

Running head: STRUCTURED DEBRIEFING AND SIMULATION

Structured Debriefing following High Fidelity Simulation to Improve Learner Experience and

Significance

Megan Lieb

Northern Kentucky University

STRUCTURED DEBRIEFING AND SIMULATION

The Use of Structured Debriefing following High Fidelity Simulation

New graduate nurses (NGNs) often report feeling unprepared, inexperienced, and overwhelmed in their new role, largely attributed to never feeling autonomous prior to entering the practice role (Odland, Sneltvedt, & Sorlie, 2014). Recently, a longitudinal study found simulation is as effective as clinical learning experiences when substituted for up to 50% of the clinical time (Hayden, Smiley, Alexander, Kardong-Edgren & Jeffries, 2014). Unlike clinical experiences, simulation can be designed to achieve specific outcomes such as: communicating effectively, identifying a change in condition, or caring for patients with specific diagnoses or problems. Simulation reflects real-life situations and is a safe environment for learners to build competency, skill, and confidence.

The International Nursing Association for Clinical Simulation and Learning (INACLS) identifies standards of best practice, which includes debriefing. The standard recommends each simulation experience should include a planned debriefing session (INACLS, 2016). While the literature strongly supports the use of simulation to facilitate the learning of nursing students, the studies often do not share specifics of the debriefing process; however the debriefing process is often cited as the most important aspect of simulation (Issenberg, Mcgaghie, Petrusa, Gordon, & Scalese, 2005).

Research Question

Does structured debriefing following high fidelity simulation impact the NGN's experience during debriefing and impact the importance of those experiences compared to NGNs who do not receive structured debriefing?

STRUCTURED DEBRIEFING AND SIMULATION

Background and Significance

A landmark study conducted by the National Council of State Boards of Nursing (NCSBN) found simulation can be effectively substituted for 50% of clinical time for all courses in undergraduate nursing curriculum (Hayden et al., 2014). The authors emphasize the significant finding of the study is both clinical and simulation settings are effective when structure and preparation can be achieved, leading to excellent outcomes.

In a phenomenological study exploring the lived experiences of NGNs, participants self-reported feeling unprepared, inexperienced, and overwhelmed in their new role (Odland et al., 2014). A major theme was never having felt totally responsible prior to entering the practice role. Simulation can be designed to reflect real-life situations and is a safe environment which allows the learner to freely make mistakes and learn at their own pace (Eyikara & Baykara, 2017).

Recently, the NCSBN has enacted a change regarding replacement of partial clinical hours with simulation for student nurses. Additionally, the complexity of entry-level practice for NGNs continues to climb. These combined factors intensify the importance of identifying and implementing best practices related to simulation curriculum and exploring use of simulation as an effective modality to bridge the gap between theory and practice for NGNs. This project seeks to explore whether structured debriefing impacts the learner's experience during debriefing and the importance of those experiences to the learner.

Purpose

Objectives

1. Develop and implement Structured Debriefing Guide (SDG) to improve learner experience and significance and standardize the debriefing process.
2. Collect quantitative and qualitative data exploring learner experience.

STRUCTURED DEBRIEFING AND SIMULATION

3. Analyze whether there are significant differences between experimental and independent groups.

The purpose of this mixed methods study was to 1) gather quantitative data to explore whether structured debriefing following high fidelity simulation impacted the NGNs' experience during debriefing and the importance of those experiences to the NGN and 2) gather qualitative data to corroborate quantitative findings and to determine whether simulations helped the NGNs make connections to real life situations.

In an effort to prepare the NGN to care for a high acuity patient in a complex health system, best research (debriefing strategies) is integrated with knowledge and expert skill to advance the practice and profession (Zaccagnini & White, 2016). Evaluating practice and practice changes related to how we orient NGNs is essential in the delivery of safe patient care.

Review of Literature

An electronic search exploring the effects of structured debriefing following high fidelity simulation on NGN was conducted. After broadly scanning the search topic "debriefing and simulation", search terms were defined to narrow the focus. The search terms "debriefing" and "simulation" and "nursing" were used. The literature findings were organized into themes.

The majority of the studies were qualitative in nature and used approximately 35 students. Three studies were systematic reviews. Studies were conducted in specialty areas such as neonatal intensive care unit and critical care units and primarily followed a pre- and post-test design, utilizing a variety of instruments such as: Health Sciences Reasoning Test, Lasater Clinical Judgement Rubric, and researcher-developed tools. Experiential Learning Theory (ELT) and Tanner's Clinical Judgement Model were commonly used as theoretical frameworks.

STRUCTURED DEBRIEFING AND SIMULATION

Definitions

Debriefing is defined by Bussard (2016) as a “method used in which a facilitator guides students through reflective thinking exercises. Reflective thinking helps students to connect theory to practice and to understand concepts within the simulation scenario” (p. 523). Cheng et al. (2014) identifies debriefing as “distinct instructional activities” (p. 658) and proposes two-way communication and the reflective nature of the discussion are hallmarks of debriefing.

