Cureus

A Focus on the Qualitative Aspects of Cultural Prototypes and Differences In Simulation Debriefing

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How to cite this poster
Lakissian Z, Sharara-Chami R, Ulmer F, et al. (2017) A Focus on the Qualitative Aspects of Cultural Prototypes and Differences In Simulation Debriefing. Cureus 9(6): e.

Abstract

Introduction: Cultural influences have a significant effect on learning styles (1) and on interactions amongst clinicians (1-2).The infusion of cultural elements into the debriefing process helps simulation-based education be tailored to individual learners' needs (3). Hofstede's culture analysis permits a quantitative comparison of cultural elements. (4).

Research Question: we aim to explore the connection between Hofstede's Power Distance Index (PDI) and behavior patterns during simulation debriefing relative to cultural origin. Specifically:
1) identify debriefing prototypes by mapping cultural, societal and regional elements of interaction
2) elucidate how interactions between instructors and participants are linked to their cultural backgrounds

Methods: Six hypotheses were formulated based on culture-relevant debriefing topics: (H1) Talking time, (H2) Interaction patterns, (H3) Style of interaction, (H4) Initiation of discussion, (H5) Content of the debriefing and, (H6) Difficulty discussing non-technical aspects. An interview-guiding questionnaire was designed consisting of demographic, quantitative and qualitative questions.

Results and Discussion: 68 interviews were conducted in 26 countries with PDIs ranging from 11 (minimal hierarchy) to 99 (significant hierarchy); 65% were from low PDI countries (PDI<50).

Quantitative Analysis: Correlation analysis was conducted based on Kendall's tau. As hypothesized: (H1) participant talking time during debriefings was significantly less in countries with high PDI (-.234, p .022); (H2) the higher the PDI the less participants interact amongst themselves (-.306, p .004); (H3) leading questions dominated the discussion (.283 p .005) in high PDI countries; (H4) interactions were initiated by debriefers in high PDI countries (.238, p .022); (H5) the debriefing content in high PDI countries conveyed more technical rather than non-technical knowledge (-.374 p .000); (H6) speaking up (.354 p .002), closed loop communication (.507 p .000), system challenges (.381 p .001) and situational awareness (.247 p

.028) were significantly more difficult to discuss in high PDI settings.

Qualitative Analysis: Participants were asked 1) to explain why certain non-technical skills were more difficult to discuss and 2) what other culture-relevant debriefing aspects they would like to elaborate on. Responses ranged from a few words to paragraphs and were analyzed qualitatively using content thematic analysis. Meaning unites were defined and categorized and two domains were identified; "Hierarchy Rules (n)" and "Culture Rules (v)" . Within these domains, various themes and subthemes emerged. Multiple relationships and subtle nuances were revealed amongst these themes/subthemes and the original domains such as professional hierarchy and expectations of knowledge and gender imbalance; communication barriers and willingness to volunteer lack of knowledge and, fear of judgment from peers and colleagues.

65