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

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Background Information

- An essential part of the simulation experience is the debriefing, where most of the learning occurs (Arafah, Hansen & Nichols, 2010). A skilled debriefer 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 cost effective method to generate ideas and facilitate consensus among individuals who may be geographically distant (Polit & Beck, 2008).

Participants

- 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.

| Participant # | Round I | Round II | Round III |
|---------------|---------|----------|-----------|
| 1 | X | | |
| 2 | X | | |
| 3 | X | | |
| 4 | X | X | X |
| 5 | X | X | X |
| 6 | X | X | X |
| 7 | X | X | |
| 8 | | X | X |
| 9 | | X | X |
| 10 | | X | X |
| 11 | | X | X |
| 12 | | X | X |
| 13 | | X | |
| 14 | | X | |
| 15 | | | X |

PADI: Peer Assessment Debriefing Instrument

- **Peer Assessment Debriefing Instrument (PADI)** is a peer review tool with two main parts.
 - **Pre-Assessment of the Simulation Experience:** self-assessment of debriefer's own debriefing skills, completed by the debriefer and given to the peer-evaluator prior to the observation
 - provides general information about the simulation
 - allows the debriefer 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 debriefer after the debriefing.
- Under each of 8 areas, PADI has four to eight elements for scoring the debriefer. Using a 4-point scale, the debriefing experience is evaluated (1-4) based on the percentage completed by the debriefer for each area.
- PADI serves as basis for discussion between peer-evaluator and debriefer

Structure and Organization of the Debriefing

| | |
|---|--|
| <ul style="list-style-type: none"> ▪ 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 | <ul style="list-style-type: none"> ▪ 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 |
|---|--|

Debriefer completed above elements at:

| <25% level | 25-49% level | 50-74% level | >75% level | N/A |
|------------|--------------|--------------|------------|-----|
|------------|--------------|--------------|------------|-----|

Comments

Delphi Process

| PROCESS | TASK |
|------------------------|--|
| Preliminary Activities | <ul style="list-style-type: none"> • Elements for inclusion in instrument of faculty effectiveness in facilitating debriefing sessions were identified • Review and synthesis of the literature • Identification of performance attributes |
| Round 1 | <ul style="list-style-type: none"> • Elements to be assessed, behavioral criteria across levels of performance were reviewed • Inclusion / exclusion of elements and behavioral criteria were affirmed; Additional elements identified were included |
| Round 2 | <ul style="list-style-type: none"> • Summary of Round 1 was reviewed • Items to be included / omitted based on Round 1 feedback for elements and behavioral criteria were identified |
| Round 3 | <ul style="list-style-type: none"> • Summary of Round 2 was reviewed • Remaining issues were discussed and consensus was established |

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 debriefer's debriefing proficiency. Using the PADI, the researchers viewed the videos and reached a consensus on rating the debriefer.
- 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 session videos 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 debriefer's professional development
 - triangulate their intended performance and outcomes
 - demonstrate ongoing quality improvement (regardless of experience level)

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