

# LEADING CHANGE TOOLKIT™

TO HELP CHANGE AGENTS AND  
CHANGE TEAMS MAKE LASTING  
IMPROVEMENTS IN HEALTH CARE

## Evidence Based Practice Competence in Nursing Students

### Pragmatic Testing and Content Validity Data

#### *Summary of Pragmatic properties*

The EBP-COQ tool had an overall **objective pragmatic score** of **17** out of **20**. According to this objective pragmatic assessment, the EBP-COQ strengths include being available in the public domain, having acceptable language, and not requiring training for administration having instructions for interpreting scores, and having less than 50 items.

Based on three RNAO stakeholders, the EBP-COQ tool was rated **3.3** out of **4** for **likelihood to use**. The EBP-COQ tool has an overall **stakeholder facing assessments** score of **18.1** out of **24**.

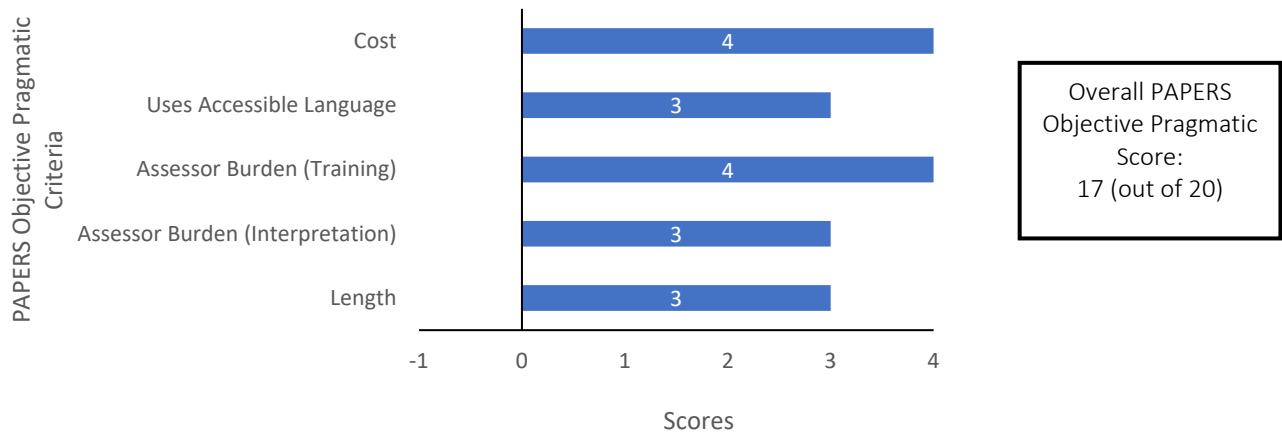
#### **Tool Pragmatic Properties**

Tools were assessed for pragmatic properties with the PAPERS tool (Stanick et al. 2019); a validated tool for measuring a tool's acceptability, ease of use, appropriateness, and usefulness. Objective pragmatic properties were assessed by two research assistants independently and with consensus for each tool. Stakeholder facing pragmatic properties were assessed independently by at least two stakeholders (e.g., champions) for each tool. A mean score was calculated from participants' responses for each of the stakeholder facing PAPERS survey questions.

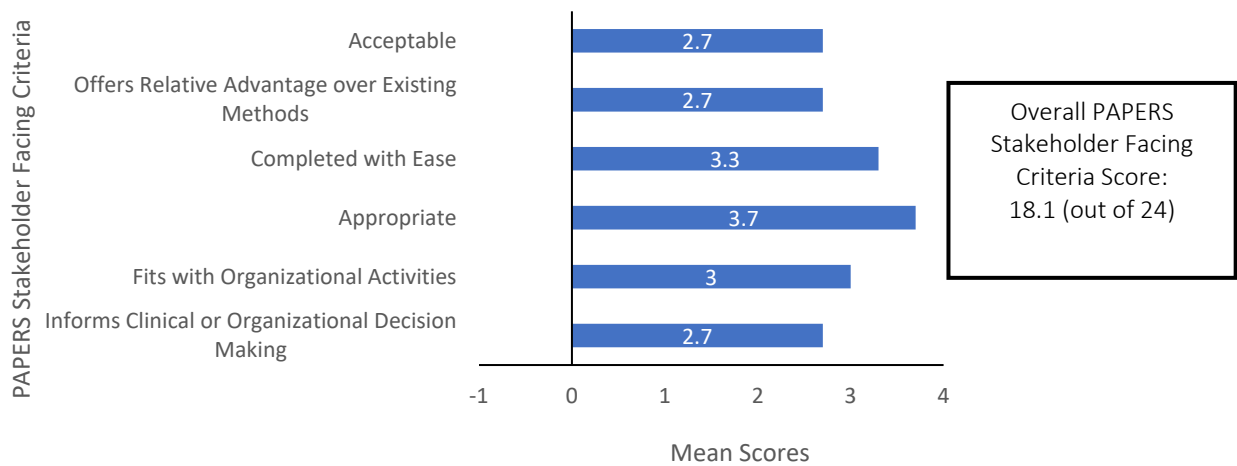
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*PAPERS Objective Pragmatic Criteria - Scoring details below*



