

Debriefing Post-Simulation and SRNA Self-Confidence and Satisfaction

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Abstract

The development of safe clinical judgment and practice in student registered nurse anesthetists (SRNAs) requires intensive skill training. Simulation-based education provides a safe learning environment, allowing for the honing of high-risk clinical skills, without compromising patient safety. Debriefing is considered a crucial element of simulation as it facilitates reflection on performance, enhances learning during simulation, bridges the gap between theory and practice, and assimilates learning experiences into future clinical practices. A large amount of research supports the use of simulation, yet debriefing is seldom the focus of research. The paucity of data supporting structured debriefing after high-fidelity patient simulation and its effects on self-confidence and satisfaction in SRNAs spurred the development of a post-test scholarly project on the difference between two evidence-based debriefing methods and the effects on SRNA self-confidence and satisfaction in learning. The objective of this scholarly project was to contribute evidence to debriefing methods used in nurse anesthesia simulation education. Four SRNAs, from AdventHealth University (AHU) 2021 and 2022 cohorts, participated in a crisis simulation scenario. This simulation was followed by two randomly assigned debriefing methods. Student self-confidence and satisfaction in learning was measured by using a modified version of the National League of Nursing Student Self-Confidence and Satisfaction 13-item questionnaire. The scholarly project was intended to provide the nurse anesthesia program at AHU recommendations and contribute to the growing body of knowledge on a structured debriefing method in promoting SRNA self-confidence and satisfaction in learning. Due to the small sample size, conclusions could not be drawn.

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Debriefing Post-Simulation and SRNA Self-Confidence and Satisfaction

High-fidelity simulation-based learning is widely utilized among nurse anesthesia programs to promote student registered nurse anesthetists (SRNAs) safe entry to clinical practice. Debriefing post-simulation is one of the most important components of clinical simulation as it leads to self-reflection, knowledge acquisition, and improved future clinical performance (Buckley et al., 2012; Coutinho, Martins, & Pereira, 2016; Ostovar et al., 2018). There are a variety of debriefing methods applied post-simulation, however, there are limited studies examining structured methods of debriefing and how they affect SRNA self-confidence and satisfaction. Self-confidence in clinical decision making is imperative to nurse anesthetists for effective clinical performance (Porter, Morphet, Missen, & Raymond, 2013). Self-confidence leads to the development of safe clinical judgment and practice, which influences patient outcomes (Blum, Borglund, & Parcells, 2010; Kendall-Gallagher & Blegen, 2009).

Significance and Clinical Background

As of June 28, 2019, there were a total of 121 accredited nurse anesthesia programs in the United States preparing SRNAs to safely care for diverse populations (Council on Accreditation of Nurse Anesthesia Educational Programs [COANAEP], 2019). In 2012, 96% of nurse anesthesia programs reported implementing high-fidelity simulation and debriefing within the curriculum (Ballister, 2018). The COANAEP (2019) values the use of simulation-based education with debriefing in graduate nurse anesthesia programs to enhance knowledge, communication, critical thinking and decision-making skills, team training, crisis management, and improved performance in clinical scenarios.

Approximately 84% of anesthesia providers will experience at least one critical incident during their career (Stone et al., 2017). A critical incident is defined as an event that causes or

has the potential to cause patient harm if not recognized and acted upon in a timely manner (Stone, Tyrey, Muckler, & Vacchiano, 2017). Nurse anesthesia educators are tasked with preparing nurse anesthesia students to safely manage crisis scenarios such as bronchospasm, anaphylaxis, and malignant hyperthermia. Structured debriefing post-simulation is identified as the best evidence-based practice method in simulation to promote learning (Coutinho et al., 2016; Decker et al., 2013; Dufrene & Young, 2014; Edgecombe et al., 2013; INACSL, 2016). Structured debriefing improves learning outcomes through reflection and promotes student self-confidence and self-efficacy (Durham & Alden, 2008). Through debriefing, students can identify areas in need of improvement in their critical thinking and clinical reasoning skills (Durham & Alden, 2008). Self-confidence is imperative for SRNAs to make critical decisions, which directly impacts patient care. Satisfaction in learning promotes engagement, meaningful learning experiences, and encourages higher-level critical thinking skills (Gudayu, Badi, & Asaye, 2015). There is limited research on the impact of structured debriefing post-simulation on SRNAs (Cannon-Diehl, Rugari, & Jones, 2012). Therefore, it is essential to examine the most effective method of structured debriefing on SRNAs in order to resolve knowledge gaps effectively and improve SRNA self-confidence and satisfaction, leading to safe and quality patient care.

The purpose of this scholarly project was to compare two structured debriefing methods post-simulation on SRNA's self-confidence and satisfaction. The SHARP method of debriefing was compared to the GAS method of debriefing, after an anaphylaxis crisis scenario, to determine which method was most effective in promoting SRNA self-confidence and satisfaction. Empowering the DNAP faculty at AHU to implement the most effective method to provide optimal learning outcomes for their students.

PICOT Evidence Review Questions

To assist in the systematic review of literature, a question modeled in the PICO (Population, Intervention, Comparison, Outcome) format was utilized. The clinical problem: How does the implementation of structured debriefing methods (I) affect SRNA (P) self-confidence and satisfaction (O)? The clinical intervention: In the 2021 and 2022 DNAP cohorts at AHU, participating in DNAP 703 and DNAP 804 courses (P), how does the implementation of the SHARP debriefing method (I) as compared to the GAS debriefing method (C) affect SRNA self-confidence and satisfaction (O)?

Search Strategies

The search strategy included the following databases: PubMed, Cumulative Index of Nursing and Allied Health (CINAHL), and Google Scholar. A total of 1619 articles were initially retrieved, and 22 studies met inclusion criteria. Inclusion criteria included simulation, debriefing, nursing education, medical education, self-confidence, satisfaction, qualitative, and quantitative. Key search terms and MESH terms included: *Debriefing AND self-confidence, post-simulation debriefing AND satisfaction, structured debriefing, clinical simulation AND self-confidence, SHARP debriefing, GAS debriefing, and debriefing AND simulation*. Search limits were English language, research article, human subjects, and publication date within the last 20 years.

GRADE Evidence

The Grading of Recommendations Assessment Development and Evaluation (GRADE) tool was used to review the literature. The GRADE score was used to assess the quality of the evidence and the strength of the recommendations. The types of research articles included were a randomized control trial, a systematic review, qualitative studies, and post-test studies. Therefore, the initial rating was high to moderate. Initially, the GRADE score was a three and rated up +1 for large sample sizes and the absences of imprecision, indirectness, and

inconsistencies. However, some studies showed inconsistency, indirectness, and methodological flaws, thus the score was rated down -1. Problems associated with imprecision included a lack of confidence intervals and nonequivalent sample sizes. Inconsistency among interventions and variability of patient population were problems associated with indirectness. Methodological flaws included homogeneous sampling, convenience sampling, and modification of a validated measurement tool. There were no publication biases. Overall, the quality of evidence and practice recommendation was moderate.

Literature Review and Synthesis of Evidence

In the United States, the increasing concern for patient safety paired with limited clinical opportunities led to an increase in simulation-based learning in nurse anesthesia programs (Hall & Tori, 2017; Reiersen, Haukedal, Hedeman, & Bjørk, 2017). There is an abundance of research on simulation, however, there is seldom research on best practices in debriefing in nurse anesthesia education. Simulation alone is not where maximal learning occurs, instead, debriefing is crucial to the integration of active learning and critical thinking (Decker et al., 2013; Hall & Tori, 2017; Levett-Jones & Lapkin, 2012). Debriefing is associated as a time-intensive process that is equal or longer in duration to simulation, posing a barrier to effective debriefing (Dufrene & Young, 2014; Mariani, Cantrell, & Meakim, 2014). In the debriefing literature, time is often a common barrier due to the facilitator's limited period of learning how to debrief and conduct a debriefing session (Mariani et al., 2014). As a result, an unstructured debriefing method is often utilized in many educational institutions due to time and expertise constraints, which poses a risk for poor learning outcomes, development of insecurities, strain to the educator and learner relationship, and dissatisfaction among students (Mariani et al., 2014; Omer, 2018; Wiggins, Morrison, Lutz, & O'Donnell, 2018). Self-confidence and satisfaction in learning are aspects

that ultimately affect quality of care and impact patient outcomes (Gudayu et al., 2015; Porter et al., 2013). Therefore, there is a need for an evaluation of time efficient structured debriefing methods and the influence on SRNA self-confidence and satisfaction. For the purposes of this scholarly project, the following terms are defined: structured debriefing, SHARP, GAS, self-confidence, and satisfaction in learning.

Definition of Terms

Structured debriefing is a facilitator-led, student discussion of events that occur post-simulation that encompasses three phases: reaction, analysis, and summary (Hall & Tori, 2017).

SHARP is a debriefing instrument that was developed by the Imperial College of London. SHARP is an acronym that stands for Set learning objectives, How did it go, Address concerns, Review learning points, and Plan ahead, which are five-step prompts to guide facilitators in performing a structured debrief (Ahmed et al., 2013; Imperial College London, 2018).

GAS is a debriefing instrument that was developed by the Winter Institute for Simulation Education and Research (WISER) in collaboration with the American Heart Association (AHA). GAS is an acronym that stands for Gather, Analyze, and Summarize, which is a three-step tool to assist the facilitator in an organized approach to debriefing (Phrampus & O'Donnell, 2013; Sawyer, Eppich, Brett-Fleegler, Grant, & Cheng, 2016).

Self-confidence is an individual's belief of their ability to accomplish a task or a goal (Porter et al., 2013; Weaver, 2015).

Satisfaction in learning is the degree to which students believe their educational experience has met their expectations and learning needs (Weerasinghe, Lalitha, & Fernando, 2017).

Self-Confidence and Satisfaction

Debriefing enhances student self-confidence in caring for unstable patients (Dufrene & Young, 2014; Hall & Tori, 2017). Self-confidence is an important characteristic of the SRNA professional role as it influences clinical decision making and promotes success in clinical practice (Gudayu et al., 2015). Satisfaction in learning correlates with clear learning objectives and active engagement in performance (Gudayu et al., 2015).

Theoretical Framework

SHARP and GAS are valid, reliable, and feasible methods of debriefing (Ahmed et al., 2013; INACSL, 2016; Sawyer et al., 2016). SHARP uses OSAD (Objective Structured Assessment of Debriefing) as the theoretical framework, which supports a time-efficient and structured debriefing. In contrast, GAS uses a combination of learning theories to support the framework. SHARP was developed to meet the needs of a time-limited setting and requires no training for the implementation (Imperial College of London, 2018). SHARP is performed in five minutes and focuses on clear objectives, learner engagement and reaction, analysis of performance, acknowledgment of performance gaps, and summary of learning points to apply to future clinical practice (Ahmed et al., 2013). However, the GAS method sets no definitive time for debriefing, but a percentage of time is allocated for each phase (Phrampus & O'Donnell, 2013). The GAS framework focuses on a student-centered approach and utilizes open-ended questions that are goal-directed (Phrampus & O'Donnell, 2013). Comparable to the SHARP method, the GAS debrief is designed for the rapid development of facilitator skill in debriefing. Both models consist of phases with corresponding goals, actions, and process improvement outcomes.

Applied as a theoretical framework in medical and nursing education, Kolb's experiential learning theory emphasizes learning from experience, reflecting over actions, and implementing acquired knowledge in future practice (Kolb, 1984; Paige, Arora, Fernandez, & Seymour, 2015). Kolb's theory aligns with simulation-based education and structured debriefing through its four phases: concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb, 1984). In addition, the theory supports engaged learning, performance analysis, reflection, and structured methods of debriefing (Kolb, 1984; Paige et al., 2015; Phrampus & O'Donnell, 2013).

