Use of the Delphi Technique in Instrument Development to Assess Debriefing Facilitation

E. Adel Herge, OTD, OTR/L
Thomas Jefferson University, adel.herge@jefferson.edu

Susan Wainwright, PT, PhD
Physical Therapy, Thomas Jefferson University, Susan.wainwright@jefferson.edu

Jennifer Saylor, PhD, RN, ACNS-BC
University of Delaware, School of Nursing, jsaylor@udel.edu

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Background Information

- An essential part of the simulation experience is the debriefing, where most of the learning occurs (Arafeh, Hansen & Nichols, 2010). A skilled debriever guides learners in transferring their experience into clinical practice. There are tools to evaluate faculty effectiveness in classroom teaching however these concepts have not been applied to debriefing.
- To meet this need the authors developed an instrument to assess the effectiveness of a debriefing following a patient clinical simulation. The PADI was based on current scientific literature in effective debriefing and peer review methodology. (Paulsen, 2002).
- A two phase process was used to develop the PADI:
  - Phase 1- instrument development and content validity was established using the Delphi technique.
  - Phase 2-inter rater reliability was established.

Phase 1: Delphi Technique

- Goal: To establish consensus for content validity and utility of the PADI
- Delphi technique was selected because
  - it is acceptable in healthcare research and education (when there is a lack of empirical evidence (Powell, 2003; Vernon, 2009)
  - it is a cost effective method to generate ideas and facilitate consensus among individuals who may be geographically distant (Polit & Beck, 2008).
- A group of experts in debriefing and education were invited to participate in the panel. Experts reviewed and provided feedback on the debriefing assessment tool using a survey on Qualtrics, LLC.
- Initially 20 experts invited: 11 consented and 7 (64%) completed Round I; An additional 5 experts in academia were invited and 4 agreed. Of these 15 consented participants, 11 (73%) completed Round II and 9 (60%) completed Round III.

Participants

- Peer Assessment Debriefing Instrument (PADI) is a peer review tool with two main parts.
  - Pre-Assessment of the Simulation Experience: self-assessment of debriever’s own debriefing skills, completed by the debriever and given to the peer-evaluator prior to the observation
    - provides general information about the simulation
    - allows the debriever to identify areas in which he or she wishes to receive specific feedback
  - Post-Debriefing Evaluation (Self and Peer Assessment): assessment of the various aspects of conducting a debriefing; completed by both the peer evaluator during the simulation and the debriever after the debriefing.
  - Under each of 8 areas, PADI has four to eight elements for scoring the debriever. Using a 4-point scale, the debriefing experience is evaluated (1-4) based on the percentage completed by the debriever for each area.
  - PADI serves as basis for discussion between peer-evaluator and debriever

Structure and Organization of the Debriefing

- Sets up the debriefing environment before the simulation
- Adheres to the schedule for debriefing or adjusts the schedule as appropriate
- Allows time for dealing with the emotional aspects of the simulation
- Allows time for recap of simulation scenario
- Allows time for analysis
- Allows time for learners to connect knowledge to practice
- Allows time for learners to reflect in their actions and make independent interpretations of their performance
- Allows time for summary and conclusion
- Finishes any evaluative paperwork and forwards to appropriate parties

Debriever completed above elements at:

<table>
<thead>
<tr>
<th>Comments</th>
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<tbody>
<tr>
<td>&lt;25% level</td>
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Delphi Process

<table>
<thead>
<tr>
<th>PROCESS</th>
<th>TASK</th>
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<tbody>
<tr>
<td>Preliminary Activities</td>
<td>Elements for inclusion in instrument of faculty effectiveness in facilitating debriefing sessions were identified</td>
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<tr>
<td></td>
<td>Review and synthesis of the literature</td>
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<tr>
<td></td>
<td>Identification of performance attributes</td>
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<tr>
<td>Round 1</td>
<td>Elements to be assessed, behavioral criteria across levels of performance were reviewed</td>
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<tr>
<td></td>
<td>Inclusion / exclusion of elements and behavioral criteria were affirmed; Additional elements identified were included</td>
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<tr>
<td>Round 2</td>
<td>Summary of Round 1 was reviewed</td>
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<tr>
<td></td>
<td>Items to be included / omitted based on Round 1 feedback for elements and behavioral criteria were identified</td>
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<tr>
<td>Round 3</td>
<td>Summary of Round 2 was reviewed</td>
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<tr>
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<td>Remaining issues were discussed and consensus was established</td>
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Phase 2: Inter-rater Reliability

- Upon completion of the Delphi Rounds, the PADI’s inter-rater reliability was evaluated using Interclass correlation coefficients (ICC).
- To evaluate inter-rater reliability, three debriefing video vignettes were developed to illustrate different performance levels of a debriever’s debriefing proficiency. Using the PADI, the researchers viewed the videos and reached a consensus on rating the debriever.
- Five experts were identified by simulation and debriefing experience > 5 years and identified within their respective settings as expert debriefing practitioners. Clinical expertise: emergency nursing, nursing education, radiation oncology, neonatology, and medical education.
- The five experts received a half-day education session to learn how to use the PADI. Experts reviewed the debriefing video vignettes and completed the PADI independently. To simulate a live debriefing session, the experts reviewed each video without discussion between videos. After all three videos were completed; the researchers reviewed each video and provided the ‘real score’ and its rationale. Finally, the experts provided initial feedback on the tool.
- The inter-rater reliability for the average measures was ICC = .973, and for the single measure ICC = .818.

Results

- Initial version of the PADI has excellent inter-rater reliability.
- PADI may be useful:
  - to guide novice, experienced and expert debriefers in the debriefing process
  - to provide a peer-review of the debriefing process across healthcare disciplines.
- Faculty can use the PADI to:
  - self assess areas of debriefing on which they would explicitly like to receive feedback
  - participate in self and peer assessment that includes observation by a peer evaluator; observation is followed by a conversation which allows the peer evaluator to serve as a consultant to the benefit of the debriever’s professional development
  - triangulate their intended performance and outcomes
  - demonstrate ongoing quality improvement (regardless of experience level)

References