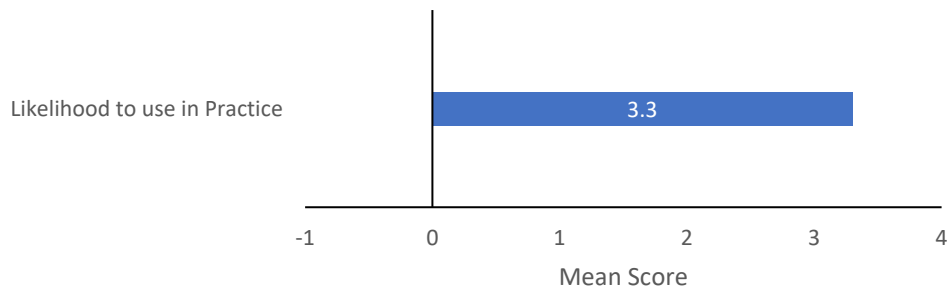
*PAPER Stakeholder Facing Criteria (n = 3 stakeholders) - Scoring details below*



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*Likelihood to Use the Tool in Practice (n = 5 stakeholders) - Scoring details below*



## Content Validity

### *Summary of Content Validity*

According to our assessment using an adapted version of a checklist by Mokkink et al. (2010), the EBP-COQ tool has evidence of content validity.

Content validity refers to degree to which the content of the tool is an adequate reflection of the construct being measured. In the case of the Evidence-based Practice Competence Questionnaire (EBP-COQ), this refers to the extent that the tool assess barriers/facilitators to knowledge use and monitor knowledge use according to following categories:

- Attitude in Evidence Based Practice (EBP)
- Knowledge in EBP
- Skills in EBP

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General Requirements	Yes	No
1. Was there an assessment of whether all items refer aspects of the construct to be measured?	x	
2. Was there an assessment of whether all items are relevant for the study population? (e.g., age, gender, disease characteristics, country, setting)	x	
3. Was there an assessment of whether all items are relevant for the purpose of the measurement instrument? (discriminative, evaluative, and/or predictive)	x	
4. Was there an assessment of whether all items together comprehensively reflect the construct to be measured?		x

Adapted from: Mokkink, L.B., Terwee, C.B., Knol, D.L., Stratford, P.W., Alonso, J., Patrick, D.L., Bouter, L.M. and De Vet, H.C. (2010). The COSMIN checklist for evaluating the methodological quality of studies on measurement properties: a clarification of its content. *BMC medical research methodology*, 10(1), 1-8.

According to our assessment using an adapted version of a checklist by Mokkink et al. (2010), the EBP-COQ tool has evidence of content validity.

#### Content Validity Requirement 1:

- The EBP-COQ tool was developed according to knowledge from existing instruments, focus groups, and a panel of 6 individuals experienced in evidence-based practice (EBP) (no information provided on panel composition).
- Item selection was carried out via panel of experts (no information on panel). Items had to achieve 75% agreement to be included (based on categorizing them into one of three constructs, attitude, knowledge, and skill).

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## Content Validity Requirement 2:

- Two focus groups were carried out to identify relevant aspects of EBP for nursing students (focus groups were made up of nursing students who have and have not studied EBP). Further, comprehension of items and feasibility of scale was assessed in undergraduate students (target population of future use).

## Content Validity Requirement 3:

- The expert panel rated the relevance of each item in measuring each of the categories of the EBP-COQ (knowledge, attitude, and skills in EBP); these categories refer to dimensions of competencies in EBP. Hence, we can infer that the EB-COQ can be used to evaluate nursing students' competencies in EBP as claimed by the authors.

## Content Validity Requirement 4:

- It is not clear if the authors explicitly assessed if all items together comprehensively reflect the evidence-based practice competency in nursing students.

## Limitations:

In terms of limitations, the composition of the panel experts was not clarified.

## **References**

- Mokkink, L.B., Terwee, C.B., Knol, D.L., Stratford, P.W., Alonso, J., Patrick, D.L., Bouter, L.M. and De Vet, H.C. (2010). The COSMIN checklist for evaluating the methodological quality of studies on measurement properties: a clarification of its content. *BMC medical research methodology*, 10(1), 1-8.
- Stanick, C. F., Halko, H. M., Nolen, E. A., Powell, B. J., Dorsey, C. N., Mettert, K. D., Weiner, B. J., Barwick, M., Wolfenden, L., Damschroder, L. J., & Lewis, C. C. (2019, Nov 20). Pragmatic measures for implementation research: development of the Psychometric and Pragmatic Evidence Rating Scale (PAPERS). *Translational Behavioral Medicine*. <https://doi.org/10.1093/tbm/ibz164>
- Ruzafa-Martinez, M., Lopez-Iborra, L., Moreno-Casbas, T., & Madrigal-Torres, M. (2013). Development and validation of the competence in evidence based practice questionnaire (EBP-COQ) among nursing students. *BMC Medical Education*, 13, 19. <https://doi.org/10.1186/1472-6920-13-19>