These time-efficient debriefing methods facilitate the implementation of effective debriefing in nurse anesthesia programs. Effective debriefing is important for nurse anesthesia students as it leads to reflection on performance, recognition of knowledge gaps, and improves clinical judgment and reasoning skills (Mariani et al., 2013; Omer, 2018; Van Heukelom, Begaz, & Treat, 2010). Debriefing has a positive impact on patient outcomes as it allows students to identify and correct their mistakes, transferring improved performance and knowledge to the clinical setting (Ostovar et al., 2018).

Project Aims

The project aimed to evaluate the difference between the SHARP method of debriefing compared to the GAS method of debriefing, conducted after an anaphylaxis crisis scenario, on SRNA self-confidence and satisfaction. The data observations were utilized to provide recommendations on the use of a structured debriefing method post-simulation for AHU DNAP and contribute to the growing body of knowledge in the field of anesthesia. This scholarly project performed observations of the data obtained from an experiential simulation between two

groups of randomly selected students. After the implementation of the scholarly project the co-investigators:

Objective 1: Assessed the effect of the method of debriefing on SRNA satisfaction in learning using a face validated tool by November 20, 2020.

Objective 2: Assessed the effect of the method of debriefing on SRNA self-confidence using a face validated tool by November 20, 2020.

Objective 3: Evaluated the difference between the two methods of debriefing (GAS and SHARP) on SRNA self-confidence and satisfaction by December 30, 2020.

Objective 4: Provided a recommendation on the use of a structured debriefing post-simulation for AHU DNAP and contributed to the body of knowledge on nurse anesthesia post-simulation debrief by the end of March 2021.

Methods

Permission was obtained from the AHU's Nurse Anesthesia Program director and faculty to perform this scholarly project. This scholarly project aimed to perform a post-test quantitative analysis design with random assignment of SRNAs to one of two debriefing groups, however data observations were performed on tables of frequencies. The settings included AHU's DNAP operating room (OR) simulation laboratory, a holding classroom, and a designated debriefing room. After obtaining approval from AHU's Scientific Review Committee (SRC) and the Institutional Review Board (IRB), a convenience sample was drawn from AHU's SRNAs, cohorts 2021 and 2022, who were enrolled in DNAP 703 and DNAP 804 courses. Participant recruitment was done in October 2020 via an e-mail that was sent to the respective cohorts emails by the co-investigators. The recruitment e-mail included basic information pertaining to the scholarly project and the day and time the scholarly project was to be conducted. The target

sample consisted of 40 doctoral students enrolled in the nurse anesthesia program at AHU, 20 SRNAs from cohort 2021 and 20 SRNAs from cohort 2022, however the sample consisted of 4 DNAP students, 2 SRNAs from cohort 2021 and 2 SRNAs from cohort 2022. Students from the same cohorts were paired and were randomly assigned to the debrief method by withdrawing a slip of paper from a paper bag labeled A or B. Group A received the SHARP method of debriefing and Group B received the GAS method of debriefing, post-simulation. Each pair had an equal probability of selecting either debriefing group and were not aware of the respective debriefing method. Group A went into the simulation first followed by Group B. The plan was to have 10 SRNAs from cohort 2021 receiving the SHARP debriefing method and the remaining 10 SRNAs receiving the GAS debriefing method. Likewise, the plan was to have 10 SRNAs from cohort 2022 to receive the SHARP debriefing method and the remaining 10 SRNAs to receive the GAS debriefing method. However, due to the small sample size, 2 SRNAs from cohort 2021 received the GAS debriefing method and 2 SRNAs from cohort 2022 received the SHARP debriefing method. Each group participated in the same anaphylaxis crisis scenario, followed immediately by the method of debriefing. Thus, 2 SRNAs were debriefed by 1 facilitator. Debriefing was led by two faculty members recruited via an e-mail sent by the co-investigators in April 2020. The facilitators received educational materials on their debriefing method respectively via email. The crisis scenario used was a simulation that the DNAP already had designed and established. This scholarly project was performed in one day. Time limits for the simulation, debriefing method, and OR turnover was adhered to, to decrease variability. A 10-minute project introduction was given to all participants, simulations ran for no longer than 10-minutes followed by a 5-minute debrief, held in a designated room to allow for a 5-minute OR simulation turnover. Educational objectives for the simulation were presented during the project

introduction. During participation of the crisis scenario the participant objectives were as follows:

Objective 1: Identify and verbalize the current clinical problem within 10-minutes.

Objective 2: Treat the current clinical problem using three appropriate interventions within 10-minutes.

Objective 3: State appropriate drugs and dosages given for the current clinical problem within 10-minutes.

The independent measured variables included the two structured methods of debriefing and the dependent variables included student self-confidence and satisfaction in learning. Each participant completed an anonymous, electronic, modified version of the National League for Nursing (NLN) Student Satisfaction and Self-Confidence 13-item instrument on Mentimeter to evaluate the method of debriefing (SHARP or GAS), and its effect on self-confidence and satisfaction in learning. Author permission for its use and modification was obtained with the knowledge that modifications may affect the reliability and validity of the instrument and was the principal investigator's sole responsibility. Hence, the modified instrument underwent a face validation process by three students from cohort 2021, two DNAP faculty members, one faculty member outside the DNAP department, and one end user. The terminology of the instrument was modified from medical surgical nursing to properly address nurse anesthesia and debriefing. The instrument was electronically administered via Mentimeter, a software that can be used to create surveys. The data obtained was collected from Mentimeter and was exported and stored in the principal and co-investigators AHU's password-protected SharePoint Application. The plan was to have data analysis conducted using the Statistical Package for Social Science (SPSS) Statistics 21 software provided by AHU and with the assistance of Dr. Roy Lukman. However due to the

small sample size, an independent samples T-test with a predetermined p-value of 0.05, a test for difference between the independent variables could not be implemented. Therefore, data observations on tables of frequencies were performed. Descriptive statistics, including frequencies, percentages, and means were used to describe the data about SRNA self-confidence and satisfaction. The data will be destroyed by deleting the survey file after 5 years from the completion of the scholarly project.

Author permission was also obtained for the use of the SHARP and GAS method of debriefing. The project's rigor was ensured by requiring participants to sign confidentiality agreements and utilizing a designated classroom as a holding area to avoid sharing of information. Ethical considerations such as informed consent and the protection of identity were obtained and adhered to by de-identifying data. Participation in the scholarly project was voluntary and written consent and confidentiality forms were attained on the day of the scholarly project. Students were assured that participation in the scholarly project did not affect their grades in the DNAP program. The written consent and confidentiality forms were collected and shredded after scanning online into a password-protected SharePoint Application. The scanned forms and data are only accessible by the principal and co-investigators and will be automatically deleted after five years.

Planning and Procedures

Three key players, Dr. Scott Bennie, Carlos Reyes, and Dr. Manuel Tolosa were interviewed in order to identify potential barriers, challenges, and overall feasibility of the project. Scott Bennie, former Vice-Chair of Doctor of Physical Therapy at AHU, was chosen for his expertise in conducting a repeated simulation study. He provided insight on the methodology of the project in regard to design, characteristics of the sample, and maintaining confidentiality.

Carlos Reyes, former Director of Simulation, was selected for his vast experience in creating simulations and identifying barriers with simulation. The current Director of Simulation provided the resources needed to conduct the project such as the setting, simulation mannequin and technician, and the electronic survey Mentimeter. The third key player, Manuel Tolosa, Doctor of Nurse Anesthesia, was selected for his experience in directing the simulations for the program. He assisted with the implementation of the project during clinical correlation, DNAP 703 and 804 courses. Dr. Roy Lukman, former Chair of the Scientific Review Committee for AHU, assisted with data processing and the plan for data analysis.

The scholarly project was implemented on Friday, November 20, 2020 from 8 a.m. to 10 a.m. Prior to the simulation, the participants were held in a classroom and given objectives and instructions through a PowerPoint presentation. The simulation ended once the participants correctly identified the crisis scenario and delivered the correct treatment or at the 10-minute mark. A 5-minute turnover time occurred post-simulation. Simultaneously, debriefing was conducted in a designated debriefing room for no longer than 5-minutes. Afterwards, students completed a modified, electronic version of the NLN Self-confidence and Satisfaction survey using Mentimeter on their cellular devices.

The major anticipated barriers identified included time and integrity of the scholarly project. The duration of the simulation, rearrangement of the simulation OR/mannequin, period of debriefing and breaks for the facilitators equated to an extensive amount of time. Therefore, the anticipated barriers were addressed by implementing a 10-minute simulation and a 5-minute debrief in a separate room to allow for OR turnover. The integrity of the scholarly project was reliant upon the participants ability to maintain confidentiality of the scenario. A classroom at AHU served as a holding area for the participants to prevent interaction with the students who

had already participated in the scenario. Another possible barrier was failure of technology of the simulation mannequin, which could have resulted in potential delays. The main facilitators were the DNAP faculty. Their support was essential in implementation of the scholarly project as the instructors facilitated the debrief. In order to sustain the scholarly project, constant communication with DNAP faculty regarding the scholarly project implementation plan was crucial.

Budget/Grant

A grant or budget was required for the implementation of the project as refreshments were planned for the participants, however due to COVID-19 pandemic, refreshments were not allowed to be served. Therefore, the budget was required for compensation and recruitment for participants. The four participants received fifty-dollar gift cards.

Timeline

The project timeline involved IRB approval, project implementation, post-implementation data observations, and dissemination. The scholarly project was submitted to the Scientific Review Committee (SRC) on December 9, 2019. Changes requested by the SRC were submitted on March 23, 2020. On March 27, 2020, the scholarly project was approved by IRB. On March 30, 2020, the External Funding Steering Committee approved the Graduate Student Research Grant. On September 10, 2020, a methodology change was requested from IRB due to COVID-19 pandemic and the limited number of students allowed on campus. The methodology change was approved on October 12, 2020. Project implementation and data collection occurred on Friday, November 20, 2020. The scholarly project data observations occurred on December 5, 2020.

Results

A total of eight SRNAs agreed to participate in the scholarly project via email, however, a total of four SRNAs participated in the scholarly project. Attrition occurred between recruitment and the day of the scholarly project implementation. Two SRNAs from DNAP cohort 2022 rescinded their participation due to school commitments the day before implementation, therefore two SRNAs from DNAP cohort 2021 were excluded for a homogenous sample. Two SRNAs from DNAP cohort 2021 and two SRNAs from DNAP cohort 2022 participated in the scholarly project. 75% of the sample were female and 25% were male. Response rate for the modified version of the National League of Nursing Student Self-Confidence and Satisfaction 13-item questionnaire was 100%. Prior to reviewing data, all data entries were assessed for outliers and data entry errors. Descriptive statistics, including tables of frequencies, percentages, and means were used to make observations of data.

