**Research Article**

**Bridging the Gap in Simulation: A Faculty Development Intervention for Debriefing Skills**

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**How to cite this article:** McElwain SD, Rhodes K, Carr KL, et al. (2022) Bridging the Gap in Simulation: A Faculty Development Intervention for Debriefing Skills. Int J Nurs & Healt Car Scie 02(06): 2022-124.

**Submission Date:** 01 June, 2022; **Accepted Date:** 14 June, 2022; **Published Online:** 19 June, 2022

**Abstract**

High-quality debriefing by trained faculty is essential for learning in simulation. Investigators led a faculty workshop to develop debriefing skills. The Debriefing Assessment for Simulation in Healthcare (DASH) model was used to guide structured debriefing. Described here is the development, implementation, and evaluation of the workshop. Comparison of group scores showed improvement across DASH Elements 2-6 (p = .01). Participants valued having debriefing skills evaluated by trained peers. Findings from this study may inform other professional development interventions.

**Keywords:** Debriefing; Faculty-development; Nursing; Simulation

**Introduction**

Simulation in nursing curricula has increased due to factors including lack of clinical sites, faculty shortages, shortened patient length of stay in acute care settings [1], and most recently the COVID-19 pandemic. Bridging the gap from simulation to practice requires guided reflection through effective debriefing by trained faculty [2]. The quality of debriefing depends on the facilitator’s skills and level of training or experience in debriefing [3,4].

Debriefing is an essential component of simulation. The International Nursing Association for Clinical Simulation and Learning (INACSL) Standards Committee released the Standards of Best Practices: Simulation Debriefing in 2016 and updated the standards in 2021. Four criterions are identified by INACSL for a robust debriefing. These criteria outline the need for debriefing to be planned; facilitated by a person(s) competent in the debriefing process; encourages reflection and identifying of errors in a safe environment; and is based in theoretical frameworks and/or evidence-based concepts [2]. Both INACSL and the National Council for State Boards of Nursing (NCSBN) call for educator development in simulation using simulation best practices [5,6]. In addition, continued development, and ongoing assessment of the educator’s ability to perform quality debriefing is needed [5].

The Center for Medical Simulation (CMS) at Harvard University created one of the first means for assessment of effective debriefing behaviors known as the Debriefing Assessment for Simulation in Healthcare (DASH) [7]. The DASH is a 6-element scale that evaluates the quality of debriefing: (1) Establishes an engaging learning environment, (2) Maintains an engaging learning environment, (3) Structures the debriefing in an organized way, (4) Provokes engaging discussion, (5) Identifies and explores performance gaps, and (6) Helps trainees achieve or sustain a good future performance [8].

Despite a call to incorporate debriefing across nursing curricula, recent estimates indicate that 31% of nursing schools use a theory-driven debriefing, less than half of faculty have had formal training in debriefing, and only 19% have had debriefing competency assessed [9]. Studies have suggested presenting faculty development in a multitude of pedagogies such as workshops, lectures, peer feedback, targeted practice, and expert mentorship [10]. In response to faculty need, a workshop was developed and aimed to 1) prepare nursing faculty in effective debriefing using the DASH model and 2) evaluate the effect of a workshop on faculty debriefing behaviors using the DASH Rater tool.

**Methods**

**Training and Workshop Development**

Guided by DASH, investigators developed a workshop on building effective debriefing skills. DASH provides a framework for trained observers to rate the quality of a debriefing based on key behaviors [11]. The DASH Score Sheet - Rater Version Short (DASH-RV-Short) has six elements with scores ranging from one (extremely ineffective/detrimental) to seven (extremely effective/outstanding). This form was used for scoring participant’s debriefing behaviors. Element 1, Establishes an engaging learning environment, applies to pre-briefing, though discussed in the workshop, and was not evaluated as part of the mock debriefings.