Quality and Safety

Confidence is linked to improved functioning in professional roles as a part of an interdisciplinary team (Dacey, Murphy, Anderson, & McCloskey, 2010). An increase in confidence (Boling & Hardin-Pierce, 2016; Bussard, 2016; Forneris et al., 2015; Koo et al., 2014) and understanding of roles (Abelsson, Rystedt, Suserud, & Lindwall 2016; Lestander, Lehto, & Engstrom, 2016) was reported by students as a result of debriefing following simulation. Debriefing was also shown to increase critical thinking (Przybyl, Androwich, & Evans, 2015), nursing knowledge (Boling & Hardin-Pierce, 2016; Letcher, Roth, & Varenhorst., 2017), and to improve learner experience (Przybyl et al., 2015). Failure to rescue, a key quality-of-care indicator, has been linked to low confidence, lack of emergent clinical experiences in school or in orientation, and poor clinical reasoning (Herron, 2018). Clinical judgment is often impacted more by the experiences nurses bring to a situation than the objective data collected from the situation (Tanner, 2006).

To improve competence and transition into practice, a systematic review by Innes and Calleja (2018) found knowledge and skill acquisition were essential to improving patient outcomes and increasing competence, confidence, and job satisfaction. Nurse residency programs (NRPs) or prolonged orientation curriculum which include best practices, such as opportunities for skills

STRUCTURED DEBRIEFING AND SIMULATION

acquisition and improved critical thinking, contribute positively to increased retention rates and improved safety and quality (Rush, Adamack, Gordon, Lilly, & Janke, 2013). Emphasis of learning experiences, such as simulation and debriefing, should be the development of characteristics perceived as being indicative of the professional nurse. These characteristics include: self-confidence, critical thinking, willingness to ask questions, and knowing limitations (Wolff, Pesut, & Regan, 2010).

Reflective Thinking

The practice of debriefing allows learners to progress from feelings of anxiety and stress to reflective thinking (Johnston, Coyer, & Nask, 2017; Lestander et al., 2016; Reiersen, Haukedal, Hedeman, & Bjork, 2017). Reflection assists in the development of clinical knowledge and reasoning (Forneris et al., 2015; Koo et al., 2014; Lestander et al., 2016; Reiersen et al., 2017) and, when reflection becomes habitual, they are equipped to think like a nurse (Tanner, 2006). Nursing students also reported the structure of debriefing created a safe environment in which to reflect and receive comprehensive feedback (Abelsson & Bisholt, 2017; Reiersen et al., 2017) and where they could be strengthened by others (Abelsson & Bisholt, 2017; Koo et al., 2014).

Most Important

Issenberg et al. (2005) conducted a systematic literature review exploring the features of high fidelity simulation that lead to most effective learning. Of the 109 journal articles, 47% reported debriefing was the most important feature of simulation education. When debriefing is unstructured, unpredictable learning outcomes occur. Debriefing helps NGNs to translate knowledge learning in simulation real world scenarios (Johnston et al., 2017). Additionally, debriefing helps to standardize evaluation of knowledge (Przybyl et al., 2015).

STRUCTURED DEBRIEFING AND SIMULATION

Gaps

A gap exists in the literature examining effects of debriefing following simulation of NGNs and practicing nurses. In the clinical arena, most simulations conducted are geared toward specialty areas to allow for complex skill development (Letcher, Roth, & Varenhorst, 2017; Boling & Hardin-Pierce, 2016). An absence of quantitative studies may exist due to the lack of established tools to validate significance relating specifically to debriefing experiences. The previously mentioned tools evaluate critical thinking skills or clinical judgment of the learner, and do not seek to evaluate the debriefing experience. While a vast amount of literature can be found supporting the use of simulation as a pedagogical strategy, Cheng et al. (2014) found a lack of debriefing strategies in the articles.

Theoretical Framework

A four-stage learning cycle based on Kolb's ELT was utilized for the study. ELT focuses on knowledge development through experience versus passive learning which occurs in a classroom, reading a text, or listening to a lecture. The theory draws from Dewey (significance of learning through experience), Lewin (integrating theory into practice) and Piaget (cognitive development influenced by experience) (Kolb, 1984). The cycle is made up of 1) a concrete experience, such as high-fidelity simulation, 2) reflective observation to make sense of the experience, such as structured debriefing, 3) abstract conceptualization to understand the situations and problems, and 4) active experimentation to test theory and use knowledge to direct future practice, such as time spent precepting on a clinical unit (Lisko & O'Dell, 2010).