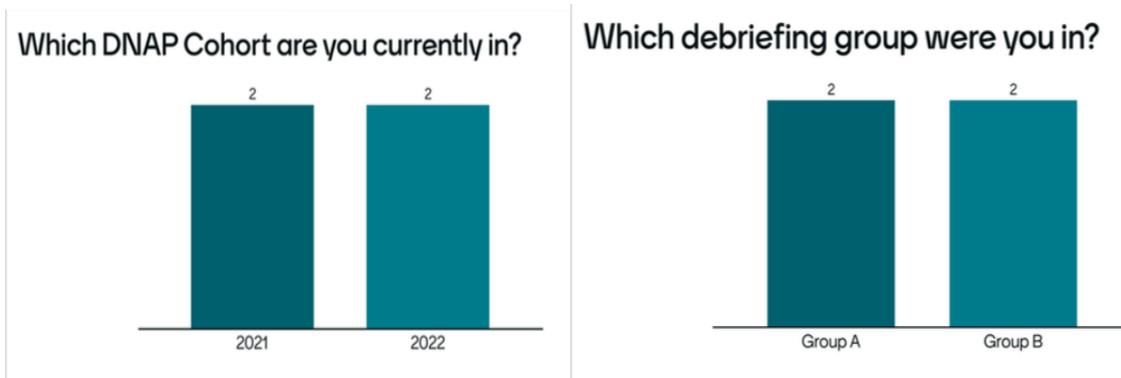
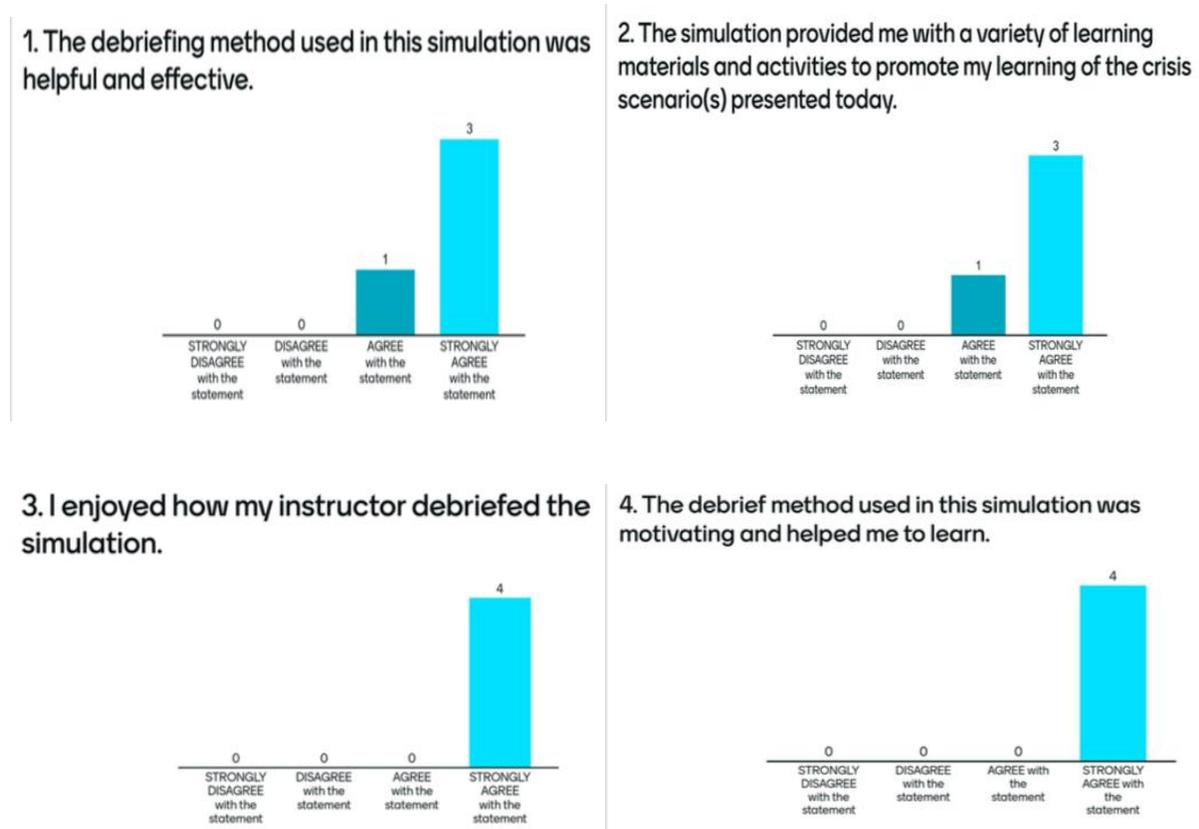


Figure 1. Population characteristics.

Effect of Debriefing on SRNA Satisfaction

SRNAs’ responses to each Satisfaction in Learning item ranged from 0 (strongly disagree) to 3 (strongly agree). No student reported a score of 0 (strongly disagree) or 1 (disagree) on any statement of the five items on the Satisfaction in Learning scale. For question 1

and 2, 25% of the SRNAs reported a score of 2 (agree), whereas the 75% of the SRNAs reported a score of 3 (strongly agree), with a mean of 2.75 for both. For question 3-5, 100% of SRNAs reported a score of 3 (strongly agree) of the statement, with a mean of 3 for each question. SRNAs that received the SHARP method of debriefing reported a mean score for SRNA satisfaction in learning of 2.8. SRNAs that received the GAS method of debriefing reported a mean score for SRNA satisfaction in learning of 3. The overall mean score for SRNA satisfaction in learning was 2.9.



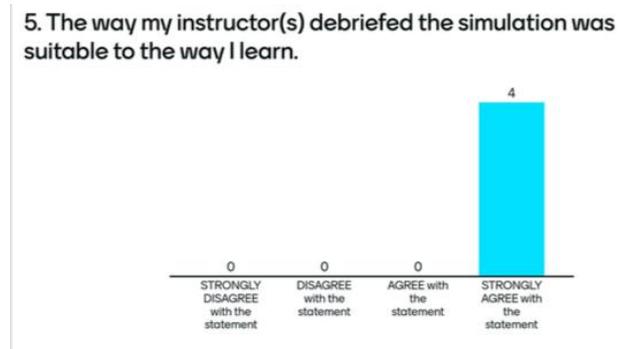
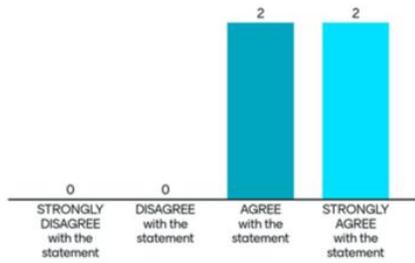


Figure 2. SRNA Satisfaction in Learning questionnaire results.

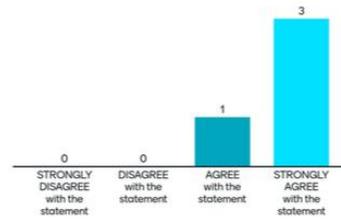
Effect of Debriefing on SRNA Self-Confidence

SRNAs' responses to the eight Self-Confidence in Learning items ranged from 0 (strongly disagree) to 3 (strongly agree). The mean self-confidence score of each item ranged from 2 to 3. For question 6, 50% of the SRNAs reported a score of 2 (agree), and 50% of the SRNAs reported a score of 3 (strongly agree), with a mean of 2.5. For question 7, 8, and 10-12, 25% of the SRNAs reported a score of 2 (agree), whereas 75% of the SRNAs reported a score of 3 (strongly agree), with means of 2.75. For question 9, 100% of the SRNAs reported a score of 3 (strongly agree) with the statement, with a mean of 3. For question 13, 50% of the SRNAs reported a score of 1 (disagree) and 50% of the SRNAs reported a score of 3 (strongly agree) with the statement. Self-confidence subscale item 13 had the lowest mean score, which reflected how confident students were in that it was the instructor's responsibility to guide them in what they needed to learn of the simulation activity using the debriefing method. SRNAs that received the SHARP method of debriefing reported a mean score for SRNA self-confidence of 2.69. SRNAs that received the GAS method of debriefing reported a mean score for SRNA self-confidence of 2.63. The overall mean score for SRNA self-confidence was 2.66.

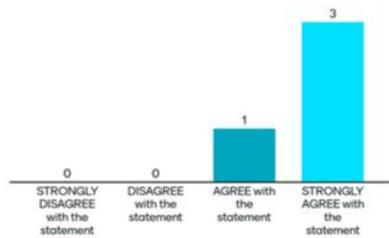
6. I am confident that I am mastering the content of the simulation activity that my instructors debriefed with me.



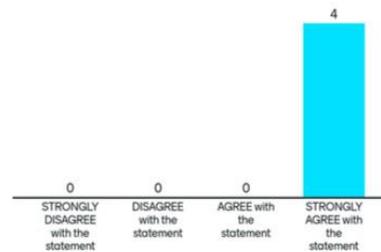
7. I am confident that the debriefing method used covered critical content necessary for the mastery of the nurse anesthesia curriculum.



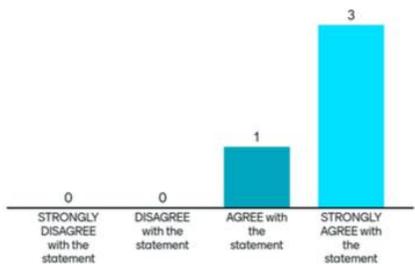
8. I am confident that I am developing the skills and obtaining the required knowledge from the debrief of simulation to perform necessary tasks in a



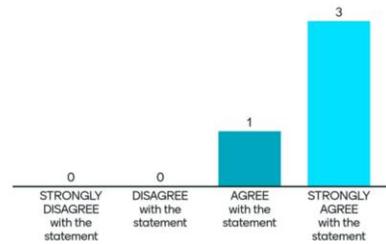
9. My instructors used a debrief method that was helpful to review the simulation.



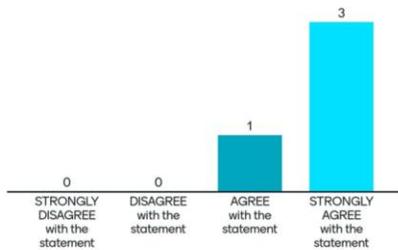
10. It is my responsibility as the student to learn from this simulation debriefing activity.



11. I know how to get help when I do not understand the concepts covered during the debrief of this simulation.



12. I know how debriefing is used to help me learn aspects of the nurse anesthesia skills presented in this simulation.



13. It is the instructor's responsibility to guide me in what I need to learn of the simulation activity using this debriefing method.

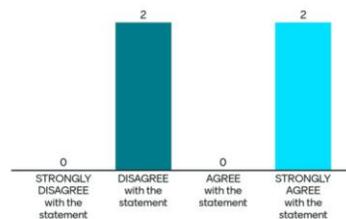


Figure 3. SRNA Self-Confidence in Learning questionnaire results.

Discussion

A large amount of research supports the use of simulation, and often discusses debriefing as an integral component of simulation. Yet, debriefing is seldom the focus of research and even less common are studies that examine structured methods of debriefing and how they affect SRNA self-confidence and satisfaction. There is a need for an evidence-based time-efficient debriefing method that nurse anesthesia faculty could apply to improve learning outcomes due to time-constraints.

The aim of this study was to evaluate the difference between the SHARP method of debriefing compared to the GAS method of debriefing, conducted after an anaphylaxis crisis scenario, on SRNA self-confidence and satisfaction. Post test data was collected from a total of four SRNAs, two SRNAs from DNAP cohort 2021 and two SRNAs from DNAP cohort 2022. Descriptive statistics, including tables of frequencies, percentages, and means were used to make observations of data. The mean score on SRNA satisfaction in learning for SRNAs that received the SHARP method of debriefing (2.8) was lower than mean score for SRNAs that received the GAS method of debriefing (3). The overall mean score for SRNA satisfaction in learning was 2.9 which suggests that the majority of the students were satisfied with the post-simulation debrief method. The mean score on SRNA self-confidence in learning for SRNAs that received the SHARP method of debriefing (2.69) was greater than the mean score for SRNAs that received the GAS method of debriefing (2.63). The overall mean score for SRNA self-confidence was 2.65 which suggests that the majority of the students were confident with the post-simulation debrief method.

An independent samples T-test is commonly used to test for differences between independent variables. However, due to the small sample size, a statistical analysis through SPSS

21 and independent samples T-test with a predetermined p-value of 0.05, could not be implemented. Hence, no statistically significant conclusions could be made regarding the individual effect of the method of debriefing, nor in the difference between the GAS and SHARP method of debriefing on SRNA self-confidence and satisfaction in learning. Thus, an increased sample size was needed in order to achieve a result with statistical significance.

