



## Context Assessment Index (CAI)

### Pragmatic Testing and Content Validity Data

#### *Summary of Pragmatic properties*

The CAI tool had an overall **objective pragmatic score** of **16** out of **20**. According to this objective pragmatic assessment, the CAI strengths include being available in the public domain, having acceptable language, and not requiring training for administration, having a guide for interpreting results, and having fewer than 50 items.

Based on three RNAO stakeholders, the CAI tool was rated **2** out of **4** for **likelihood to use**. The CAI tool has an overall **stakeholder facing assessments** score of **18.5** out of **24**.

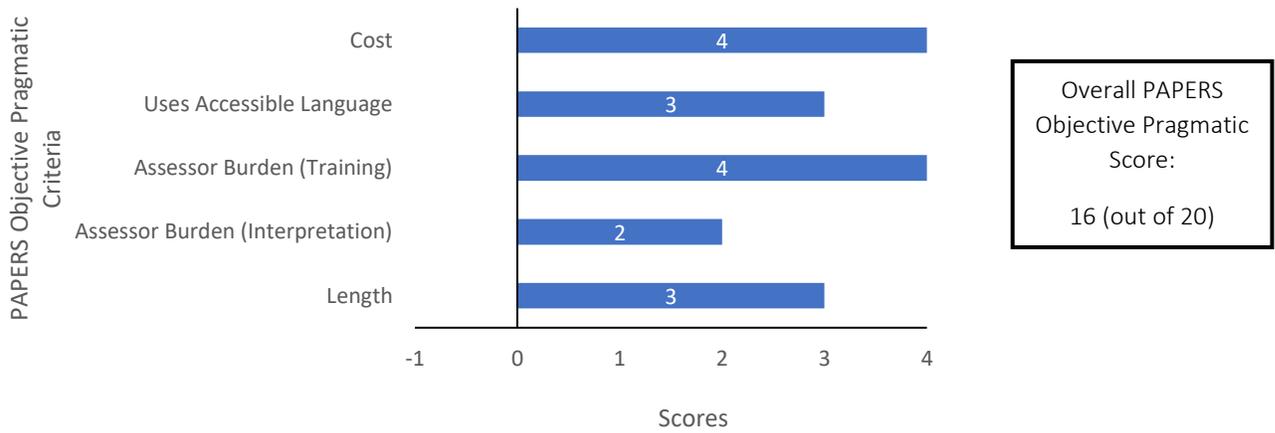
#### **Tool Pragmatic Properties**

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.

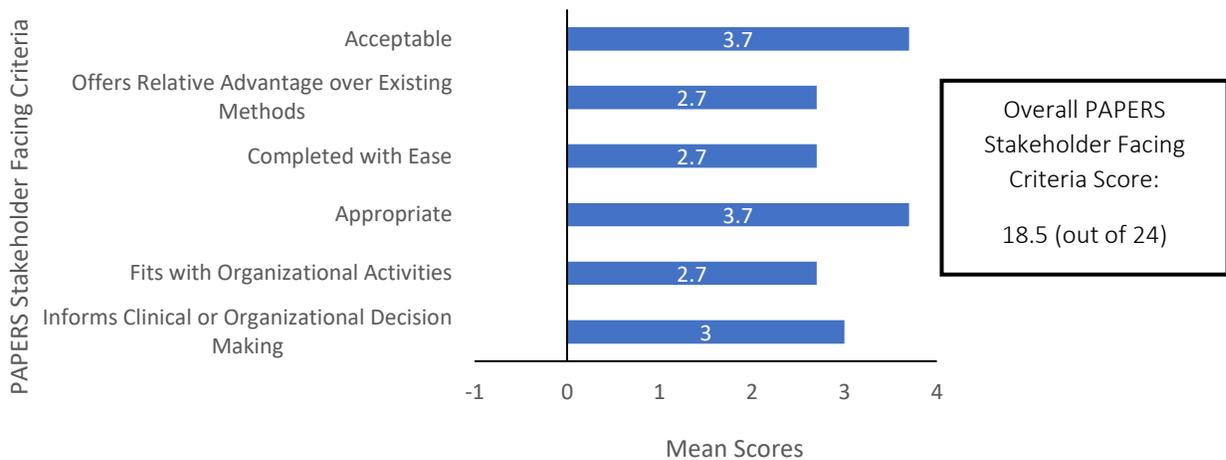
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## PAPERS Objective Pragmatic Criteria - Scoring details



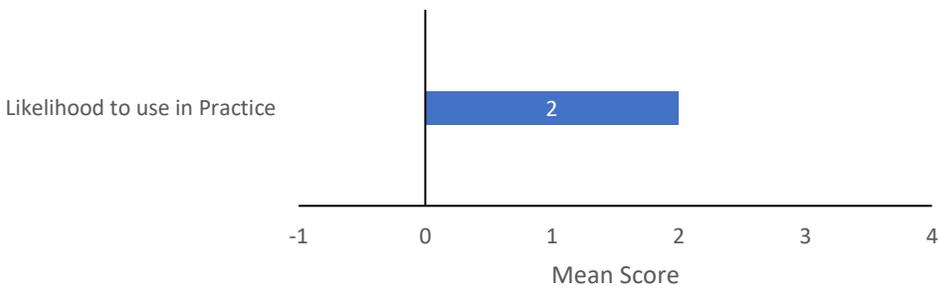
## PAPERS Stakeholder Facing Criteria (n = 3 stakeholders) - Scoring details.





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*Likelihood to Use the Tool in Practice (n = 3 stakeholders).*



## Content Validity

### *Summary of Content Validity*

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

Content validity refers to the degree to which the content of the tool is an adequate reflection of the construct being measured. In the case of the CAI, this refers to the extent that individuals can use the CAI tool to assess barriers/facilitators to knowledge use and monitor knowledge use according to the following elements:

- Culture (16 items)
- Leadership (7 items)
- Evaluation (14 items)

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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.

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### Content Validity Requirement 1:

- The relevance of each item in measuring each of the CAI constructs (i.e., culture, leadership, and evaluation) were assessed by 10 continence nurse specialists (8 of whom are recognized experts in practice development) for their clarity and specificity (McCormack et al., 2009).

### Content Validity Requirement 2:

- Following the face validity/content validity assessments by content experts, the tool developers tested the CAI tool on a large sample of registered nurses ( $n = 915$ ); only items with factor loadings of 0.4 or greater were considered relevant; the set of items resulting from this assessment were then distributed to an expert panel of seven individuals to garner agreement on the construct's titles and items; redundant factors/items were removed based on the expert panel advice (McCormack et al., 2009).



Content Validity Requirement 3:

- The tool developers of the CAI performed phone interviews with 20 nurse managers to determine that the CAI is relevant in evaluating context in clinical practice (McCormack et al., 2009).

Content Validity Requirement 4:

- Comprehensiveness of the CAI tool in measuring elements of health care context and the readiness of this context to adopt change was assessed by 10 continence nurse specialists (8 of whom are recognized experts in practice development) (McCormack et al., 2009).

Limitations:

- Based on our assessment, we cannot locate any important flaws in the design or methods of the development study.

**References**

- McCormack, B., McCarthy, G., Wright, J., Slater, P., & Coffey, A. (2009). Development and testing of the Context Assessment Index (CAI). *Worldviews on Evidence-Based Nursing*, 6(1), 27–35. <https://doi.org/10.1111/j.1741-6787.2008.00130>.
- 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>