Abstract
Background: Validity evidence based on the internal structure of an assessment is one of the five forms of validity evidence stipulated in the Standards for Educational and Psychological Testing of the American Educational Research Association, American Psychological Association, and National Council on Measurement in Education. In this paper, we describe the concepts underlying internal structure and the statistical methods for gathering and analyzing internal structure. Method: An in-depth description of the traditional and modern techniques for evaluating the internal structure of an assessment. Results: Validity evidence based on the internal structure of an assessment is necessary for building a validity argument to support the use of a test for a particular purpose. Conclusions: The methods described in this paper provide practitioners with a variety of tools for assessing dimensionality, measurement invariance and reliability for an educational test or other types of assessment.

Keywords
validity, standards, dimensionality, measurement invariance, reliability