Applicability to Practice/Contribution to Professional Growth

Nurse anesthesia programs are transitioning to doctoral level status due to the additional scientific knowledge required to practice in a complex and changing healthcare system (Hawkins & Nezat, 2009). The aim is to prepare student nurse anesthetists to integrate evidence-based knowledge into practice to improve patient and population health outcomes (Hawkins & Nezat, 2009). Nurse anesthesia faculty play an integral role in the education of SRNAs development in becoming competent certified registered nurse anesthetists (CRNAs). Debriefing post-simulation is an effective learning method utilized in graduate programs to consolidate knowledge, skills, and performance for students. There are a variety of structured debriefing methods identified in the literature such as PEARLS, OPT model of Clinical Reasoning, Debriefing with Good Judgment, and Debriefing for Meaningful Learning (INACSL, 2016). Despite these recognized structured debriefing models, there is a need for an evidence-based time-efficient debriefing method that nurse anesthesia faculty can apply to improve learning outcomes due to time constraints. There is a lack of research on time-efficient and effective structured debriefing methods in nurse anesthesia education. Therefore, one of the goals of this project was to contribute to nurse anesthesia education by comparing two structured and validated debriefing models, SHARP and GAS, and evaluating the impact on student's self-confidence and satisfaction. However, a recommendation to use the SHARP or GAS method of debriefing for

SRNAs at AdventHealth University cannot be made due to the small sample size. Thus, a recommendation is to repeat this scholarly project with an increased sample size in order to enhance the probability of statistically significant results. Another recommendation is to enhance recruitment through financial or academic incentives. For example, a day off clinical rotation or an additional personal day could be an incentive for SRNAs to participate in the scholarly project.

Limitations/Conclusion

Several limitations such as recruitment and methodology were noted in the scholarly project. First, the use of a standardized and validated tool was modified to apply to the scholarly project participant population. However, the modified instrument underwent a face validation process by three students from cohort 2021, two DNAP faculty members, one faculty member outside the DNAP department, and one end user. A second limitation was the effectiveness of the facilitators performing the debrief due to the absence of a third party evaluating the instructors using a standardized tool. A third limitation was recruitment and retention of participants. Recruitment occurred one month prior to implementation of the scholarly project.

The COVID-19 pandemic was the factor that affected the sampling, methodology, and implementation of this scholarly project. The pandemic created a question of whether a post-simulation debriefing project was permitted. Rules and regulations were implemented by AHU to account for social distancing and public health safety requirements. Due to the COVID-19 pandemic, changes in the original methodology of the scholarly project were requested by IRB. The scholarly project team received approval to methodology changes one month prior to implementation date. AHU only allowed a limited number of students on campus to prevent and control the spread of the virus, thereby DNAP classes were only held online. Therefore,

recruitment was limited to email and face to face recruitment could not occur. Follow up emails were sent to participants for retention, however, the week before implementation, attrition occurred due to SRNAs commitment to DNAP meetings held on the same day. In addition, the uncertainty and instability of the pandemic projected to the home life of many students, leading to an increased workload at home and decreased time to participate in scholarly projects. Furthermore, the SRNAs were also impacted in their own scholarly projects and many had University engagements that interfered with their participation.

The main limitation of the scholarly project was the use of a small convenience sample size. Two SRNAS from DNAP cohort 2020 were excluded for a homogenous sample, thereby the total sample size was 4 SRNAs, 2 SRNAs from cohort 2021 and 2 SRNAs from cohort 2022. Therefore, the results of the scholarly project may not be generalizable to other SRNAs at different institutions. Due to the small sample size, a statistical analysis could not be made through SPSS 21 and an independent samples T-test with a predetermined p-value of 0.05, a test for difference between the independent variables could not be implemented. Thus, conclusions cannot be made regarding the difference between the GAS and SHARP method of debriefing on SRNA Self-Confidence and Satisfaction in Learning.

Dissemination Plan

The results and data observations of the scholarly project were disseminated in Spring 2021. A PowerPoint presentation and poster board was made available on March 21, 2021 through March 28, 2021. The scholarly project was presented at the AHU DNAP Scholarship and Poster Presentation week via the canvas course DNAP 2021 Scholarly Project Dissemination.

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Purpose	Variables	Setting/Subjects	Measurement and Instruments	Results	Evidence Quality
<p>Study One: To explore the current status of debriefing in the OR and evaluate an evidence-based SHARP tool to improve debriefing in surgery. Second aim: to determine the feasibility and reliability of using the OSAD tool to assess debriefing practices.</p> <p>Study Two Aim to perform an in-depth exploration of four key attributes of debriefing sessions prior and subsequent to a pedagogical intervention involving video play back scenario simulation</p> <p>Design Study One Prospective, pre- and post-cross-sectional study</p> <p>Study Two Explorative qualitative design</p>	<p>Study One <u>Primary outcome:</u> Use of SHARP debriefing tool</p> <p><u>Secondary outcome:</u> Quality of debriefing, trainees’ assessment of debriefing, User satisfaction with SHARP debriefing tool</p> <p>Study Two <u>Primary Outcome:</u> Audio and video playback of simulation</p> <p><u>Secondary Outcome:</u> Central attributes of structured debriefing (reflection, feedback, knowledge development, and psychological safety)</p>	<p>Study One <u>Subjects:</u> 22 general surgery attendings, 30 surgical residents (postgrad yrs. 3-8), Males (19), Females (11)</p> <p><u>Setting:</u> 100 cases at University Teaching Hospital in London, United Kingdom</p> <p>Study Two <u>Subjects:</u> Two student groups recruited each yr. 16 students in 2013, Males (4), Females (12); 10 students in 2014, Males (0), Females (10)-second year of bachelor nursing degree level</p> <p><u>Setting:</u> pre-clinical simulation course over a period of 2 weeks, University College in Southern part of Norway</p>	<p>Study One SHARP debriefing tool, Validated Objective Structured Assessment of Debriefing (OSAD), 5 pt. Likert scale Questionnaire regarding perceptions (usefulness, overall satisfaction) of the debriefing</p> <p>Study Two Structured observation tool, video play back on simulation session, transcribed video and audio recordings</p>	<p>Study One Interrater reliability for OSAD was excellent (ICC=0.944) Objective scores of debriefing improved (p<0.001). Users reported high levels of satisfaction with the SHARP tool (p<0.001)</p> <p>Study Two Reflection: 2013 cohort constrained and focused on emotion; 2014 cohort active dialogue w/ observers Feedback: students’ feedback was more specific and comprehensive in 2014 cohort Knowledge development: Facilitator presented divergent perspectives on students’ observations Psychological safety: patterns similar in both cohorts</p> <p>Implications Study one Propose systematic use of the SHARP tool in OR as an inexpensive, practical, and evidence-based intervention; SHARP could effectively ensure “Time-Out for Debriefing” to promote patient safety.</p> <p>Study Two Structured debriefing designed according to students’ education level could potentially maximize learning outcomes. Also, future studies examining factors that contribute to a safe psychological climate during debriefing should include humor.</p>	<p>Study One Methodological flaws: Convenience sampling, Small sample</p> <p>Inconsistency: none</p> <p>Indirectness: variability in surgical cases (general, vascular, ortho, urology)</p> <p>Imprecision: None</p> <p>Publication bias: None</p> <p>Study Two Methodological flaws: Convenience sampling Small sample size, risk of bias as three of the authors were facilitators in the simulation</p> <p>Inconsistency: none</p> <p>Indirectness: Variability of size and gender of the two student groups, variability in case scenarios</p> <p>Imprecision: None Publication bias: None</p>

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Purpose	Variables	Setting/Subjects	Measurement and Instruments	Results	Evidence Quality
<p>Study One: To determine the importance of debriefing vs no debriefing in simulation-based learning (SBL) for students in a nursing program.</p> <p>Study Two To identify themes of the NLN/Jeffries Simulation Framework and identify gaps and key issues. To determine best simulation practices, and priorities for future research.</p>	<p>Study One: <u>Primary Outcome:</u> debriefing vs no debriefing</p> <p><u>Secondary Outcome:</u> Clinical performance based on three domains: psychomotor, cognitive, and effectiveness; Satisfaction with SBL Self-reflection</p> <p>Study Two: Recurring Themes: Simulation vs Traditional didactic teaching, Fidelity of Simulation, Debriefing, Simulation design characteristics, Facilitator/Participant</p>	<p>Study One: <u>Setting:</u> Red Cross College of Nursing in Seoul, Korea</p> <p><u>Subjects:</u> 49 Second-year nursing students Debriefing group: 24 students, Males (2), Females (21) Non-debriefing group: 25 students, Males (2), Females (23)</p> <p>Study Two The final review included 153 studies.</p>	<p>Study One: Clinical performance competency scale (instructor checklist: nursing skills, task management, situation awareness, decision making, team working, communication) Satisfaction with Simulation-Based Learning Scale (5 pt. Likert Scale) Self-reflection Questionnaire</p> <p>Study Two Search strategy using CINAHL, Simulation in Healthcare journal yielded 1,533 articles from Jan.2000-Sept. 2014;</p>	<p>Study Two Satisfaction was higher in the DG than the NDG (t= -2.032, P=.048). Clinical performance competency was higher in DG than NDG (t= 5.662, P < 0.001). Debriefing positively affects student clinical competences, self-reflection, and satisfaction with SBL.</p> <p>Study Two The systematic review strongly supports the components of the NLN/Jeffries Simulation framework and confirms the importance of the five variables Feedback/debriefing, defined outcomes, repetitive practice, controlled environment led to effective learning.</p>	<p>Study One: Methodological flaws: Convenience sampling, small sample size, homogenous sample, sampling bias, modification of a validated tool</p> <p>Inconsistency: None</p> <p>Indirectness: None</p> <p>Imprecision: None</p> <p>Publication bias: None</p> <p>Study Two Methodological flaws: search terms not mentioned</p> <p>Inconsistency: None</p> <p>Indirectness: None</p> <p>Imprecision: None</p> <p>Publication bias: None</p>
Design					
<p>Study One Nonequivalent control group pretest-posttest design study</p> <p>Study Two Systematic review</p>					
				Implications	
				<p>Study One Highly trained debriefing experts can result in a financial burden to nursing colleges and alternatives to standardized debriefing should be considered. Debriefing should be a required and not an optional process for SBL.</p> <p>Study Two NLN/Jeffries Simulation Framework should be expanded to include translation to the clinical environment and impact on patient care.</p>	

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Ostovar, S., Allahbakhshian, A., Gholizadeh, L., Dizaji, S. L., Sarbakhsh, P., & Ghahramanian, A. (2018). Comparison of the effects of debriefing methods on psychomotor skills, self-confidence, and satisfaction in novice nursing students: A quasi-experimental study. *Journal of Advanced Pharmaceutical Technology & Research*, 9(3), 107-112. doi:10.4103/japtr.JAPTR_291_18

Van Heukelom, J. N., Begaz, T., & Treat, R. (2010). Comparison of postsimulation debriefing versus in-simulation debriefing in medical simulation. *Simulation in Healthcare: Journal of the Society for Simulation in Healthcare*, 5(2), 91.