STRUCTURED DEBRIEFING AND SIMULATION

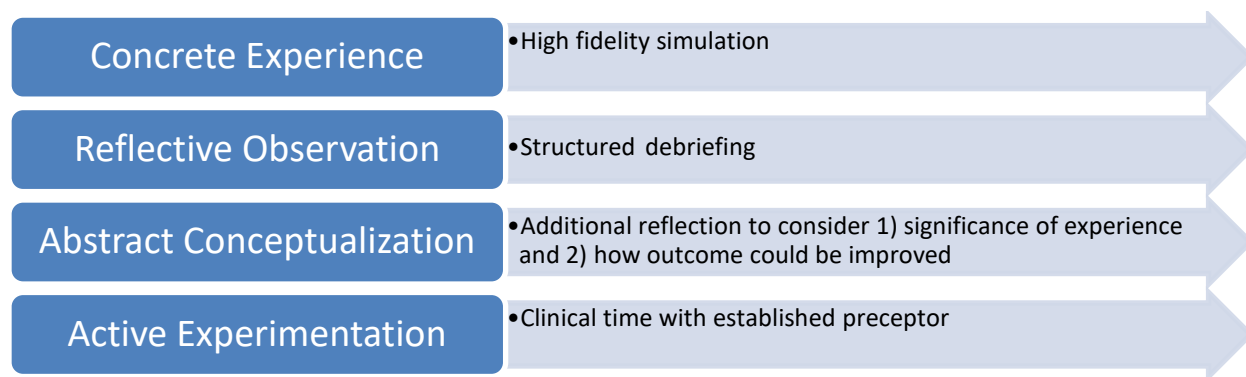


Figure I. Theoretical Framework aligned with simulated experience.

Project Design

Permissions and Informed Consent

Institutional Review Board (IRB) approval was obtained from Northern Kentucky University and ProMedica Health System prior to the study. Permission was obtained from Dr. Shelly Reed to use the Debriefing Experience Scale (DES) (Reed, 2012). The study was introduced to NGNs hired into a metro NRP. A PowerPoint was presented during hospital orientation, which covered all aspects of informed consent. Following the presentation, all potential participants had an opportunity to ask questions and gain clarification as needed. Informed consent was then obtained for 1) participation in the study, 2) online survey offered via Qualtrics, and 3) participation in post-hoc discussion groups. All participants were informed their decision to participate or not participate would not affect their employment or progression in their orientation. Any participants who did not volunteer for the study were placed in a group which participated in the institution's established process for simulation as part of the NRP.

Sample

The participants were NGNs who participated in high fidelity simulation as part of the NRP. There were 76 total NGNs in the sample; 3 NGNs were excluded because they were hired into specialty areas and would not participate in simulation as part of the NRP. The participation

STRUCTURED DEBRIEFING AND SIMULATION

rate was 82% (n=60). There were 29 nurses who reported having a Bachelor of Science in Nursing degree, and 30 nurses who reported having an Associate Degree in Nursing. The sample was predominantly female (86%) and was a convenience sample from one large healthcare organization.

Setting

The study was conducted in a multi-hospital healthcare organization located in northwest Ohio and southeast Michigan. The simulated experience took place in a central location.

Tool

The DES is organized to provide feedback in the following two areas: experience and importance (Reed, 2012). A strength of this scale is that it allows for understanding of the learning experience from the viewpoint of the NGN, which is essential to maximize learning. The DES was determined to have a Cronbach's alpha in the scale area of importance at .91 and in the scale area of experience at .93. The DES was administered via an anonymous online survey utilizing Qualtrics software. The scale is organized into four categories: analyzing thoughts and feelings, learning and making connections, facilitator skill in conducting the debriefing, and appropriate facilitator guidance. Each category has between three to eight statements. The NGN used a Likert scale to answer strongly disagree (1) to strongly agree (4) for each statement. The NGN then used a Likert scale to rate each statement as not important (1) to very important (4).

Methodology

Approximately four to six weeks into the NRP, NGNs who chose to participate were randomly assigned to an experimental and independent group. Groups were numbered: even groups received structured debriefing (experimental), odd groups received unstructured debriefing (independent). All NGNs participated in a simulated patient care experience.

STRUCTURED DEBRIEFING AND SIMULATION

Following simulation, participants in the experimental group viewed the recording and debriefed utilizing the SDG. The SDG was developed by the researcher and is grounded in evidence-based practice. The SDG was reviewed for content by nurse educator experts in the field of simulation and encourages participant to reflect and share (See Appendix A). The purpose of the SDG was to standardize the debriefing structure. Participants in the independent group viewed the recording and debriefed utilizing an unstructured format, for example: play back the video, educator pointed out what should have been done and what went well. All educators who conducted the debriefings were experienced in the practice of debriefing. Educators utilizing the SDG had been trained by the researcher on use of the SDG. Debriefing occurred in groups of two to three and lasted approximately 30 minutes.

