Hitt <jhitt@cbu.edu> wrote:

Hi Jenny,

…..We could do it at the end of the day or if a session ends early. Would that work?

Jennifer Hitt, PhD, RN, CNE
TNEI Conference Coordinator
Director-Nursing Program
Christian Brothers University
(901) 321-3465-office

Full email communication available in EIRB

Appendix B: Letter to Participants – Study Invitation

Hello Nurse Educator Meeting Attendees,

I would like to invite you to participate in a research study on gaining insight into faculty experiences regarding simulation debriefing adjuncts. I am a nursing PhD student at the University of Kansas Medical Center (KUMC) School of Nursing seeking participants for my dissertation research. Dr. Wanda Bonnel is my dissertation chair. The purpose of this study is to explore the experiences of faculty of prelicensure nursing students with debriefing adjuncts in simulation.

As an attendee of this meeting, you were identified as a potential participant for this study. Participation in this study is voluntary and confidential. No personal identifies linking you to study results will be made.

Study data will be collected by completing a written survey. The survey will take approximately 15-20 minutes to complete. Written forms are available at this association meeting. Study data will also be collected by interviewing three to six participants to confirm, validate, and add depth to the data from the written surveys. You are invited to indicate willingness to be interviewed.

There are no identifiable risks to participating in this study. You may choose at any time before or during the study to stop participating. However, since the completion of the written surveys will be anonymous, once it is submitted it cannot be withdrawn. A possible benefit to you as a nurse educator is to discuss debriefing adjuncts in simulation. --It is hoped that the results of this study will help the researcher learn more about nurse educators' experiences with debriefing adjuncts in simulation. This may lead to better methods to enhance debriefing methods.

All study data and information will be confidential. All information obtained through hard-copy documents will be kept in a secure, locked location that is only accessible by the researcher. Recordings and interview notes will be stored on REDCap according to KUMC policy.

If you are interested in participating in this study, please indicate your willingness to participate in this study by completing the survey. Completion of the survey implies consent. This study has been approved by the researcher's five-member dissertation committee and the Human Subjects Committee at KUCM. If you have any questions about your rights as research participant or concerns related to the study, you may contact myself Ashley Johnson (ajohnson28@kumc.edu) or Wanda Bonnel, PhD, RN (wbonnel@kumc.edu).   For questions about the rights of research participants, you may contact the KUMC Institutional Review Board (IRB) at (913) 588-1240 or humansubjects@kumc.edu

Appendix C: Letter to Participants – Survey Consent Form

Dear Nurse Educator Meeting Attendee,

   My name is Ashley Johnson, and I am doctoral candidate from The University of Kansas. You are being contacted to participate in a study about simulation debriefing adjuncts used in teaching prelicensure nursing students. You are being invited because you are a nursing educator attending a Tennessee Nurse Educator meeting. We are recruiting research participants to help us explore faculty experiences with debriefing adjuncts in simulation. Participation involves completing a survey which is attached to this letter that will take about 10-15 minutes to complete. No identifiable information will be collected about you, and the survey is anonymous. When you have completed the survey, please place it in the designated box at the meeting room exits.

 If you are interested in being contacted for an interview that will last approximately 30 minutes, please fill out the card provided with your email address and return it separate from you survey in the designated box.

There are no personal benefits or risks to participating in this study. Completing and submitting the survey serves as your consent to participate. Participation is voluntary, and you can stop taking the survey at any time. Researchers hope this study will help nurse educators learn more about this topic.

If you have any questions, please contact Ashley Johnson (ajohnson28@kumc.edu) or Wanda Bonnel, PhD, RN (wbonnel@kumc.edu).   For questions about the rights of research participants, you may contact the KUMC Institutional Review Board (IRB) at (913) 588-1240 or humansubjects@kumc.edu

Sincerely,

Ashley C. Johnson, PhD (c), MSN, RN
PhD Student, University of Kansas Medical Center School of Nursing
Email: ajohnson@kumc.edu

Appendix D: Survey

The purpose of this survey is to explore the experiences of prelicensure faculty with debriefing adjuncts in simulation. If using simulation, please answer the following questions with the following information as a guide or reference.

