

A Review of Instrumentation in Nursing Student Clinical Evaluation

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Clinical evaluation is key to ensuring nursing students' clinical competence, application of knowledge, and critical thinking, all of which are important to patient safety and the provision of quality nursing care. Methods used by faculty to perform clinical evaluation vary widely from subjective opinion to use of evaluation tools or instruments with established reliability and validity. To date there have been no comprehensive reviews of clinical evaluation instruments, including their reliability, validity, and other psychometric characteristics. Such a review would prove an invaluable resource for nursing faculty to aid in the selection and use of reliable and valid methods of clinical evaluation.

Across different types of programs and educational levels (undergraduate, RN-BSN, graduate), there is no standardized method or instrument for clinical evaluation, and many clinical evaluation instruments used are created by faculty and lack established reliability and validity. Collins and Callahan (2014) note the lack of standardized methods of clinical evaluation for nurse anesthesia students, which brings into question the validity of methods used and the ability to identify students at risk for program attrition. This lack of standardization is concerning, since all diploma, associate degree and bachelor's prepared nursing students take a standardized NCLEX for licensure. Also, many nurses take a nationally standardized test for advanced practice licensure in their area of clinical expertise. To inform nursing science related to this issue, a synthesis of the current research literature was conducted to examine outcomes of the psychometric analyses of the clinical evaluation instruments used to date.

A research synthesis was conducted on the topic of clinical evaluation of nursing students using the method described by Cooper (2010). An electronic search of all relevant databases was conducted through 2015, and a hand search of table of contents of six major nursing research and education journals was conducted for the years 2005-2015. These searches resulted in 177 research articles and dissertations on clinical evaluation of nursing students. The included articles were sorted according to topic, and a total of 16 were included in the category of instrumentation, defined as research conducting psychometric testing of an instrument, with student data not reported as a part of the study findings.

The publication dates of the instrumentation studies ranged from 1981-2014. All of the studies were published in nursing journals and used quantitative methodology. Six of the studies were conducted in the United States; three in the United Kingdom, and the remaining seven studies were conducted in Australia, Canada, Egypt, England, Scotland, Taiwan, and Turkey. A total of 13 studies were conducted with undergraduate nursing students, two with graduate students, and one with both levels. Six of the studies were funded, with one receiving intramural university funding and the other five receiving external funding.

A variety of statistical analyses were used to determine reliability, validity, and/or factor analysis of investigator developed and established instruments. Most of the studies analyzed instruments that address student competence or clinical performance. Two of the studies evaluated the reliability and validity of Objective Structured Clinical Examinations (OSCE) (Selim et al., 2012; Walsh, et al., 2010). Also included were instruments that measured cultural competence (Jeffreys & Dogan, 2013) and interpersonal communication (Klakovich & Cruz, 2006).

Additional analyses of the psychometric methods and findings of these studies is ongoing. This presentation will provide an overview of the studies, including summaries of the instruments, samples, and settings used, as well as a critical evaluation of the reported psychometric properties of the instruments in terms of rigor, validity, reliability, and factors. In addition, implications for cross-cultural or international use and validation of instruments will be addressed. These findings may prove useful for effective and equitable evaluation of students from diverse cultures and ethnicities.

An integral step to the transformation of nursing education is the use of evidence-based evaluation methods with sound psychometric properties. This includes the use of clinical evaluation instruments and methods with established reliability and validity, and those with cross-cultural relevance to serve students from diverse backgrounds and experiences. Increased knowledge about the use of clinical evaluation methods with sound psychometric properties may lead to the advancement of nursing education through standardization of clinical evaluation.

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Title:

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References:

Collins, S. & Callahan, M. F. (2014). A call for change: Clinical evaluation of student registered nurse anesthetists. *AANA Journal*, 82, 65-72. Cooper, H. (2010). *Research synthesis and meta-analysis: A step-by-step approach* (4th ed.). Los Angeles: Sage. Jeffreys, M. R., & Dogan, E. (2013). Evaluating cultural competence in the clinical practicum. *Nursing Education Perspectives*, 34, 88-94. Klakovich, M. D., & Cruz, F. A. D. (2006). Validating the interpersonal communication assessment scale. *Journal of Professional Nursing*, 22, 60-67. Selim, A. A., Ramadan, F. H., El-Gueneidy, M. M., & Gaafer, M. M. (2012). Using objective structured clinical examination (OSCE) in undergraduate psychiatric nursing education: Is it reliable and valid? *Nurse Education Today*, 32, 283-288. Walsh, M., Bailey, P. H., Mossey, S., & Koren, I. (2010). The novice objective structured clinical evaluation tool: Psychometric testing. *Journal of Advanced Nursing*, 66, 2807-2818.

Abstract Summary:

This presentation will provide a synthesis of the findings of 16 research studies that conducted psychometric testing on a variety of clinical evaluation instruments.

Learning Activity:

LEARNING OBJECTIVES	EXPANDED CONTENT OUTLINE
Identify reliable and valid instruments for clinical evaluation.	Summarize studies conducting psychometric testing of clinical evaluation instruments. Review the instrument topics, samples, and settings in which they were evaluated.
Distinguish clinical evaluation instruments based on rigor and strength of psychometric properties for use in clinical courses.	Describe the psychometric properties of instruments. Evaluate the strength of findings related to instrument reliability, validity, and relevant factors.
Apply selected clinical evaluation instruments to appropriate clinical settings or experiences.	Categorize the instruments related to evaluation content, purpose, setting, or level of student. Discuss application of instruments to relevant clinical experiences.