Assessing the Reliability of Data from the Team Behavior Assessment Tool for Entry Level Nurses (TBAT-ELN) and the Congruence Between a Quantitative and Qualitative Assessment Scale

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Goals and objectives of study: The purposes of this study were to develop and utilize video recorded teamwork simulations for instrument testing, assess the reliability of data produced using the Team Behavior Assessment Tool for Entry Level Nurses (TBAT-ELN), and investigate the congruence between the quantitative and qualitative assessment scales.

The research questions were:

1.   What is the reliability and validity of data produced using the TBAT-ELN to assess an entry level registered nurse's teamwork skills in a simulated environment?

2.   Is there a difference in the assessment data when raters use the TBAT-ELN with a frequency scale compared with using the TBAT-ELN and a quality assessment scale?

<u>**Abstract:**</u>

Background: The need for collaborative, interprofessional healthcare has never been greater, and the ability to work effectively in interprofessional teams has been identified as a core educational competency for all healthcare professionals (Interprofessional Education Collaborative, 2016). However, significant barriers exist to evaluating nursing students' and entry level nurses' teamwork skills. Developing high quality evaluation instruments that produce valid and reliable data can be difficult and time-consuming. The Team Behavior Assessment Tool for Entry Level Nurses (TBAT-ELN) is an instrument designed by the Principal Investigator to assess teamwork skills in a senior nursing student or new graduate registered nurse within a simulated environment. The pursuit of meaningful ways to evaluate participant performance during simulation activities is ongoing in nursing (Adamson, Kardong-Edgren, & Willhaus, 2013; Yuan, Williams, Fang, & Ye, 2012), medicine (Kogan, Holmboe, & Hauer, 2009), and pharmacy (Bray, Schwartz, Odegard, Hammer, & Seybert, 2011).

The TBAT-ELN is an 18 items tool that identifies essential teamwork skills expected in an entry level nurse. This tool differs from other teamwork assessment instruments as it focuses on the individual performance of an entry-level nurse within a team rather than a team's performance. However, the reliability of data from the TBAT-ELN required further investigation.

Sample: The sample include 41 nurse educators from clinical and academic environments, reflecting nurse educators who might use the instrument in nursing education and new graduate residency programs.

Method: Scripted simulation videos portraying three levels of student performance were developed. Nurse educators assessed the student's performance in each video utilizing the TBAT-ELN with both a frequency scale and a qualitative scale.

Results: Validity evidence based on relations to other variables or convergent validity was confirmed and the Intraclass Correlation Coefficient for both versions of the TBAT-ELN reflected very good inter-rater reliability across all three scenarios.

Conclusion: The TBAT-ELN, with either a frequency score or qualitative score, is a meaningful and helpful way to evaluate the teamwork skills of nursing students and new graduate nurses.

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