Immediately following debriefing, NGNs from both groups were asked to complete the DES via an online survey. The first question on the survey asked the NGN to report whether they were in an even or odd group. Three weeks later, participants were asked to participate in post-hoc discussion groups led by the researcher to discuss how the simulation experience impacted their practice. The post-hoc discussion was tape-recorded and transcribed by the researcher.

Data Analysis

Quantitative Data

The DES data was analyzed using Statistical Package for the Social Science (SPSS). Internal consistency was measured using Cronbach's alpha. A reliability coefficient of 0.70 or higher is considered acceptable. Each category was individually analyzed, all categories demonstrated internal consistency $>.77$ (Table 1). Two-way ANOVA was used to compare the group means and to check for evidence of significance between experimental and independent groups (Table 2). Responses to all questions in same category were summed and means for two

STRUCTURED DEBRIEFING AND SIMULATION

groups compared for each category. Level of significance was set at 0.05. Next, the association between the NGN's response and the group was tested to determine if the experimental group was more likely to give a favorable answer (strongly agree or extremely important) compared to the control group. Goodman and Kruskal's Gamma and Kendall's Tau C were both calculated, but because the tests both consistently reported the same p-values, only one p-value will be reported. These tests were utilized to measure strength of association between two variables measured at the ordinal level.

Qualitative Data

Approximately three weeks after the simulation experience, a sub-set of NGNs (n=32) from the experimental and control groups participated in post-hoc discussion groups to corroborate quantitative findings. Focus groups ranged from three to four NGNs and were conducted by the researcher. Utilizing the three steps of analysis as identified by Ary, Walker, and Jacobs (2014), findings from post-hoc discussion groups were organized, coded and reduced, and interpreted into themes. Findings from experimental and control groups were contrasted to determine differences in themes. Transcription and themes were reviewed with the nurse educators to ensure trustworthiness.

Results

Quantitative Results

Table 1

Cronbach's Alpha for Individual Categories

	Agree/Disagree	Importance
C1 Analyzing Thoughts and Feelings	.78	.80
C2 Learning and Making Connection	.92	.94
C3 Facilitator Skill in Conducting Debriefing	.88	.92
C4 Appropriate Facilitator Guidance	.89	.88

STRUCTURED DEBRIEFING AND SIMULATION

Table 2

Two-Way Analysis of Variance and Level of Significance for Each Category

	Mean Score Experimental Group	Mean Score Independent Group	Mean Score Experimental Group	Mean Score Independent Group	Level of Significance	Level of Significance
	Agree/Disagree	Agree/Disagree	Importance	Importance	Agree/Disagree	Importance
C1 Analyzing Thoughts and Feelings	18.1	16.8	18.2	16.9	.07	.04
C2 Learning and Making Connection	37.4	33.6	37.5	34.9	.002	.02
C3 Facilitator Skill in Conducting Debriefing	23.0	21.8	23.2	21.2	.13	.009
C4 Appropriate Facilitator Guidance	14.3	13.4	13.9	13.5	.04	.36

Table 3

Goodman and Kruskal's Gamma and Kendall's Tau C Results for Individual Questions

		Agree/Disagree	Importance
C1 Analyzing Thoughts and Feelings	Q1	.02	.02
	Q2	.01	.001
	Q3	.26	.22
	Q4	.34	.24
C2 Learning and Making Connections	Q5	.01	.35
	Q6	.02	.01
	Q7	.002	.01
	Q8	.0009	.02
	Q9	.006	.08
	Q10	.01	.08
	Q11	.001	.003
	Q12	.006	.09
C3 Facilitator Skill in Conducting Debriefing	Q13	.18	.01
	Q14	.36	.002

STRUCTURED DEBRIEFING AND SIMULATION

	Q15	.009	.04
	Q16	.12	.01
	Q17	.09	.05
C4Appropriate Facilitator Guidance	Q18	.11	.15
	Q19	.01	.35
	Q20	.07	.35

There were no significant differences identified between NGNs with a bachelor's degree or an associate's degree. The structured debriefing did render significant differences between groups in multiple areas. There were significant differences identified between the experimental and independent group in two of the categories for agree/disagree and significant differences in three of the categories for importance (Table 2). Goodman and Kruskal's Gamma and Kendall's Tau C both indicated a strong association between the experimental group and answering "strongly agree" and indicating "very important" in the majority of answers when questions were analyzed individually (Table 3). Each question in Learning and Making Connections (category two) had a significant finding, indicating the experimental group demonstrated strong correlation for answering "strongly agree". The findings indicate the structured debriefing guide resulted in significant differences for NGNs' experience and significance.

Qualitative Results

There were several themes unique to the independent group: awareness and reflection, framework for practice, communication, resolution, and reflection (Table 4). The most prevalent theme from the independent group was framework for practice/connections.

