

LEADING CHANGE TOOLKIT™

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

Implementation Climate Scale (ICS)

Pragmatic Testing and Content Validity Data

Summary of Pragmatic properties

The ICS had an overall **objective pragmatic score** of **16** out of **20**. According to this objective pragmatic assessment, the ICS' strengths include being available in the public domain, having acceptable language, not requiring training for administration, the availability of a scoring guide, and being short in length.

Based on two RNAO stakeholders, the ICS was rated **1.5** out of **4** for **likelihood to use**. The ICS has an overall **stakeholder facing assessments** score of **17.5** out of **24**.

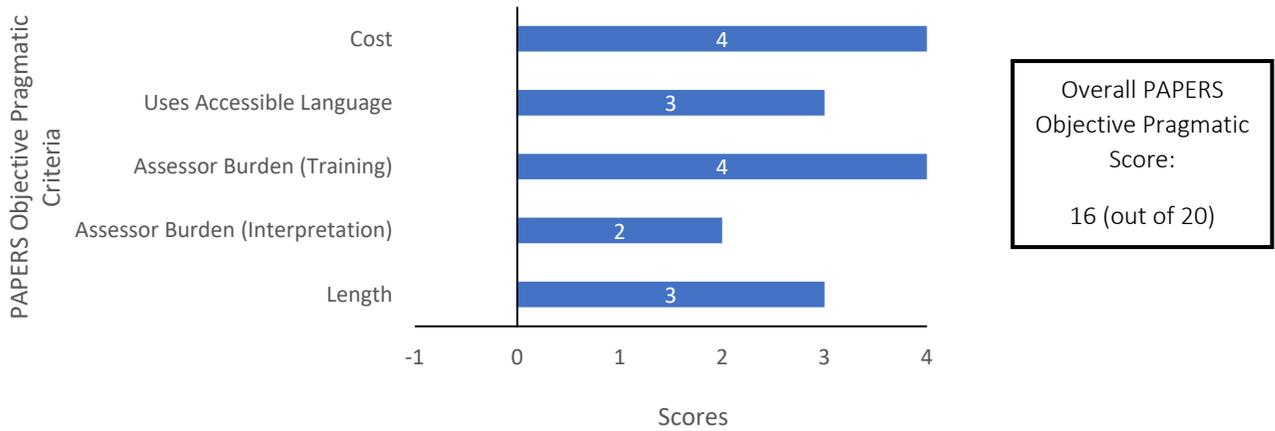
Tool Pragmatic Properties

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.

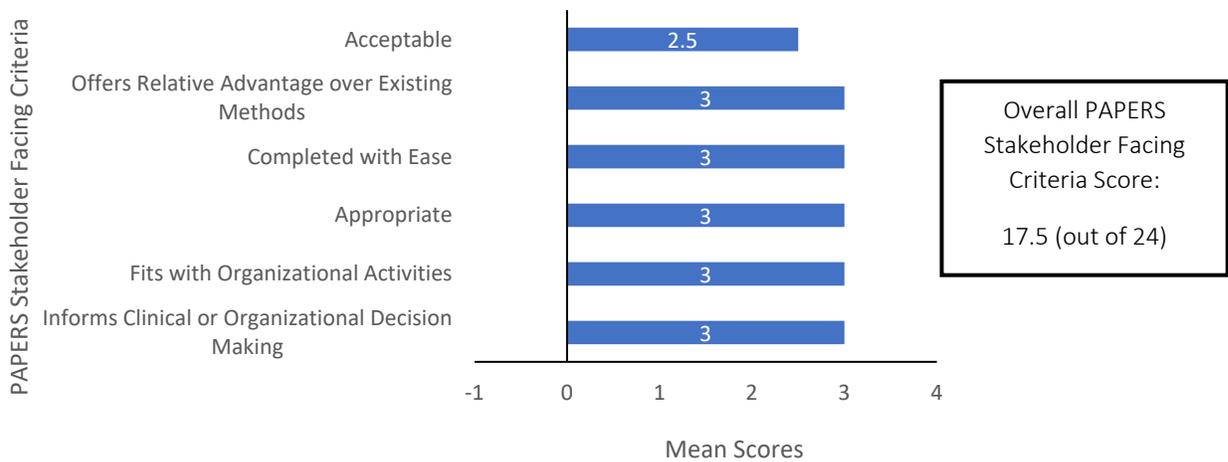
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PAPERS Objective Pragmatic Criteria - Scoring details below



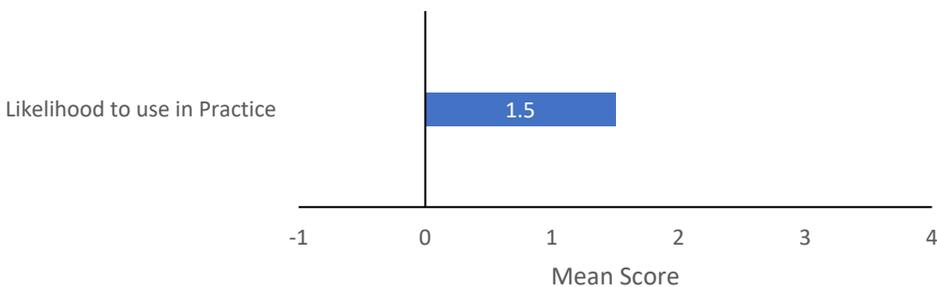
PAPERS Stakeholder Facing Criteria (n = 2 stakeholders - Scoring details below)



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Likelihood to Use the Tool in Practice (n = 2 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 ICS 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 Implementation Climate Scale (ICS), this refers to the extent that knowledge users can use the ICS to assess barriers/facilitators to knowledge use and monitor knowledge use by assessing the following components of context:

- Focus on EBP
- Educational support for EBP
- Recognition for EBP
- Rewards for EBP
- Selection for EBP
- Selection for openness

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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:

- Multitude expert and stakeholder involvement occurred during the development of the ICS (Ehrhart et al, 2014):
 - The tool developers constructed the possible dimensions and items in consultation with subject matter experts (a mental health program leader, an EBP trainer, and four mental health program managers).
 - Survey dimensions and items were further tested for face validity and content validity by four mental health program managers.
 - The finalized survey was re-evaluated by subject matter expert consultants.

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Content Validity Requirement 2:

- The ICS was tested for validity and reliability by 630 direct service providers from 128 workgroups or teams across two American states (California and Pennsylvania). Knowledge user testing and the previously described subject expert consultations is congruent with the authors intent for the ICS to be understandable and usable by both researchers and knowledge users (Ehrhart et al, 2014).

Content Validity Requirement 3:

- The ICS overall score was correlated with similar forms of climate (service climate), or other concepts related to the broader organizational climate (e.g., performance feedback and autonomy) (Ehrhart et al, 2014).

Content Validity Requirement 4:

- The tool developers reported that the ICS, with its six dimensions produces a model with a good fit. Even though the “Rewards of EBP” did not correlate well with the other dimensions, the tool developers stated that the practical importance of having this dimension outweighs the results of statistical results (Ehrhart et al, 2014).

Limitations:

- The tool developers stated that a significant limitation in their study was that there were inconsistent procedures for data collection between the sample from California and the sample from Pennsylvania (Ehrhart et al, 2014).

References

Ehrhart, M.G., Aarons, G.A. & Farahnak, L.R. (2014). Assessing the organizational context for EBP implementation: the development and validity testing of the Implementation Climate Scale (ICS). *Implementation Science*, 9, 157. <https://doi.org/10.1186/s13012-014-0157-1>

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