After Institutional Review Board (IRB) approval, four nursing faculty served as investigators and were trained through CMS as DASH raters. All four faculty led the workshop and one led the focus group feedback discussion. Investigators watched a pre-recorded debriefing and independently scored the debriefing using the DASH-RV-Short. Rater scores for elements 2 - 6 demonstrated no more than a one-point difference for each element. This scoring established inter-rater agreement.

In preparation for the workshop, scripted debriefings were filmed for each of the six debriefing elements in DASH. These videos were used as examples of “Good”, “Average”, and “Poor” debriefings during the faculty workshop. Student volunteers acted as nursing students in the videos, and investigators acted as the faculty facilitating the debriefings.

**Participants**

All nursing faculty (n = 55) were invited to participate via e-mail. Eleven faculty enrolled and completed all aspects of the workshop except for two participants who were unable to complete the post-workshop mock debrief due to scheduling conflicts. Participants had the opportunity to review feedback on the debriefing scores after the post-workshop debriefing. However, no one opted to review feedback on scores.

**Pre-workshop**

One week prior to the workshop, participants received a simulation scenario which included objectives, anticipated case progression, and expected student responses. Scenario objectives involved communication, physical assessment, and safe medication administration, which can reasonably be evaluated by any level of faculty. Participants were asked to review the material and then scheduled a time to view a recording of the simulation. Immediately after viewing the simulation, the participants were filmed as they completed a mock debrief with the workshop facilitators playing the role of the students. Investigators independently viewed the mock debriefs and scored them with the DASH-RV-Short. The average composite DASH scores served as the baseline score for each participant (n = 11).

**Workshop**

Investigators led a 6-hour active learning workshop for nursing faculty as part of professional development efforts. A general overview of debriefing was introduced at the beginning. Each of the six DASH elements were discussed separately by the investigators and illustrated with the good, average, and poor videos. Participants were asked to practice the skills of debriefing presented after each element in groups of 3 - 4 faculty. Each participant took turns in the role of the student and the facilitator of the debriefing while the other participants used the DASH Short form as a guide to evaluate the debriefing. Investigators assisted with questions and coaching during this time.

**Post-workshop**

All participants were invited to take part in a focus group (n = 5), aimed at collecting feedback on workshop effectiveness, one week after the workshop. Within two weeks of the workshop, participants were again scheduled to have a mock debriefing filmed. The same recorded simulation from the pre-workshop was shown to the participants and again, immediately after viewing, a mock debriefing was filmed. The four investigators independently viewed and scored the post-workshop debriefings for nine participants (n=9) using the DASH-RV-Short.

**Evaluation**

A quasi-experimental single group design using pre- and post-tests were used to evaluate improvements in the participants’ debriefing skills after attending the debriefing workshop. Investigators viewed videos of faculty completing a mock debriefing pre- and post-workshop and rated debriefings using the DASH-RV-Short. Average scores from each rater resulted in a composite score for each participant. Possible composite scores range from 5 - 35. Pre- and post-workshop scores were compared using the related-samples Wilcoxon signed rank test. Focus group feedback responses provided insight on workshop effectiveness.

**Results**

Composite DASH scores for each participant (n=9) increased after the workshop (range 2-11.75). Analysis of composite DASH scores (range 5-35) demonstrated improvement (p =.01) with a mean pre-workshop score of 15.19 (SD ±2.7) and mean post-workshop score of 20.72 (SD ±3.5). The calculated effect size of these means was medium (r =.7) with Cohen’s d of -1.8. One participant had a decrease of 0.5 points in element 4 post-workshop; however, their composite DASH score improved from 19 pre-workshop to 20.5 post-workshop.