STRUCTURED DEBRIEFING AND SIMULATION

Table 4

Qualitative Findings from the Experimental Group

Post-hoc Discussion Questions	Themes in Independent Group	Supporting Statements
How did debriefing after simulation help you make sense of your feelings or thoughts regarding the simulation experience?	Awareness	Debriefing helped me realize things I need to work on and focus on; I realized I was forgetting things and see now what I can do better
	Reflection	During the simulation I was exposed to a situation or thought, then in debriefing I could elaborate on that thought with the educator; this helped me understand how I did and helped me reflect... there were a lot of little things I missed that I won't miss again since we talk about it
How did simulation help you to make connections to real-life situation?	Framework for Practice	(Sim) was so realistic because I didn't have a teacher right there next to me; I felt like...this little light bulb went off... like hey, they need an IV so I need to do that and I really do need to do a full assessment; helped me see the disease process and put everything together; it helped me piece things together...like I had a totally different patient diagnosis but the concepts were still the same (elevated heart rate) so I still knew what to do
	Communication	The debriefing helped me with talking to doctors by making me more aware of what I am doing; it really helped with patient education...like knowing what to say if they aren't doing what they should
Is debriefing important to you following high fidelity simulation?	Resolution	I have a lot of questions going into simulation, but I have so many more questions coming out of simulation.... Like I need to get these answered or else they are going to bug me. So many things come up when I am in there, like I actually don't know how to handle this...I feel less nervous now (on the floor) because I think I know what to expect; Yes, because we got to talk to someone who has been in nursing for many years and we get to reflect with them on what we did; Debriefing is important, otherwise I would leave like what just happened
	Reflection	When you go into sim, you have a certain perspective and during (sim) you are not really thinking and then after (during debriefing) you think wow, I didn't even think of that so it definitely helps; I think it is the most important part

STRUCTURED DEBRIEFING AND SIMULATION

Discussion

NGNs who participated in the structured debriefing rated analyzing thoughts and feelings, learning and making connections, and facilitator skills as significantly more important compared to the control group. After the intervention was complete, an educator who was utilizing the SDG stated “this format really makes them (the NGNs) think, reflect, and share instead of me just telling them”. The SDG was founded on evidence and promotes learner reflection. By allowing the learners to reflect in a safe environment, they are learning “to think like a nurse” (Tanner, 2006). Tanner (2006) also notes reflection is triggered when an adverse event occurs. A breakdown in clinical judgment is vital for the development of clinical judgment and reasoning (Tanner, 2006). Because errors in simulation do not compromise patient safety, NGNs are allowed to make decisions and implement them, even when they are not the best option (i.e. calling a physician for orders before thoroughly assessing a patient). Because the NGNs often make “errors” during the simulation, a foundation for development of clinical judgment and reasoning has been laid.

The findings from the second category, learning and making connections, were significant in both the experience and importance areas. NGNs in the experimental group highly valued the opportunity to make connections to practice. This was evident in both the quantitative (Table 2) and qualitative findings (Table 4). In addition, there was a strong association between being in the experimental group and answering “strongly agree” and “very important” (Table 3). While learning through simulation and debriefing is important, the link to improved patient outcomes occurs when that learning is translated to “real world scenarios”. Debriefing is the essential process to ensure translation from learning to practicing (Johnston et al., 2017).

Interestingly, NGNs reported facilitator skill in conducting debriefing was very important to them (category three), which contrasts the educator’s statements that the SDG focused on self-

STRUCTURED DEBRIEFING AND SIMULATION

directed learning and reflection. It is possible NGNs are more satisfied with the facilitator skill because when learners take an active role in the learning process, more meaningful understanding occurs (Du Toit-Brits, 2018). This is supported by the significant finding in category four (appropriate facilitator guidance). The NGNs answered they strongly agreed that the educator taught the right amount and provided the right amount of evaluation and guidance. NGNs perceived the educators utilizing the SDG did a better job facilitating the debriefing than those who did not (Table 2).

Drawing from Kolb's ELT, the learning process begins with a concrete experience (Kolb, 1984). The experience is then reflected on to develop new insight which is then tested in practice. By developing a specific debriefing process through structured debriefing, educators ensure all NGNs are directed through the learning process, resulting in changed behaviors and achievement of objectives. The qualitative data obtained from post-hoc discussion groups supports the theory. NGNs reported reflective thinking resulted in changed behaviors because the mistakes they made in simulation would not be repeated in real life. Following simulation, NGNs continued precepting with experienced nurses and were able to actively experiment in a safe setting. Others stated they could be now be more "efficient" and safe in their delivery of care and communicate better with physicians and patients because of learning which occurred through simulation.

