

PSYCHOMETRIC PROPERTIES OF A CLINICAL TEACHING EFFECTIVENESS
INSTRUMENT USED AT THE CLEVELAND CLINIC FOUNDATION (176 PP.)

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The study explored evidence to assess the validity and reliability of scores obtained with a web-based Clinical Teaching Effectiveness (CTE) instrument used at the Cleveland Clinic Foundation (CCF) for summative faculty assessment purposes.

Participants include all medical students and residents ($n = 1,354$) who assessed their clinical teachers ($n = 872$) using the web-based version of the CTE instrument during the 2003-2004 academic year.

Different evidence was collected to assess the validity of clinical teachers' CTE scores. Descriptive statistics were used to assess missing data, straight-line responses, and item-level difficulty for different learner groups (medical students or residents). Confirmatory and exploratory factor analyses were used to determine the internal structure of the CTE instrument collected from learner groups. Correlation coefficients were used to explore if a global item measured the same domain assessed by the fifteen-item CTE instrument.

Two different approaches were used to assess score reliability. First, Cronbach's alpha was estimated for CTE scores submitted from different learners. For the second approach, generalizability theory methods were conducted using various G- and D-studies designs (e.g., Groups:Raters x Teachers x Items and Raters:Teachers x Items) to determine the requisite number of raters and items for reliable CTE scores.

Several conclusions were drawn. First, the examination of response processes provided insufficient evidence to support the use of the CTE instrument as a summative performance measure for all physicians at the CCF. Second, the one-factor structure for CTE scores provided evidence that residents perceived the teaching behaviors listed on the CTE instrument as one dimension of teaching effectiveness. Third, high validity coefficients ($r > .88$) suggest that the CTE instrument measured similar components of teaching effectiveness as a global item added to the instrument in 2003. Finally, generalizability theory approaches indicated that scores obtained with the web-based version of the CTE instrument were not as reliable as reported for the paper-based CTE instrument. Research implications follow.