Pre-workshop mean scores for each element ranged from 2.75 in element 2 to 3.23 in element 3. Post-workshop mean scores ranged from 3.97 (element 2) to 4.22 (elements 3 and 6). Analysis of pre- and post-workshop scores showed statistically significant improvement for each of the five elements evaluated (Table 1).

|  |  |  |  |
| --- | --- | --- | --- |
| DASH Element | Pre-workshop | Post-workshop | P-value |
| Element 2: Maintains an engaging learning environment | 2.75 | 3.97 | <0.01 |
| Element 3: Structures the debriefing in an organized way | 3.22 | 4.22 | <.01 |
| Element 4:Provokes engaging discussion | 3.17 | 4.17 | 0.02 |
| Element 5: Identifies and explores performance gaps | 3.03 | 4.14 | 0.01 |
| Element 6: Helps trainees achieve or sustain a good future performance | 3.03 | 4.22 | 0.01 |
| 1Related-samples Wilcoxon Signed Rank TestTotal possible score for each element 1 - 7 points |

**Table 1:** Comparing average element scores by group (n = 9)1.

Focus group feedback responses supported the value and effectiveness of the workshop. The focus group facilitator presented six pre-established questions for discussion. Participants provided feedback about goals for attending the workshop, whether these goals were met, if concerns about debriefing were addressed, satisfaction with workshop delivery, whether new skills were obtained, and ideas for improvement. Goals in attending the workshop included: “My goal was to gain the knowledge and to debrief better, but what I realized was that the whole part of the debriefing is to prepare students a little bit better” and “I have done simulation for 11 years but I wanted to see what was new.” Participants felt that concerns about current debriefing practices were addressed during the workshop. These concerns included, “Too many objectives,” “Not knowing how to talk to students,” and “Not enough time.” Participants were asked if new skills were developed. Quotes about these skills included, “Know the scenario you are debriefing,” “Pre-briefing is a must,” “Debriefing can be used in clinical and the classroom,” and “Keep the students safe.” All participants agreed the workshop and debriefing training was beneficial, and they enjoyed the opportunity to practice the skills during the workshop and receive feedback from other faculty.

**Discussion**

Faculty debriefing skills can be improved through professional development training. Findings demonstrated that a faculty development workshop is an effective method to begin learning the process of debriefing and associated skills. The use of the DASH rater tool provided a structured measure of faculty development and peer-evaluation in debriefing. Continued use of this tool could be beneficial for ongoing debriefing skills assessments as suggested by NCSBN. Similar workshops with structured peer-evaluation of skills may serve to close the gap in the number of faculty who are appropriately trained in debriefing. Experiential learning, via example videos and small group practice, was an effective means of learning debriefing skills. The small group discussions during the workshop lead to peer coaching which was beneficial for the participants. Additional research is needed to identify if faculty retain debriefing skills over time.

**Limitations**

A primary limitation was the small sample size; however, a medium effect size in such a small sample was encouraging. Scheduling conflicts caused challenges with initial participation and follow-ups. Only 20% of eligible faculty participated, citing scheduling as a significant factor for not attending, as well as, not following up with post-workshop mock debriefing evaluations. Online or asynchronous methods may address this limitation in future work. Many graduate faculty did not perceive themselves as using debriefing skills regularly, which may have affected their participation. The use of the same video for the pre- and post-workshop mock debriefing could have contributed to an increase in post-workshop scores because the participants were already familiar with the content and could more easily come up with relevant questions for debriefing. Use of a different simulation scenario recording for the post-workshop debriefing evaluation may reduce the influence generated by a repeat exposure. Generalization of these findings are difficult but provide a potential framework for faculty development programs in which there is structured measurement of skills by trained observers before and after training sessions.

**Conclusion**

Debriefing is a learned skill that requires practice. Sometimes faculty facilitate simulation and lead debriefing without formal training. However, this lack of formal training limits student learning from simulation experiences. A faculty development workshop that utilizes interactive videos and on-sight practice with instructional coaching is a valuable way to develop debriefing skills. Regular peer-evaluation of debriefing skills as part of faculty development should follow training to ensure maintenance of skills and provide accountability for high-quality debriefing that fosters student learning.

**Conflict of Interests**

We have no known conflict of interest to disclose.

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