One NGN stated debriefing "gives you a moment to translate what happened in the simulation to what has happened in the hospital". A peer supported this idea by saying after simulation, he or she cared for a similar patient and was able to provide improved care for the patient because of the simulation experience. Reflective thinking is key for development of clinical knowledge and reasoning (Forneris et al., 2015; Koo et al., 2014; Lestander et al., Reiersen

STRUCTURED DEBRIEFING AND SIMULATION

et al., 2017). When a structured debriefing process is established, a safe environment for reflecting and receiving feedback is formed (Abelsson & Bisholt, 2017; Reiersen et al, 2017).

Relationship of Results

Many nurses graduate without vital experiences such as physician communication or recognizing and reporting a change in condition (Cronenwett et al., 2007). It is essential to ensure all NGNs develop similar skills during their orientation to ensure all patients are cared for by nurses with the same competency level. Regardless of the time NGNs spend precepting with an experienced nurse, it is challenging to ensure they are all exposed to the same learning opportunities. While simulation has recently become widely accepted as an effective modality to bridge the learning gap for nursing students, there is a need to evaluate the effectiveness of simulation to train NGNs, improving their transition to practice and ability to render safe care. In order to effectively evaluate simulation, aspects such as debriefing need to be explored, defined, and studied. This study adds value by explicitly defining the debriefing process and sharing a SDG to assist in the standardization of debriefing processes. When simulation and debriefing are unstructured, it is difficult to ensure each NGN has accomplished the identified objectives which are specifically developed to safeguard patients.

The quantitative data from the study demonstrated the structured debriefing process helped NGNs to learn and make connections. In addition, those in the experimental group rated the significance of analyzing thoughts and feelings, learning and making connecting, and facilitator skill in debriefing higher than those in the independent group. The most common theme from the qualitative findings was simulation created a framework for practice; many NGNs elaborated by saying the simulation aided them in making connections, learning from their mistakes, and knowing how to apply the knowledge in a clinical setting.

STRUCTURED DEBRIEFING AND SIMULATION

Strength and Limitations

There were several challenges linked to working with a healthcare organization where the researcher was not employed and which had its own IRB process. A sponsor has to be identified and signed off on the IRB application. This process did require careful consideration of the finer details of the project intervention and evaluation which helped implementation to run smoothly.

Efforts were made to reduce variables between independent and experimental groups by random assignment. Additional variables may include facilitator skill in conducting debriefing and NGN previous experience with simulation and debriefing. The sample was predominantly female (86%) and was a convenience sample from one large healthcare organization and may reflect opinions specific to nurses who pursued a NRP after graduation.

The DES provided significant information about the experience and significance in four category areas. The study effectively compared two debriefing experiences. Cronbach's alpha demonstrated internal consistency. Overall, the project was successful. The objectives were met and results indicated the intervention yielded significant results. The sample size was adequate and the educator team was engaged and assisted with any logistic needs. Another benefit was increasing the educators' and the participants' exposure to research and use of evidence to guide practice.

Recommendations and Implications for Practice

Design Simulation to Ensure Competency

Multiple learners stated debriefing was the most important part of the simulation experience and that mistakes made in simulation would not be repeated in real life. This finding was supported by the review of literature. A significant theme was the importance of debriefing

STRUCTURED DEBRIEFING AND SIMULATION

and that debriefing was the most important feature of simulation (Issenberg et al., 2005). It is crucial to develop simulation objectives to meet the needs of NGNs and to address any gaps in learning. In order to ensure learners have the same experiences and are able to achieve meaningful learning objectives, standardized processes are needed. NRPs can strategically incorporate the needs of learners into simulation design to ensure all NGNs enter practice with practical experiences.

Define Debriefing Process

Debriefing guides transfer of principles learned in simulation to real world scenarios (Johnston et al., 2017). Reed (2012) recommends further investigation to define the debriefing experience. This study disseminates a structured tool which can be used to standardize the debriefing process. Structured debriefing increases perceived awareness of the connections between simulation scenarios, nursing actions, and patient outcomes. Educators should implement structured debriefing processes to facilitate learner progression from concrete experience to practice changes.

Continued Research

There is a need to continuously research, implement, and evaluate best practices related to the education and training of NGNs. Future research should clearly define the debriefing process so it can be replicated. Additional research on the longitudinal impact of simulation and debriefing processes should be explored related to the quality and safety of the care provided by NGNs and the impact of such learning experiences on retention.

Sustainability of Project

The nurse educators who manage the NRP initially identified the need for standardized debriefing to ensure consistent experiences for NGNs as part of orientation and were involved in

STRUCTURED DEBRIEFING AND SIMULATION

the implementation of the project. The nurse educators will continue to use the SDG for all simulations. To sustain costly programs such as NRPs, it is essential to demonstrate return on investment (ROI) to leaders related to the retention of NGNs, decreased costs of turnover, and improved quality and safety. This study adds to the body of literature which suggests experiential learning activities, such as simulation and debriefing, are effective in the training and orientation of NGNs and can contribute positively to the provision of safe care, acquisition of skills, and improved ability to critically think which are linked to reflection.