Terms and keywords have been used interchangeably over the years. We will use the following definitions for this survey:

1. Simulation – any activity that provides realistic clinical environments, demonstrates procedures, decision-making activities, and clinical judgment exercises.
2. Simulation Debriefing – a time of reflection where the participant can process the event, discuss with peers, learn, and modify behaviors.
3. Debriefing adjuncts in simulation – active learning elements used during a debriefing process to optimize learning and maximize the impact of the debriefing experience.
4. Student codebriefer - the purposeful matching of students or with faculty to facilitate the conducting of a debriefing.
5. Student written self-reflections - the ability of the student to become an observer in their own experience and then reflecting and writing about what they have learned.
6. Peer observer role – active engagement in a simulation experience by a student without hands-on activity.
7. Video-assisted debriefing– method of debriefing used to incorporate video playback of the simulation session along with verbal discussion.
8. Virtual debriefing – an evolving process that incorporates performance feedback in monitored online discussion forums.
9. Post debriefing assignments - activities assigned outside of the simulation environment to promote learning from the simulation.

Thank you for your time and willingness to share your experiences.

Demographic Information: Please tell me more about yourself and your teaching practice by answering the following questions. All responses are anonymous and will be analyzed in combination with information from all participants.

Please fill in the blank with the correct response:

1. How long have you used simulation in the education of nurses? _____

2. What type of program do you teach in? (Select the program that best fits your role)

   ____Licensed Practical Nurse Program
   ____Associate Degree Program
   ____Baccalaureate Degree Program
   ____On-line Bridge program (RN-BSN, LPN-RN, accelerated BSN)

_____Clinical Educator
_____Other _____

3. Select the type of teaching institution where you have used simulation. (Select all that apply.)

   ___university/college setting
   ___academic/teaching medical center
   ___hospital-based nursing program
   ___other: (please name)_____

4. What is your highest level of education?

   ___Baccalaureate Degree in Nursing
   ___Master's Degree in Nursing
   ___Doctor of Nursing Practice
   ___Doctor of Philosophy in Nursing
   ___Doctorate – Non-nursing
   ___Other: _____

5. Who is present during the debriefing? (Mark all that apply.)
   _____Nursing faculty
   _____Nursing students
   _____Observers of the scenario
   _____Equipment operators
   _____Other (such as faculty or students from other disciplines)_____

6. What ways did you gain training on your simulation debriefing process? (Select all that apply.)
   _____Graduate degree
   _____Continuing Education
   _____Simulation Vendors
   _____Webinars
   _____ Academic Institutions
   _____ Conferences
   _____ On-line courses
   _____ Other: _____

7. Please select the guidelines that your program uses as a standard for debriefing:
   _____International Association of Clinical Simulation (INACSL)
   _____National League for Nursing (NLN)
   _____Provided by the institution or school.
   _____Other: _____

8. In the last simulation that you conducted, what were the number of faculty present during debriefing? _____

9. In the last simulation that you conducted, what were the number of students present during debriefing? _____

10. What region of the state do you teach in?
    ___West
    ___Middle
    ___East

Survey Questions: Please reflect on your approaches to simulation debriefing and answer the following related to your teaching practice.

11. Please describe how you conducted your last debriefing.

12. What do you see as the benefits of your debriefing methods?

13. What are the challenges of your debriefing methods?

You will find attached a list of simulation debriefing adjuncts and their descriptions at the beginning of this survey. After reviewing, please answer the following questions:

14. Student written self-reflection

   a. Have used _____ Have not used_____
   b. In what ways is it used?

   c. Any Challenges?

   d. Effective or not effective?

15. Student as co-debriefer
   a. Have used _____ Have not used_____
   b. In what ways is it used?

   c. Any Challenges?

   d. Effective or not effective?

16. Student as peer observer
   a. Have used _____ Have not used_____
   b. In what ways is it used?

   c. Any Challenges?

   d. Effective or not effective?

17. Audio-video assisted debriefing
   a. Have used _____ Have not used_____
   b. In what ways is it used?

   c. Any Challenges?

   d. Effective or not effective?

18. Virtual debriefing such as on-line/discussion board
   a. Have used _____ Have not used_____
   b. In what ways is it used?

   c. Any Challenges?

   d. Effective or not effective?

19. Post-Simulation Debriefing Assignments
   a. Have used _____ Have not used_____
   b. In what ways is it used?

   c. Any Challenges?

   d. Effective or not effective?

20. What other creative debriefing adjuncts in simulation are used in your program beyond those you have already discussed?

21. What further resources do you feel are needed for your simulation debriefing?

22. What ways do you self-evaluate or are you evaluated on your debriefing for effectiveness?

23. What additional education would you feel useful in your debriefing process?

24. What additional information would you like to share about your debriefing experiences?

Appendix E: Interview Intent Card

If you are willing to be contacted for an interview, please indicate your email on this paper and deposit in the box provided --(separate from your survey).