Purpose	Variables	Setting/Subjects	Measurement and Instruments	Results	Evidence Quality
<p>Study One: To compare the effects of oral debriefing (OD) and video-assisted debriefing (VAD) on the development of learning outcomes in nursing students.</p> <p>Study Two: To compare two styles of managing a simulation session: post-simulation debriefing vs. in-simulation debriefing and to compare post-simulation vs. pre-simulation self-reported confidence and knowledge scores.</p>	<p>Study One <u>Primary outcome:</u> Difference between OD and VAD</p> <p><u>Secondary outcome:</u> Psychomotor skills, self-confidence, and student satisfaction</p> <p>Study Two <u>Primary outcome:</u> Student perceptions of the simulation as measured using a survey.</p> <p><u>Secondary outcomes:</u> Analysis of students' subjective confidence in their ability to perform a medical resuscitation both before and after completing the simulation.</p>	<p>Study One <u>Setting:</u> Tabriz University of Medical Sciences.</p> <p><u>Subjects:</u> 50 first-year nursing students in the nursing and midwifery faculty.</p> <p>Study Two <u>Setting:</u> The Medical College of Wisconsin.</p> <p><u>Subjects:</u> 161 third year medical students enrolled in the "Clinical Procedures Rotation" from September 2007 to June 2008.</p>	<p>Study One A demographic information questionnaire, a 33-item observational checklist for the evaluation of performance in administration of IV fluid therapy, and the satisfaction and self-confidence in learning scale (SCLS). SPSS 16 and Paired <i>t</i>-tests and independent <i>t</i>-tests.</p> <p>Study Two An anonymous two-part, seven-point Likert scale, retrospective pretest and posttest related to self-reported confidence and the effectiveness of the debriefing, facilitator, and simulation realism. SPSS 15.0, Cronbach α, Mann-Whitney U tests, and the Wilcoxon signed-rank tests through the Spearman ρ correlations.</p>	<p>Study One: Both OD and VAD can improve the psychomotor skill development, self-confidence, and satisfaction in nursing students.</p> <p>Study Two: The post-simulation debriefing ranked the measures significantly higher (all $P = 0.001$); Pretest-posttest items showed statistically significant increases in median scores (all $P \leq 0.001$) and moderate associations through Spearman ρ correlations (all $\rho \sim 0.5$ with $P \leq 0.001$) related to the students' self-reported confidence and knowledge.</p>	<p>Study One: <u>Methodological flaws:</u> Convenience sampling. Seven of the students were excluded because of previous experience of clinical work and IV cannulation. <u>Inconsistency:</u> None <u>Indirectness:</u> None <u>Imprecision:</u> Wide CI <u>Publication bias:</u> None</p> <p>Study Two: <u>Methodological flaws:</u> Sampling was limited to third year medical students with limited experience in medical resuscitation.</p>
<p>Design</p>				<p>Implications</p>	
<p>Study One: A quasi-experimental study with a pre-test and post-test design.</p> <p>Study Two: Randomized control trial; observational study with a retrospective pre-post survey of student confidence levels on managing a simulator session.</p>				<p>Study One The study confirms the usefulness of simulation and particularly debriefing in improving clinical skills, self-confidence, and satisfaction of students.</p> <p>Study Two Simulation increased students' confidence and knowledge scores; post-simulation debriefing experienced this more.</p>	<p>The specific amount of time spent performing the simulation vs. coaching /debriefing was not recorded. <u>Inconsistency:</u> The specific amount of time spent performing the simulation vs. coaching /debriefing was not recorded and may have varied. <u>Indirectness:</u> None <u>Imprecision:</u> Sample size was nonequivalent. <u>Publication bias:</u> None</p>

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Coutinho, V. R. D., Martins, J. C. A., & Pereira, F. (2016). Structured debriefing in nursing simulation: Students' perceptions. <i>Journal of Nursing Education and Practice</i> , 6(9), 127-134.					
Omer, T. Y. (2018). Nursing students' perceptions on standardized debriefing experience after clinical simulation. <i>IOSR Journal of Nursing and Health Science</i> , 7(5), 59-66.					
Purpose	Variables	Setting/Subjects	Measurement and Instruments	Results	Evidence Quality
<p>Study One: To analyze the students' perceptions of structured debriefing (SD).</p> <p>Study Two: To explore the perceptions of nursing students regarding their debriefing experience after clinical simulation using an unstandardized model compared to the Ee-Chats Model and evaluates facilitators' ability to conduct debriefing using Objective Structured Assessment of Debriefing tool (OSAD).</p>	<p>Study One <u>Primary outcome:</u> Perceptions of students on SD.</p> <p><u>Secondary outcome:</u> Impact of SD on students cognitive, psychosocial and affective categories.</p> <p>Study Two <u>Primary outcome:</u> Student's' perceptions' regarding their debriefing experience.</p> <p><u>Secondary outcomes:</u> Facilitator's ability to conduct debriefing.</p>	<p>Study One <u>Setting:</u> The Nursing School of Coimbra, Portugal.</p> <p><u>Subjects:</u> 22 final-year students of an undergraduate nursing degree in the curricular unit Emergency Nursing.</p> <p>Study Two <u>Setting:</u> College of Nursing- Jeddah, King Saud Bin Abdulaziz University for Health Sciences in Saudi Arabia.</p> <p><u>Subjects:</u> 266 nursing students.</p>	<p>Study One A questionnaire with nine open-ended questions focused on the students' perceptions about SD. The questionnaires were subsequently submitted for qualitative data analysis using Bardin's approach.</p> <p>Study Two Survey method used to compare unstandardized and Ee-chats debriefing model using Debriefing Experience Scale (DES). Objective Structured Assessment of Debriefing tool (OSAD).</p>	<p>Study One: Students considered SD to be an interactive and reflective method (n = 22) and believed that SD minimizes their distress and insecurity, provides positive reinforcement, enables an interactive practice, and encourages students to repeat and to take part in the action (n = 11). Study Two: There was a significant increase in the rating of the students' perceptions regarding their debriefing experience related to the four subscales using unstandardized compared to Ee-Chat model of debriefing p<0.001.</p> <p>Implications Study One This study has confirmed that students believe that SD has a positive impact and significant cognitive, psychosocial and affective benefits. Study Two Structured debriefing fosters reflection and meaningful learning among students. Facilitator training for conducting debriefing is essential for the best outcomes.</p>	<p>Study One: <u>Methodological flaws:</u> The questionnaire was validated by four students. Small sample size</p> <p><u>Inconsistency:</u> None</p> <p><u>Indirectness:</u> No mention of time limits during debriefing or simulation.</p> <p><u>Imprecision:</u> only 22 students replied to the survey, although 80 surveys were disseminated.</p> <p><u>Publication bias:</u> None</p> <p>Study Two: <u>Methodological flaws:</u> Convenience sampling. Self-reported data can be affected by social desirability bias.</p> <p><u>Inconsistency:</u> None</p> <p><u>Indirectness:</u> None</p> <p><u>Imprecision:</u> None</p> <p><u>Publication bias:</u> None</p>

References					
<p>Mariani, B., Cantrell, M. A., & Meakim, C. (2014). Nurse educators' perceptions about structured debriefing in clinical simulation. <i>Nursing Education Perspectives</i>, 35(5), 330-331. doi:10.5480/13-1190.1</p> <p>Wallace, D.R., & Gill, J.M. (2019). The value of simulation debriefing in launching reduced anxiety and improved self-confidence in the clinical setting for accelerated baccalaureate nursing students. <i>Nurse Education in Practice</i>, 9(7), 31-37. doi:10.5430/jnep.v9n7p31</p>					
Purpose	Variables	Setting/Subjects	Measurement and Instruments	Results	Evidence Quality
<p>Study One: To explore the perceptions of faculty on structured debriefing in clinical simulation.</p> <p>Study Two: To investigate the correlation between simulation debriefing and decreased anxiety and increased self-confidence in the clinical setting.</p>	<p>Study One <u>Primary outcome:</u> Advantages and disadvantages of structured debriefing in clinical simulation. <u>Secondary outcome:</u> Students ability to demonstrate a higher level of thinking and foster integration of new information into one's current knowledge base.</p> <p>Study Two: <u>Primary Outcome:</u> Simulation structured debriefing in focus group <u>Secondary Outcome:</u> Student self-confidence, time provided to reflect and review clinical performance, identifying the justification for the actions and responses</p>	<p>Study One <u>Setting:</u> Villanova University College of Nursing, Villanova, Pennsylvania. <u>Subjects:</u> 22 nurse educators from seven accredited schools of nursing in the mid-Atlantic region of the United States.</p> <p>Study Two: <u>Setting:</u> Fast-track nursing baccalaureate program in California State University of Northridge, United States <u>Subjects:</u> 205 nursing students</p>	<p>Study One Focus groups lasting on average 60 minutes. Participants were asked to respond to questions that reflected the study's stated aims. The sessions were recorded using the Go To Meeting platform, the oral transcripts were sent to a professional transcription service and compared to the verbal recordings for accuracy. After all study team members conducted a content analysis of the transcripts, summaries were collated by the principal investigator. An outside expert reviewer validated the themes. Study Two: Simulation Evaluation Survey, Grading Rubric for clinical performance (Likert Scale), SPSS 22.0 to analyze data.</p>	<p>Study One: Structured debriefing is a process that can be used to assess students' thinking and understanding of clinical nursing concepts. To be effective and enhance student-learning outcomes, some form of structure is essential. Study Two Out of the 205 students, 95% (N=195) stated simulation enhanced self-confidence; significant influence on 3 of the 5 debriefing components: reflection on student's clinical judgement to patient care (p=0.001), sufficient time given to reflect and review performance (p=0.030), assisting in the justifications for actions to performance (p=0.001)</p> <p>Implications Study One: The study supports that debriefing engenders a higher level of thinking among students and fosters students' ability to accommodate new information into their current knowledge base. Study Two: Further research needs to examine the correlation between simulation debriefing and self-confidence, clinical judgement, and direct patient care outcomes with valid instruments.</p>	<p>Study One: <u>Methodological flaws:</u> Sampling bias. <u>Inconsistency:</u> some were onsite others participated via a conference call. <u>Indirectness:</u> The subjects has varying degrees of educational preparation and faculty roles. <u>Imprecision:</u> None <u>Publication bias:</u> None</p> <p>Study Two: <u>Methodological flaws:</u> No description of characteristics of subjects, small sample size, sampling bias, did not mention students' pre and post anxiety level <u>Inconsistency:</u> None <u>Indirectness:</u> None <u>Imprecision:</u> None <u>Publication bias:</u> None</p>
Design					
<p>Study One: A qualitative descriptive design.</p> <p>Study Two: Correlational research study</p>					

References					
<p>Sawyer, T., Eppich, W., Brett-Fleegler, M., Grant, V., & Cheng, A. (2016). More than one way to debrief: A critical review of healthcare simulation debriefing methods. <i>Simulation in Healthcare : Journal of the Society for Simulation in Healthcare</i>, 11(3), 209.</p> <p>Freytag, J., Stroben, F., Hautz, W. E., Eisenmann, D., & Kämmer, J. E. (2017). Improving patient safety through better teamwork: How effective are different methods of simulation debriefing? protocol for a pragmatic, prospective and randomised study. <i>BMJ Open</i>, 7(6), e015977-e015977. doi:10.1136/bmjopen-2017-015977</p>					
Purpose	Variables	Setting/Subjects	Measurement and Instruments	Results	Evidence Quality
<p>Study One: To examine the methods simulation educators use to conduct healthcare simulation and debriefing and to examine the timing, facilitation, conversational structures, and process elements used in healthcare simulation debriefing.</p> <p>Study Two The study’s aim was to evaluate the effects of two debriefings (GAS vs. GAS+ cognitive aid) on team performance after an extensive medical student teamwork training.</p> <p>Design Study One Nonsystematic critical synthesis review</p> <p>Study Two A prospective experimental study</p>	<p>Study One Recurring themes: Debriefing timing, methods of debriefing (GAS tool), conversation facilitation, conversation structure and process elements</p> <p>Study Two <u>Primary Outcome:</u> Team performance and numbers of principles discussed based on GAS and GAS-TAG</p> <p><u>Secondary Outcome:</u> Learning opportunities, helpfulness, and feasibility</p>	<p>Study One Descriptive/narrative reports, qualitative and quantitative methods, literature reviews, systematic reviews, meta-analysis (no attempt was made to quantitate results)</p> <p>Study Two <u>Subjects:</u> 35 final-year medical students in teams of five</p> <p><u>Setting:</u> Emergency Department simulation at Charité Medical School, Berlin, Germany</p>	<p>Study One Search strategy using PubMed, CINAHL and Google Scholar using search terms “debrief” and “simulation” between June 2014-Oct. 2015</p> <p>Study Two Team Emergency Assessment Measure (TEAM). Pre-post questionnaire (15-multiple choice)</p>	<p>Study One Many of the debriefing methods are effective if used appropriately by well trained and engaged simulation facilitators. Learners prefer post-event debriefing than within-event debriefing and skill retention may be longer with post-event debriefing. The GAS model is a validated tool and has been adopted by the American Heart Association for use during debriefing in PALS.</p> <p>Study Two Interclass correlation coefficients were 0.999 for the first resuscitation (mean TEAM score=42.3, SD=1.3) and 0.85 for the second (mean TEAM score 22.5, SD=3.1). Instructors rated the Team TAG guideline as a feasible tool (M=1.9, SD=0.9) and stated that it helped in observation and providing feedback.</p> <p>Implications Study one Future studies need to investigate which debriefing method works best and for whom. Additional research is needed on how debriefing during simulation can be applied to improve quality of debriefing of real clinical events.</p> <p>Study Two The GAS-team is a valid instrument for assessing team performance in the study. The instructors rated the Team TAG guideline as a feasible tool and stated that it helped in observation and providing feedback.</p>	<p>Study One Methodological flaws: lack of clear definition of some terms used “feedback” and “process elements”, no description of how many articles were included Inconsistency: None</p> <p>Indirectness: None</p> <p>Imprecision: None</p> <p>Publication bias: None</p> <p>Study Two Methodological flaws: WEH received financial compensation for educational consultancy. Sample size. Only a single simulation enter was studied.</p> <p>Inconsistency: May have occurred as the group instructors were not observed during debriefing.</p> <p>Indirectness: None Imprecision: None Publication bias: None</p>

Appendix B

Facilitator Recruitment Email

Good Afternoon,

You are receiving this email because we would like for you to assist us to implement our Scholarly Project titled, “*Debriefing Post-Simulation and SRNA Self-Confidence and Satisfaction*”. We would like you to consider being one of two facilitators for the implementation of our Scholarly Project that will occur in the Fall trimester of 2020.