Dissemination Plan

The project abstract was submitted for a podium or poster presentation at ProMedica Research Conference. The abstract was selected for a podium presentation on October 25, 2018. The nurse educators who collaborated will participate in the presentation and the results will be shared with other staff development educators and NGNs to demonstrate the value of what individuals and teams can do to improve care delivery (Cronenwett et al., 2007).

The manuscript will be submitted to *The Journal for Nurses in Professional Development*. The preparation guidelines are: 1) one-inch margins and double-spacing, 2) page numbers in upper right corner, 3) preferred length of 12-16 pages, including tables and references, 4) APA format. The journal is geared towards professional staff development specialists and patient educators. This study explores best practices related to high fidelity simulation use in NRPs and provides an innovative SDG with detailed implementation of a structured debriefing process to improve learner experience and significance. Educators in staff development roles are often tasked with the orientation of NGNs and seek evidence-based strategies to improve retention and quality of care delivered by NGNs.

STRUCTURED DEBRIEFING AND SIMULATION

References

- Abelsson, A., & Bisholt, B. (2017). Nurse students learning acute care by simulation: Focus on observation and debriefing. *Nurse Education in Practice*, 246-13. doi:10.1016/j.nepr.2017.03.001
- Abelsson, A., Rystedt, I., Suserud, B., & Lindwall, L. (2016). Learning by simulation in prehospital emergency care: An integrative literature review. *Scandinavian Journal of Caring Sciences*, 30(2), 234-240. doi:10.1111/scs.12252
- Ary, D., Walker, D., & Jacobs, L.C. (2014). *Introductions to Research in Education* (9th ed.). CA: Cengage Learning
- Boling, B., & Hardin-Pierce, M. (2016). The effect of high-fidelity simulation on knowledge and confidence in critical care training: An integrative review. *Nurse Education in Practice*, 16, 287-293. doi:10.1016/j.nepr.2015.10.004
- Bussard, M. E. (2016). Self-Reflection of video-recorded high-fidelity simulations and development of clinical judgment. *Journal of Nursing Education*, 55(9), 522-527. doi:10.3928/01484834-20160816-06
- Cheng, A., Eppich, W., Grant, V., Sherbino, J., Zendejas, B., & Cook, D. A. (2014). Debriefing for technology-enhanced simulation: A systematic review and meta-analysis. *Medical Education*, 48(7), 657-666. doi:10.1111/medu.12432
- Cronenwett, L., Sherwood, G., Barnsteiner, J., Disch, J., Johnson, J., Mitchell, P., & ... Warren, J. (2007). Quality and safety education for nurses. *Nursing Outlook*, 55, 122-131. doi:10.1016/j.outlook.2007.02.006
- Dacey, M., Murphy, J., Anderson, D., & McCloskey, W. (2010). An interprofessional service-learning course: Uniting students across educational levels ad promoting patient-centered

STRUCTURED DEBRIEFING AND SIMULATION

- care. *Journal of Nursing Education*, 49(12), 696-699. doi:10.3928/01484834-20100831-09
- Du Toit-Brits C. (2018). Towards a transformative and holistic continuing self-directed learning theory. *South African Journal of Higher Education*, (4), 51. <https://doi.org/10.20853/32-4-2434>
- Eyikara, E., & Baykara, Z. G. (2017). The importance of simulation in nursing education. *World Journal on Educational Technology: Current Issues*, 9(1), 2-7.
- Forneris, S. G., Neal, D. O., Tiffany, J., Kuehn, M. B., Meyer, H. M., Blazovich, L. M., & ... Smerillo, M. (2015). Enhancing clinical reasoning through simulation debriefing: a multisite study. *Nursing Education Perspectives*, (5), 304. doi:10.5480/15-1672
- Hayden, J. K., Smiley, R. A., Alexander, M., Kardong-Edgren, S., & Jeffries, P. R. (2014). The NCSBN National Simulation Study: A Longitudinal, Randomized, Independentled Study Replacing Clinical Hours with Simulation in Prelicensure Nursing Education.
- Herron, E. K. (2018). New graduate nurses' preparation for recognition and prevention of failure to rescue: A qualitative study. *Journal of Clinical Nursing*, 27(1/2), e390. doi:10.1111/jocn.14016
- INACSL Standards Committee. (2016). INACSL standards of best practice: SimulationSM Debriefing. *Clinical Simulation in Nursing*, 12(S), S21-S25. <http://dx.doi.org/10.1016/j.ecns.2016.09.008>
- Innes, T., & Calleja, P. (2018). Transition support for new graduate and novice nurses in critical care settings: An integrative review of the literature. *Nurse Education in Practice*, 30, 62-72. doi:10.1016/j.nepr.2018.03.001