Appendix F: Letter to Participants – Interview Consent Form

Date:

Dear:

Thank you for being willing to participate in an interview. The purpose of this interview is to confirm, validate and add depth to the findings from the survey. I will not know how you answered the questions in the survey. This interview will be conducted over the phone or face to face. The interview will be recorded.

The study interview will take place at a day and time convenient for you and last approximately 30 minutes. The interview will be recorded and conducted over the phone or face to face with Ashley Johnson, University of Kansas School of Nursing PhD Student, as the researcher. I will send you an email to confirm the best time for conducting the interview.

I will contact you to finalize the method, day, and time. Please contact me at ajohnson28@kumc.edu if you have any questions.

Sincerely,

Ashley C. Johnson, MSN, RN

PhD Student University of Kansas Medical Center School of Nursing

Appendix G: Interview Packet

Interview participations were given the following information as a big picture summary related to adjuncts:

- Adjunct methods used and found effective.
- Process overview
- Structure overview
- Perceived Benefits overview
- Definitions and examples of study themes
- Summary of educational needs
- Summary of resource needs
- Summary of evaluation approaches

Appendix H: Interview Script

Background: Introduce myself to the participant and spend a few moments making them comfortable. Using general interview guidance and use of prompting questions, the goal is to have participants talk freely about using debriefing adjuncts in simulation.

Context: Thank you for agreeing to meet with me. I appreciate that you have consented to help validate result and further detail the findings related to the faculty survey about debriefing adjuncts in simulation.   Since the surveys were anonymous, I don't know how you answered. We are going to spend about 30 minutes discussing the findings and your personal experiences with debriefing adjuncts. I am interested in your perspectives on the findings and as many details as possible. Do you have any questions before we begin?

1. How would describe your experience with debriefing adjuncts in simulation?

    a. What type of learner do you use these methods with?

    b. How long have you used these methods?

2. The following information is a summary of key findings from survey data. What are your thoughts?   (Table of summarized findings provided – interviewer goes through findings and asks about each key area).

    a. Tell me about why you agree or disagree with the findings?

    b. What additional information could you share to help clarify the findings?

    c. How would you say your teaching practice confirms or validates these findings?

3. I would like to go back over some of the major points of what you shared with so that I have it correctly …

Appendix I: Survey Analysis Method

1. Data were transcribed by each question.

2. Demographic data were organized by tables (Questions 1-10)

3. Data from open-ended questions were reviewed repeatedly; Systems framework was determined as useful to organize debriefing as a complex system.

4. Organized responses to open-ended questions by Structure- Process – Outputs with faculty consultant (Questions 11-24)

5. All the Structure, Process, and Output items were grouped together and then reviewed for themes. Under these themes a range of responses were considered, and examples provided.

6. For specific questions about adjunct debriefing methods (questions 14 to 19), boxes were created for comparisons of the methods.

7. Final themes were generated and described.

Appendix J: Initial Analysis Document –Example

Survey Statement	Restatement/Condensed Meaning Unit	Formulated/Meaning Code	Themes
we have allowed students to sit in as observer as charge nurse in clinical simulation environment.	Used students as observers in a specific role	Process – observing for further learning	Student learning – active engagement
Each student has a role - observer; ex: teamwork, communication	Observer – students assigned difficult roles	Process – observing for further learning	Student learning – active engagement
Observing students learning from other students with realization that others make mistakes/miss important things as well	Observer – students learned by watching others	Process – observers and reflecting for further learning	Student learning – active engagement

Appendix K: Sample Review for Each Adjunct Method (Question 16 Peer Observer Method)
Example

Process Challenges faculty reported:		
Student engagement *Student may sometimes:* • not be fully engaged • address aspects not relevant to the scenario or anticipated goals	**Student interactions** *Students:* • not always open with each other • tried to help too much or not enough • sometimes not civil in comments	**Working with diverse students:** • not always forthcoming about concerns • weaker students lacked the skill • some uncomfortable with negative feedback
Example: Some students do not see the peer evaluators critique as important as they are not the ones that are 'grading' them. If pre-simulation issues between students are not resolved this can influence the critique students receive and how it is used by the students receiving it.		
Structure Challenges faculty reported		
Knowledge/experience: • lacked training on how best to use the observer role.	**Faculty Time and Numbers:** • wanted more faculty	**Space and equipment:** • no challenges noted
Example: In campus clinical simulation it takes time away from the faculty running the simulation as they have to spend more time with senior student explaining the process and answering questions it almost becomes a sim within a sim.		
Output/Benefits – Faculty liked these because it: • allowed students to be part of the simulation • used with diverse roles • allowed students to help other students		
Example: Student has the opportunity to address important aspects of sim that are often missed when participating.		