We will teach one facilitator to use the SHARP method of debriefing and we will provide all the information and materials. Likewise, we will teach the other facilitator to use the GAS method of debriefing and we will provide all the information and materials as well. These methods will be used to debrief participants of the simulated activities from DNAP cohorts of 2021 and 2022.

The project aims to evaluate the difference between the SHARP method of debriefing compared to the GAS method of debriefing, conducted after an anaphylaxis crisis scenario, on SRNA self-confidence and satisfaction. The data analysis will provide recommendations on the use of a structured debriefing method post-simulation for AHU DNAP and contribute to the growing body of knowledge in the field of anesthesia.

We would like to thank you in advance for your consideration.

Best Regards,

Manuel Tolosa DNAP, CRNA. Principal Investigator

Camila Queiroz BSN, RN, DNAP Candidate. Co-Investigator

Diana-Jauregui-Cervantes BSN, RN, DNAP Candidate. Co-Investigator

SRNA Recruitment Email

Good Afternoon,

You are receiving this email because you are enrolled in either DNAP 703 or DNAP 804 during this Fall trimester. As SRNAs of the 2021 and 2022 cohorts your participation is requested for our Scholarly Project that will evaluate the difference between two methods of debriefing post-simulation and the impact on SRNAs'. This scholarly project will take place on (insert date) and will occur from 08:00 until 15:00. Refreshments and food will be provided.

Participation in this scholarly project is voluntary and written consent and confidentiality forms will be attained. Participation in this scholarly project does not have any effect on your grades in the DNAP program. The written consent and confidentiality forms collected will be shredded after scanning online onto a password protected SharePoint Application. The scanned forms and survey responses are only accessible by the principal and co-investigators and will be automatically deleted after five years.

Through your participation, the scholarly project is intended to provide the nurse anesthesia program at AHU recommendations and to contribute to the growing body of knowledge on a structured debriefing method. We thank you in advance for your consideration and hope to see you on (insert date) at 07:30.

Best Regards,

Manuel Tolosa DNAP, CRNA. Principal Investigator

Camila Queiroz BSN, RN, DNAP Candidate. Co-Investigator

Diana-Jauregui-Cervantes BSN, RN, DNAP Candidate. Co-Investigator

Appendix C

Study Title: Debriefing Post-Simulation and SRNA Self-confidence and Satisfaction PI: Manuel Tolosa, DNAP, CRNA, ARNP

AdventHealth University (AHU) Consent Document to Participate in a Human Research Study

Study Title: Debriefing Post-Simulation and SRNA Self-confidence and Satisfaction

Principal Investigator (PI): Manuel Tolosa

Co-investigator(s) (Co-Is): Camila Queiroz and Diana Jauregui-Cervantes

Introduction of the Study

We are Camila Queiroz RN, BSN, and Diana Jauregui-Cervantes RN, BSN, currently enrolled in the Doctor of Nurse Anesthesia Practice cohort 2021. We are asking you to participate in this scholarly project entitled “Debriefing Post-Simulation and SRNA Self-confidence and Satisfaction”. You are invited to take part in this scholarly project because we feel that your experiences and insights as a doctoral candidate of nurse anesthesia practice can contribute to our understanding and knowledge. As part of this scholarly project we are conducting a survey post-simulation to learn more about how two debriefing methods affect student registered nurse anesthetists’ self-confidence and satisfaction in learning.

We plan to enroll 40 participants in this scholarly project. Your participation in this scholarly project is completely voluntary. You are not required to participate. You are encouraged to ask questions at any time during the consent process and may take as much time as you need to decide on whether to participate. You can withdraw your voluntary participation in this scholarly project at any time.

Purpose of the Study

The purpose of this scholarly project is to evaluate the difference between two structured debriefing methods post-simulation on SRNA’s self-confidence and satisfaction. The data analysis will provide recommendations on the method of structured debriefing post simulation for the AHU DNAP and will contribute to the body of knowledge on structured debrief on SRNA’s.

Procedures

You will be asked to participate in this scholarly project in the following ways. Your initial participation will take approximately 10-minutes in order to receive instructions on the scholarly project and to be randomly assigned a partner and a debrief group. You will then await your turn

in a holding classroom to participate in a 10-minute crisis scenario simulation. The simulation will end once the crisis scenario is correctly identified and the correct treatment delivered or at the 10-minute mark, whichever comes first. Immediately following the simulation, you will receive a 5-minute debrief, in a designated debrief area, based on the group you were randomly placed in. After the debrief you will be asked to complete an anonymous, electronic 15-item survey that asks questions based on the post-simulation debrief. The scholarly project will be performed in one day from 8 a.m. to 3 p.m. and will be held at the AHU simulation OR. You will be asked to not use mobile devices during this scholarly project to maintain the integrity and confidentiality of the scholarly project.

Possible Risks and Discomforts Associates with the Study

The risks associated with participation in this scholarly project are minimum. There are known physical risks to you for consenting to participate in this scholarly project. Anxiety may be experienced during this scholarly project; however, it is common to experience anxiety during simulation even without participating in a scholarly project. You are being asked to share personal and sensitive information with the investigators and debrief facilitator, and you may feel uncomfortable discussing your performance during debrief.

In addition, although the risks of a breach of confidentiality or privacy are low, we cannot guarantee that your privacy or confidentiality will not be breached.

Potential Benefits

We cannot and do not guarantee or promise that you will receive any benefits from participation in this scholarly project. However, you may benefit in that your participation will help us understand a time-efficient structured debrief method that can be implemented by AHU DNAP post-simulation. In addition, we hope that what we learn from the scholarly project will contribute to the evidence of supporting structured debrief.

Confidentiality

The investigators will work to protect your confidential information. The consent form will be collected and shredded after scanning online onto a password protected SharePoint. The scanned forms will only be accessible by the principal and co-investigators and will be automatically deleted after five years. Data from the anonymous electronic survey will be stored online and is password protected. We will take steps to protect your privacy and confidential information, however we are unable to guarantee or promise that your privacy will not be breached. Governmental agencies and the IRB may request access to study related data. We will work to ensure that your privacy is to be protected.

Sharing the Results

The knowledge that we obtain from your participation will be shared in the following ways: a PowerPoint presentation, poster board presentation, final paper, and potential publication in a scholarly journal. The anticipated timeline for the scholarly project implementation and data

analysis will be during Fall of 2020. The anticipated professional dissemination and poster presentation will be in the Spring of 2021. No information that you shared with us will be presented with your name or any other identifying information. All information when presented is de-identified without any links to you and presented as group data.

Voluntary Participation

Your participation in this scholarly project is voluntary. You may choose to not to participate. The decision to participate or not participate in this scholarly project is completely up to you. If you choose not to participate your refusal to participate in this scholarly project will involve no penalty and will not affect your academic standing in the nurse anesthesia program at AHU. If you choose to participate, you can change your mind later and withdraw your consent and discontinue participation from this scholarly project at any time. If you choose to withdraw, please inform the PI of your wishes.

Right to Refuse or Withdrawal from the study

You do not have to participate in this scholarly project and choosing not to participate in this scholarly project will not involve any penalty. Additionally, if you choose not to participate, or if you withdraw your voluntary participation, your academic standing in the nurse anesthesia program will not be affected. The decision to participate or not participate in this scholarly project is completely up to you. If you choose to participate, you can change your mind later and withdraw your consent and discontinue participation from this scholarly project at any time. If you choose to withdraw from the scholarly project, please inform the PI of your wishes.

Compensation

Refreshments and a light meal will be served as an incentive for participants in this scholarly project. However, there is no compensation for your participation in this scholarly project.

Contact Information

If you have questions, concerns, or complaints regarding this scholarly project you may contact the Co-Investigators: Camila Queiroz at (407) 303-9331 and Diana Jauregui-Cervantes at 407-303-9331. You may also email them at: camila.queiroz@my.ahu.edu and diana.jauregui@my.ahu.edu. You may also contact the Principal Investigator at (407) 303-9331 or email him at: manual.tolosa@ahu.edu. You may also contact AHU research office at (407) 407-609-1388 or AHU.Research.Office@ahu.edu or the IRB Office at (407) 303-5619.

Other Information

We thank you for your participation in this scholarly project. Please remember that every identifier may be removed from identifiable private information and that after such removal, the information could be used for future scholarly projects or distributed to another investigator for future scholarly projects without additional informed consent / or a statement that informs

participants that information collected in this scholarly project will be used or distributed for any other research purposes not disclosed in this consent form. By signing this consent form you agree to not disclose any information regarding your participation in this scholarly project to other participants and student registered nurse anesthetists in the AHU DNA program until after the dissemination of this scholarly project.

This scholarly project has been reviewed and approved by AdventHealth University Institutional Review Board, which is tasked to protect research participants from harm. If you want to learn more about the Institutional Review Board and its role in protecting research participants feel free to contact AdventHealth University IRB at (407) 303-5619.

Participant’s Understanding

- I have been invited to participate in a scholarly project about debriefing post high-fidelity simulation and SRNA self-confidence and satisfaction.
- I understand that my participation is voluntary.
- I understand that all data collected will be limited to the use disclosed above.
- I understand that I will not be identified by name in any presentation or publication.
- I am aware that all my information will be kept confidential and secured by the investigators.
- I understand that I may withdraw from the scholarly project at any time.

I have read the forgoing information and it has been explained to my satisfaction. I have had the opportunity to ask questions. I consent voluntary to be a participant in this scholarly project.

Printed Name of Participant

Signature of Participant (required)

Date Day / Month/ Year

Name of Person Obtaining Consent

Signature of Person Obtaining Consent (required)

Date Day / Month/ Year

Appendix D

Modified Student Satisfaction and Self-Confidence in Learning

The survey will include a total of 15-questions. Two questions will pertain to the participants cohort and debriefing group. Thirteen questions will be from the face validated modified NLN survey.

Instructions: This questionnaire is a series of statements about your personal attitudes about the debrief you receive after your simulation activity. Each item represents a statement about your attitude toward your satisfaction with learning and self-confidence in obtaining the instruction you need. There are no right or wrong answers. You will probably agree with some of the statements and disagree with others. Please indicate your own personal feelings about each statement below by marking the numbers that best describe your attitude or beliefs. Please be truthful and describe your attitude as it really is, not what you would like for it to be. This is anonymous with the results being compiled as a group, not individually.