STRUCTURED DEBRIEFING AND SIMULATION

- Issenberg, S. B., Mcgaghie, W. C., Petrusa, E. R., Gordon, D. L., & Scalese, R. J. (2005). Features and uses of high-fidelity medical simulations that lead to effective learning: A BEME systematic review. *Medical Teacher*, 27(1), 10-28. doi:10.1080/01421590500046924
- Johnston, S., Coyer, F., & Nash, R. (2017). Simulation debriefing based on principles of transfer of learning: A pilot study. *Nurse Education in Practice*, 26, 102-108. doi:10.1016/j.nepr.2017.08.002
- Koo, L., Layson-Wolf, C., Brandt, N., Hammersla, M., Idzik, S., Rocafort, P. T., & ... Windemuth, B. (2014). Qualitative evaluation of a standardized patient clinical simulation for nurse practitioner and pharmacy students. *Nurse Education in Practice*, 14(6), 740-746. doi:10.1016/j.nepr.2014.10.005
- Kolb, D. A. (1984). *Experiential Learning: Experience as the Source of Learning and Development*. Englewood Cliffs, NJ: Prentice Hall.
- Lestander, Ö., Lehto, N., & Engström, Å. (2016). Nursing students' perceptions of learning after high fidelity simulation: Effects of a three-step post-simulation reflection model. *Nurse Education Today*, 40, 219-224. doi:10.1016/j.nedt.2016.03.011
- Letcher, D. C., Roth, S. J., & Varenhorst, L. J. (2017). Simulation-based learning: Improving knowledge and clinical judgment within the NICU. *Clinical Simulation in Nursing*, 13, 284-290. doi:10.1016/j.ecns.2017.03.001
- Lisko, S., & O'Dell, V. (2010). Integration of theory and practice: experiential learning theory and nursing education. *Nursing Education Perspectives (National League for Nursing)*, 31(2), 106-108.

STRUCTURED DEBRIEFING AND SIMULATION

- Odland, L., Sneltvedt, T., & Sörlie, V. (2014). Responsible but unprepared: Experiences of newly educated nurses in hospital care. *Nurse Education in Practice*, 14(5), 538-543. doi:10.1016/j.nepr.2014.05.005
- Przybyl, H., Androwich, I., & Evans, J. (2015). Using high-fidelity simulation to assess knowledge, skills, and attitudes in nurses performing CRRT. *Nephrology Nursing Journal*, 42(2), 135-148.
- Reed, S. J. (2012). Debriefing Experience Scale: Development of a tool to evaluate the student learning experience in debriefing. *Clinical Simulation in Nursing*, 8,e211-e217. doi:10.1016/j.ecns.2011.11.002
- Reierson, I. Å., Haukedal, T. A., Hedeman, H., & Bjørk, I. T. (2017). Structured debriefing: What difference does it make? *Nurse Education in Practice*, 25, 104-110. doi:10.1016/j.nepr.2017.04.013
- Rush, K. L., Adamack, M., Gordon, J., Lilly, M., & Janke, R. (2013). Best practices of formal new graduate nurse transition programs: An integrative review. *International Journal of Nursing Studies*, 50,345-356. doi:10.1016/j.ijnurstu.2012.06.009
- Tanner, C.A. (2006). Thinking like a nurse: A research-based model of clinical judgment in nursing. *Journal of Nursing Education*, (6), 204.
- Wolff, A. C., Pesut, B., & Regan, S. (2010). New graduate nurse practice readiness: Perspectives on the context shaping our understanding and expectations. *Nurse Education Today*, 30,187-191. doi:10.1016/j.nedt.2009.07.011
- Zaccagnini, M. E. & White, K. W. (2016). *The Doctor of Nursing Practice Essentials: A New Model for Advanced Practice Nursing (3rd ed.)*. Burlington, MA: Jones & Bartlett Learning.

STRUCTURED DEBRIEFING AND SIMULATION

Appendix A

Structured Debriefing Guide

Getting Started (3-5 minutes)

Provide copy of objectives. Allow students to review.

Explain role of the facilitator and learner.

My role as the facilitator is to support you and to help you reflect to make sense of your learning. I realize it might be awkward to watch yourselves but reflection is often the most important part of the learning experience.

Your role as the learner is to reflect on actions and thoughts so you can get the greatest benefit from this simulation experience.

Reflection (10-15 minutes)

Replay short sections of the recording which relate directly to learning objectives.

Allow learner to interpret the scenario.

Tell me about your simulation experience.

How did you identify the priority problem for the patient?

How did you determine the best patient outcome for this situation?

Utilize plus/delta debriefing method.

What did you do that went really well? Why?

What did you do that you would change? Why?

Wrap Up (10-15 minutes)

Link to practice:

What would have happened if this was a real patient?

How does this change the way you take care of patients?

Review objectives for scenario

Were the objectives met?

Do you have any unanswered questions about what happened?