The Effect of Faculty Training and Personality Characteristics on High Stakes Assessment of Simulation Performance

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Conflicts of Interest and Disclosures:

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Session Objectives:

- Describe the need for evaluator training and development of shared mental models for high stakes assessment of student performance in simulation
- Describe an experimental study design that includes a training intervention developed to prepare faculty for performance evaluation
- Discuss results of the study and implications for nursing education programs and future research
Background for Study
High-Stakes Assessment in Simulation
High Stakes Assessment in Simulation

- Simulation is evolving from a teaching/learning strategy used for formative assessment to.....
- A summative and high stakes assessment method
  - NCSBN study (Hayden, Smiley, Alexander, Kardong-Edgren, & Jeffries, 2014)
  - NLN study (Kardong-Edgren, Oermann, Rizzolo, & Odom-Maryon, 2017; Rizzolo, Kardong-Edgren, Oermann, Jeffries, 2015)
- How do we ensure validity and reliability in high stakes assessment in simulation?
- How do we ensure fair and equitable assessment?
High stakes assessment: “an evaluation process associated with a simulation activity that has a major academic, educational, or employment consequence . . .” (Meakim et al., 2013, p. S7).
Research Study Design
Experimental, Randomized, Controlled Study

- What is the effect of (a) a training intervention and (b) faculty personality characteristics on faculty ability to achieve intra/inter-rater reliability when evaluating student performance during simulation?
- Multi-methods: IRR, qualitative survey
- Conceptual Framework
- Nationwide recruitment of 102 pre-licensure RN faculty
- Control and Intervention Groups
Methods

Basic Orientation

Advanced Evaluator Training Intervention
- Evaluation of training videos
- 2 Webinars
- Remediation, if needed

Experimental Procedure
- 1st rating of 3 video performances of varying quality
- One month pause
- 2nd rating of same 3 video performances
- Completed StrengthsFinder Survey as final study activity
Data Collection Instruments

- Demographic Survey
- Creighton Competency Evaluation Instrument (CCEI)
- 10 video-recorded student performance videos
- Clifton StrengthsFinder Inventory
- StrengthsFinder Survey
Findings/Results
Participants

- 75 of the 102 participants completed the study
- Retained equal numbers in Control (37) and Intervention (38) groups
- No statistically significant differences between the groups in demographic characteristics such as age, years of teaching, years of teaching with simulation
## Inter-rater Reliability: Total Score

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**ICC**
- 0.75-1.0: excellent
- 0.60-0.74: good
- 0.40-0.59: fair
- <0.40: poor

**Kappa**
- >0.80: high
- 0.60-0.79: substantial
- 0.40-0.59: moderate
- <0.40: poor to fair
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Most participants thought the StrengthsFinder results were accurate.

Participants explained how knowing their strengths could help with the evaluation process.

“As I learn more about myself, I feel I can provide more consistent evaluation.”

Participants reflected on how their strengths may make it more difficult to evaluate students fairly.

Too strict, too lenient, don’t like conflict, difficulty being consistent.
Study Conclusions
Conclusions

- A structured training method that included a model evaluation and practice evaluations contributed to higher inter and intra rater reliability.
- Providing participants with a video recorded “model” evaluation was a useful method to initiate a SMM in a diverse group of evaluators.
- Live discussions allowed participants to express their values and beliefs about clinical competence in attempts to reach consensus.
- Participants who were initially resistant agreed, through continued discussion, to adopt a reasonable, if not perfect, SMM.
- The accuracy of video performance evaluation was highly dependent on the quality of audio and video capture and the structural limitations and variations of simulation labs. This is of particular relevance if programs adopt high stakes assessment.
Study Implications

Education and Research
Implications for Education

- Communication and sharing of individual beliefs and values about competency must occur among team members.
- An intentional process must be planned that allows time for consensus to occur.
- Evaluators must be trained in the use of a valid evaluation tool.
- The process should include practice evaluations using live or high-quality video recorded performances of differing competency levels.
Implications for Research

- Additional studies are needed to test and confirm the effects of training methods on reliability.
- Funding sources are needed to support large scale experimental studies.
- The effect of faculty personality characteristics on student performance evaluation requires more study.
- Studies are needed to examine evaluator decision-making using checklists versus global rating scores.
Questions?


References