Mark:

- 1 = STRONGLY DISAGREE with the statement
- 2 = DISAGREE with the statement
- 3 = AGREE with the statement
- 4 = STRONGLY AGREE with the statement

Demographic Questions:

1. Which DNAP Cohort are you currently in?	<input type="radio"/>	<input type="radio"/>	
	2021	2022	
2. What group are you in?	<input type="radio"/>	<input type="radio"/>	
	A	B	

Satisfaction with Current Learning	SD	D	A	SA
1. The debriefing method used in this simulation was helpful and effective.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
2. The simulation provided me with a variety of learning materials and activities to promote my learning of the crisis scenario(s) presented today.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
3. I enjoyed how my instructor debriefed the simulation.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
4. The debrief method used in this simulation was motivating and helped me to learn.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
5. The way my instructor(s) debriefed the simulation was suitable to the way I learn.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
Self-confidence in Learning	SD	D	A	SA
6. I am confident that I am mastering the content of the simulation activity that my instructors debriefed with me.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4

7. I am confident that the debriefing method used covered critical content necessary for the mastery of the nurse anesthesia curriculum.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
8. I am confident that I am developing the skills and obtaining the required knowledge from the debrief of simulation to perform necessary tasks in a clinical setting.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
9. My instructors used a debrief method that was helpful to review the simulation.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
10. It is my responsibility as the student to learn from this simulation debriefing activity.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
11. I know how to get help when I do not understand the concepts covered during the debrief of this simulation.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
12. I know how debriefing is used to help me learn aspects of the nurse anesthesia skills presented in this simulation.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
13. It is the instructor's responsibility to guide me in what I need to learn of the simulation activity using this debriefing method.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4



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Permission to use **SHARP** tool



Arora, Sonal <sonal.arora06@imperial.ac.uk>

Sat 6/29/2019 6:26 AM

Jauregui-Cervantes, Diana ✓



Yes of course
Please go ahead

Sonal

Sent from my iPhone



Jauregui-Cervantes, Diana

Fri 6/28/2019 1:41 PM

sonal.arora06@imperial.ac.uk ✓



Hello,

My name is Diana Jauregui-Cervantes and I am a doctoral nurse anesthesia student at AdventHealth University in Orlando, FL. I am conducting my doctoral research project comparing two forms of debriefing methods, one being the **SHARP** debriefing tool. In order to use the **SHARP** debriefing tool, I would like to request permission for its use. Thank you,

Diana Jauregui-Cervantes, BSN, RN, CCRN
Camila Queiroz, BSN, RN, CCRN



O'Donnell, John Marc <jod01@pitt.edu>
 Sun 9/8/2019 8:49 AM
 Jauregui-Cervantes, Diana



Debrief_narration.pptx 12 MB	Sim-Dictionary-JOD.pdf 498 KB
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Show all 4 attachments (13 MB) Download all Save all to OneDrive - AdventHealth University

Dear Diana-

Consider this email my formal approval for your use of the **GAS** debriefing tool (also called structured and supported debriefing but nobody uses that title) for your study. I would like the opportunity to hear about your results.

Also- I assume you will provide a similar training in both tools for the facilitators conducting the study. One problem that you will need to deal with- are the student outcomes a result of the tool or a result of the facilitator skill in general? This is a difficult problem to address and will be a significant limitation. Also- how will you evaluate the debriefings? Will you video them and then have outside observers use a tool like DASH to evaluate debriefing quality? DASH also requires training.

I would like to offer the narrated ppt for help in facilitator training. Also- I would like to offer the **GAS** Job aid (modified for use during the 2019 AANA Congress) which you can make available to both facilitators and students and the mini- elephant job aid which helps facilitators maintain focus on objectives for each scenario. The elephant represents surprises that sometimes occur during simulation events that the instructor needs to address that are outside of the objectives. I also include the Healthcare Simulation Dictionary which you may have...

Regards,

John O'Donnell



From: Jauregui-Cervantes, Diana <Diana.Jauregui-Cervantes@my.ahu.edu>
Sent: Saturday, September 7, 2019 6:19 PM
To: O'Donnell, John Marc <jod01@pitt.edu>
Subject: Re: Permission to use **GAS** debriefing tool

Good Afternoon Dr. O'Donnell,

We hope you are having a great weekend so far. So, here is a little information on our scholarly project:

Our Project Title:
 Debriefing and SRNA Self-Confidence and Satisfaction

A Background on our Topic:

- We are wanting to conduct our scholarly project on how the implementation of the SHARP debriefing method as compared to the **GAS** debriefing method affect SRNA self-confidence and satisfaction.
- We conducted a literature review that examined structured debriefing.
- We plan to conduct an anaphylaxis crisis scenario, participants would be randomly placed in the SHARP or **GAS** debriefing group and receive the respective debriefing post-simulation, a post-test (modified version of the NLN self-confidence and satisfaction survey) would provide data on how the debriefing method affected SRNA self-confidence and satisfaction.
- We plan to submit to IRB by December 6, 2019.
- Pending IRB approval, implementation of our Scholarly Project would occur during Fall of 2020.

Project Aim and Objectives

The project aims to evaluate the difference between the SHARP method of debriefing compared to the **GAS** method of debriefing, conducted after an anaphylaxis crisis scenario, on SRNA self-confidence and satisfaction. The data analysis will provide recommendations on the method of structured debriefing post simulation for the AHU DNAP.

- o Objective 1: Assess the difference between two methods of debriefing on SRNA self-confidence and satisfaction by September 30, 2020.
- o Objective 2: Provide recommendations on the use of a structured debriefing method post-simulation at AHU DNAP by the end of March 2021.

Our goal is to see if these methods affect SRNA self-confidence and satisfaction. As well as to recommend a structured debriefing method that can be used for rapid development of skill, in a time limited setting, at AHU. Since implementation of the project is projected for Fall 2020, we will have a full year that may be utilized to train the facilitator.

We need your permission to use the **GAS** method and this permission must be included in the files that we submit to IRB. What can we do to receive your approval for the use of the tool by December 2019, in time for our IRB deadline? How would you recommend we train our facilitator?

Thank you,

Diana Jauregui-Cervantes. BSN. RN. CCRN

Emotional Readiness?
Their Recollection?

G



Obj 1

Obj 2

Obj 3

A

Score?
Performance?
2 Item take away (+/Δ)

S

Emotional Readiness?
Their Recollection?

G



Obj 1

Obj 2

Obj 3

A

Score?
Performance?
2 Item take away (+/Δ)

S

IMPLEMENTING STRUCTURED AND SUPPORTED DEBRIEFING: LEARNING A MODEL OF SUCCESS

John M. O'Donnell
Paul E. Phrampus




Learning Objectives



- Define the importance of debriefing in simulation
- Identify variables that determine debriefing strategies
- Discuss the closure of knowledge, skill and performance 'gaps'
- Review the importance of using a Structured and Supported Debriefing model
- Review the components of the Structured and Supported Debriefing model

What is Debriefing?

A deliberative, process designed to standardize post-event interactions to assist participants in thinking about what happened, when it happened, why it happened, what they did about it and any associated outcomes.

What is Debriefing?

A deliberative, process designed to standardize post-event interactions to assist participants in thinking about what happened, when it happened, why it happened, what they did about it and any associated outcomes.

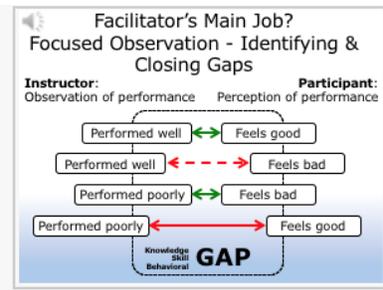
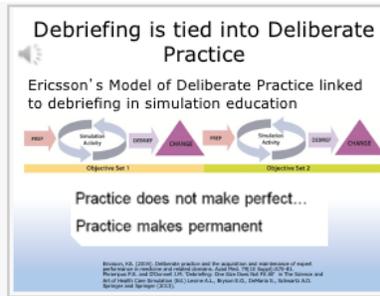
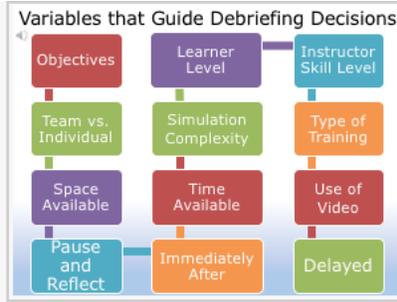
Benefits of Effective Debriefing

Emotional release
Stimulates reflection on actions and behaviors
Participants gain deeper understanding of performance
Facilitators can share professional judgement

The Ultimate Failure of Debriefing

"Learners are left with the mistaken impression that they are doing just fine....when they are not"

Task	Rating
Sutures spaced 3.5 mm apart	5
Equal "bites" on each side	4
Square knots present	2
Sutures cut to correct length	4
No dermal pouting	3



Structured & Supported Debriefing (SSD)

- Developed in collaboration with the American Heart Association
- Key considerations:
 - Simple
 - Could be learned rapidly
 - Validated by use
 - Scalable (ACLS and PALS across the world)
- Structured and Supported
 - Structured** elements include three specific debriefing phases
 - Supported** elements include both interpersonal support as well as use of valid evidence

Adapted from: O'Connell, L.M., Rodgers, D.L., Lee, N., et al. (2010). Structured and supported debriefing (SSD). In: American Heart Association, Dallas, TX.

Phase	Goal	Actions	Sample Questions	Time
Gather	Listen to participants to understand what they think & how they feel about session	<ul style="list-style-type: none"> Request narrative from team leader Request clarifying or supplemental information from team 	All: How do you feel? Team Leader: Can you tell us what happened? Team members: Can you add to the account?	25%
Analyze	Facilitate participants' reflection on & analysis of their actions	<ul style="list-style-type: none"> Review of accurate record of events Report observations (correct & incorrect steps) Ask a series of questions to reveal participants' thinking processes Assist participants to reflect on their performance Redirect participants to ensure continuous focus on session objectives 	"I noticed..." "Tell me more about... what did you feel about... what were you thinking when..." "I understand, however, tell me about 'X', aspect of the scenario." "Conflict resolution: -Let's refocus: 'what's important is not who is right but what is right for the patient.'	50%
Summarize	Facilitate identification & review of lessons learned	<ul style="list-style-type: none"> Participants identify positive aspects of team or individual behaviors & behaviors that require change Summary of comments or statements 	List two actions or events that you felt were effective or well done Describe two areas that you think your team need to work on...	25%

Adapted from: O'Connell, L.M., Rodgers, D.L., Lee, N., et al. (2010). Structured and supported debriefing (SSD). In: American Heart Association, Dallas, TX.

GAS Model

Goal: Listen to participants to understand what they think & how they feel

Actions: Request narrative from team leader
Request clarifying or supplemental information from team

Sample Questions:
All: "How do you feel?"
Team Leader: "Can you tell us what happened?"
Team members: "Can you add to the account?"

GATHER 25%

GAS Model

Goal: Facilitate reflection on & analysis of actions

Actions: Review accurate record of events
Report observations (correct & incorrect steps)
Reveal participants' thinking processes
Reflect on performance
Assure continuous focus on session objectives

Sample Questions:
"Tell me more about..."
"When..."
"I understand, however, tell me about 'X' aspect of the scenario..."
"Let's refocus... what's important is not who is right but what is right for the patient..."

ANALYZE 50%

GAS Model

Goal: Facilitate identification & review of lessons learned

Actions: Participants identify positive aspects of team or individual behaviors & behaviors that require change
Summary of comments or statements

Sample Questions:
"List two actions or events that you felt were effective or well done"
"Describe two areas that you think your team need to work on..."

SUMMARIZE 25%

SHARP

**5-STEP
FEEDBACK
AND
DEBRIEFING
TOOL**

BEFORE CASE

Set learning objectives
What would you like to get out of this case?

