

Online Supplementary Appendix 2: Article review matrix

Rate the articles on each of the three criteria using the following scale in the accompanying matrix:

Meets criteria (Y)

Possibly meets criteria (?)

Does not meet criteria (N)

Inclusion/exclusion criteria:

First, the subjects of the article must be clinical investigators or clinical investigators in training. Disciplines represented can include medicine, public health, nursing, pharmacy, dentistry, and other related fields. Also, subjects must be either student or doctoral-level researchers. Exclude studies of researchers from non-clinical disciplines and other research roles (e.g., technicians, CRPs).

Second, articles should focus on research-based skills. Include articles that describe assessments that are exclusively or mostly focused on the development of research skills. Exclude articles that examine assessment designed to promote the acquisition of specialty-specific medical knowledge (such as knowledge of barriers to cancer prevention) or basic research skills (such as laboratory techniques).

Third, research-based competencies must be assessed in some way (competencies can be called skills, abilities, mastery, knowledge). This can take the form of self-report surveys, interviews, and structured exams (there may be other possibilities). Exclude any articles that merely propose competency frameworks without some form of empirical validation of said frameworks.

If an article meets ALL 3 criteria, indicate "Y" in the final column. Otherwise, put an "N" in that column.

Also, please comment on the validity of the assessments used in each article.

Article review matrix

[illegible]