AFTER CASE

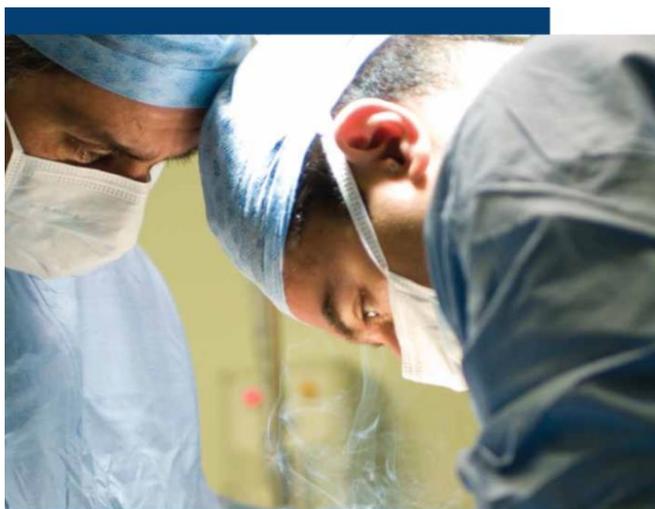
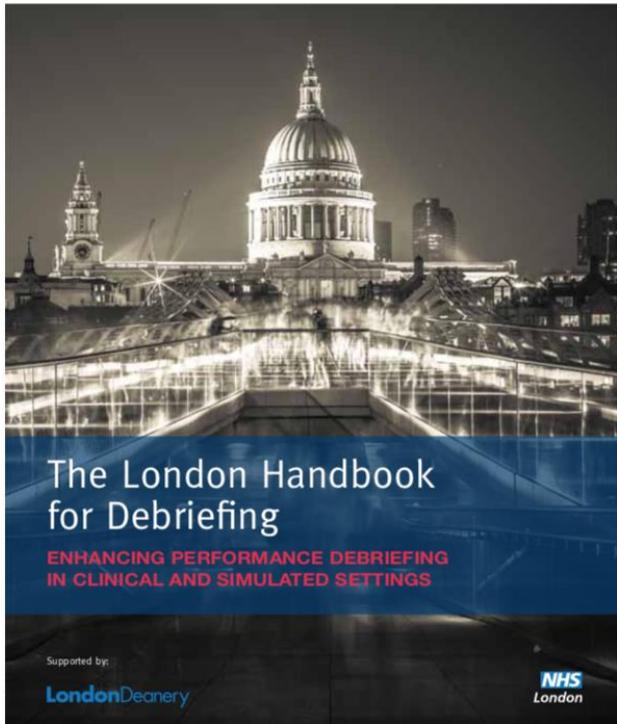
How did it go?
What went well? Why?

Address concerns
What did not go so well? Why?

Review learning points
Were your learning objectives met for this case?
What did you learn about your clinical/technical skills?
What did you learn about your teamwork skills?

Plan ahead
What actions can you take to improve your future practice?

Imperial College
London



Background

The fundamental aim of medical and surgical training is to produce competent clinicians able to provide the highest standard of patient care. Quite how this training is to be delivered is currently one of the most hotly debated topics engaging the profession. Drivers for change include increasing concerns for patient safety and reduced working hours resulting in less opportunity for experiential learning. In an effort to address such challenges, there has been an increased uptake in the use of simulation to provide trainees with the necessary knowledge, skills and attitudes that they will need for independent practice.

The use of simulations alone does not guarantee high-quality training, especially when the skill in question goes beyond technical competence to involve aspects of human factors. In addition, running simulations requires significant faculty and financial resources. Therefore, practices which permit maximal learning from every clinical encounter, be they in simulation or in real environments, must be actively sought.

From this perspective, the role of structured feedback and debriefing as part of both simulation and workplace-based training is of paramount importance. As an educational strategy,

debriefing following a simulation-based scenario or clinical encounter, be it on the ward or in an operating theatre, is a critical part of the learning process. Through the use of a mutually engaging dialogue between the trainee and trainer, debriefing highlights the lessons learned by trainees through guided reflection on their performance. It also provides the trainee with an opportunity to develop strategies for applying these lessons to their daily clinical activities so as to improve their practice.

Despite this central importance of debriefing to training, the components of an educationally effective debriefing and how best to deliver it remain elusive. A lack of guidelines on debriefing can lead to significant variations in practice which can result in many missed opportunities for learning. Both trainers and trainees need tools that can allow for systematic, objective feedback to be provided. Such evidence-based tools will allow for better quality debriefs, more transparency and higher acceptability in the provision of feedback.

This handbook provides evidence-based, user-informed tools for conducting and assessing debriefings in the real clinical and simulated setting. The tools can be used for adult and paediatric cases.

Imperial College
London

SHARP PROMOTING PERFORMANCE DEBRIEFING

OSAD IMPROVING QUALITY OF DEBRIEFING

SHARP PROMOTING PERFORMANCE DEBRIEFING

What is SHARP?

SHARP contains the absolute basic principles of what to cover when conducting a debriefing. SHARP is an acronym that comprises five 'prompts' to guide trainers and trainees in providing/receiving a structured debrief. SHARP stands for Set learning objectives, How did it go, Address concerns, Review learning points, Plan ahead. It is a practical tool which can be used when there is not enough time to carry out a detailed debriefing using all the comprehensive information provided in the Objective Structured Assessment of Debriefing (OSAD) tool described below.

Who can use SHARP?

SHARP can be used by anyone who wants a brief reminder of what to cover in a debriefing in a time-limited setting. For example, it can be used by a trainer to provide feedback to their trainee immediately after a case in theatre. It can also be used, for example by a paediatric trainee to help structure their feedback when discussing management of a seriously ill child with their trainer. Ideally SHARP should be used by both trainee and trainer in order to ensure joint responsibility for the debriefing.



“SHARP forces you to sit down and talk... make every moment count.”

Consultant Trainer

“It could be implemented into routine practice like at the end of the case ‘Have you done your SHARP?’”

Consultant Trainer

For what can SHARP be used?

SHARP can be used as a practical aide memoire to help conduct a debriefing 'on the ground'. It can be used by a simulation instructor, for example, to remind trainees of the points that need to be covered in the post-scenario debriefing. Here SHARP could also be placed as a poster in the debriefing room. Clinically, SHARP can be carried in a credit card sized format in the pocket of a trainer and then brought out at the end of the case to aid debriefing.

Unlike OSAD (see below), it is not an assessment tool. The five prompts of SHARP map onto the components of high quality debriefing described in OSAD. Both tools are designed to complement each other and can be used together. For example, SHARP could be used by a trainer to conduct a debriefing and OSAD by a researcher who observes their skills in debriefing to determine how effective they are when using SHARP.

How should SHARP be used?

Before conducting a debriefing with a trainee, trainers should first familiarise themselves with the components of SHARP so that they are comfortable using it. The first prompt 'Set learning objectives' should be completed before the case or simulation scenario commences. The remaining four prompts should be discussed after the case. It is recommended that this is done as soon as possible to ensure immediacy of feedback. No training is required in order to use the SHARP tool.

The Evidence for SHARP

SHARP was developed based upon the findings of a comprehensive literature review and an international interview study with end users from three continents regarding the components of effective debriefing. These were distilled into the five key prompts that form the basis of SHARP using an international expert panel.

A clinical study using SHARP highlighted how it significantly improved feedback and debriefing in the operating theatre, thereby demonstrating its fitness for purpose (see references). In particular, debriefings were provided to trainees more often (72% of cases when SHARP was not used vs. 100% of cases when SHARP was used). The number of cases where learning objectives were set prior to the case significantly increased from 24% to 86% when SHARP was used. The quality of debriefings provided by trainers in the operating theatre was assessed using OSAD within this study. Results found that there was a significant improvement in OSAD scores when SHARP was used indicating that the performance debriefs with SHARP were also of an objectively higher standard.

“We have SHARP as a poster in the scrub room. It reminds me to always ask my trainee at the start of each case what they want to get out of it...”

Consultant Surgeon

“OSAD helps to define what is really important when giving feedback. By measuring how we are doing, we understand where we can further improve our debriefing practices.”

Consultant Anaesthetist

“Using OSAD has helped me to develop my skills as a simulation trainer. As my scores get better, I have become much more confident in giving feedback – especially when the simulation has not gone so well.”

Consultant Paediatrician



Instructional PowerPoint for Simulation

**DEBRIEFING POST-SIMULATION AND
SRNA SELF-CONFIDENCE AND SATISFACTION**

CO-INVESTIGATORS: CAMILA QUEIROZ & DIANA JAUREGUI-CERVANTES
 PRINCIPAL INVESTIGATOR: MANUEL TOLOSA, DNP, CRNA
 PROJECT MENTOR: JONELLE WEAGRAFF, MSNA, CRNA
 PROJECT REVIEWER: NEL THOMAS, PhD, RN

*PARTICIPATION IN THE SCHOLARLY PROJECT IS VOLUNTARY AND WILL NOT HAVE AN EFFECT ON THE PARTICIPANTS GRADE(S) IN THE DNP PROGRAM.



SUMMARY OF THE SCHOLARLY PROJECT

- The project aims to evaluate the difference between the SHARP method of debriefing compared to the GAS method of debriefing, conducted after a crisis scenario, on SRNA self-confidence and satisfaction. The data analysis will provide recommendations on the use of a structured debriefing method post simulation for AHU DNAP and contribute to the growing body of knowledge in the field of nurse anesthesia.
- The Scholarly Project will consist of
 - A 10-minute project introduction, provided to all participants.
 - A 10-minute crisis scenario simulation.
 - A 5-minute post-simulation debrief. Participants will be randomly placed into one of two debriefing methods.
 - A 13-item anonymous, electronic survey on [Mentimeter](#).



SCHOLARLY PROJECT OBJECTIVES

After implementation of the scholarly project the principal investigators will:

- Objective 1: Assess the effect of the method of debriefing on SRNA satisfaction in learning using a face validated tool by December 30, 2020.
- Objective 2: Assess the effect of the method of debriefing on SRNA self-confidence using a face validated tool by December 30, 2020.
- Objective 3: Evaluate the difference between the two methods of debriefing (GAS and SHARP) on SRNA self-confidence and satisfaction by December 30, 2020.
- Objective 4: Provide a recommendation on the use of a structured debriefing post-simulation for AHU DNAP and contribute to the growing body of knowledge in the field of nurse anesthesia by the end of March 2021.



SIMULATION OBJECTIVES

Topic: Crisis Scenario Simulation

Learners: During participation of the crisis scenario the participant will:

1. Identify and verbalize the current clinical problem within 10-minutes
2. Treat the current clinical problem using three appropriate interventions within 10-minutes
3. State appropriate drugs and dosages given for the current clinical problem within 10-minutes

*The simulation will end once the participants correctly identify the crisis scenario and deliver the correct treatment OR at the 10-minute mark



INFORMED CONSENT & CONFIDENTIALITY FORMS

- At this time, please read and sign the informed consent and confidentiality forms.
- The integrity of this Scholarly Project relies on your cooperation and confidentiality.
- Please do not text or talk with your classmates and other cohorts regarding the Scholarly Project, as it can negatively impact the results of our project.



RANDOM SELECTION OF DEBRIEF METHOD




FURTHER INSTRUCTIONS

- At this time you will be held in this classroom until your cohort year (2021, 2022) and selected letter (A, B), is called upon.
- Once you are called upon, please leave your belongings in the classroom and follow co-investigator into the simulation lab.
- Feel free to use this time to study until you are called upon.



Appendix E

RE: NAP39019 - Debriefing Post-Simulation and SRNA Self-Confidence and Satisfaction / GRANT Approval

PM PRADO, Mildred <Mildred.Prado@ahu.edu>
Mon 3/30/2020 4:52 PM

To: AHU Research Office <AHU.Research.Office@ahu.edu>; TOLOSA, Manuel <Manuel.Tolosa@ahu.edu> +2 others
Cc: BRADFIELD, Carol <Carol.Bradfield@ahu.edu>; Elao, Carmen <Carmen.Elao@ahu.edu>

 Grant Utilization-GSR.docx
22 KB

Greetings and congratulations on your grant award. Attached is an electronic copy of the link in Leana's email on the grant utilization instructions for graduate student research (GSR) grants. Please review carefully and save for your future reference. This document contains information that will help guide you in utilizing your grant funds.

Please do not hesitate to contact me should you have any questions or need additional information. Best wishes on your research!

Warm Regards,

Millie Prado,
Grants Manager | Grants, Alumni, Philanthropy
407-303-7747, Ext. 1101469



Appendix F

