

LEADING CHANGE TOOLKIT™

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

Evidence-Based Practice Attitude Scale-50

Pragmatic Testing and Content Validity Data

Summary of Pragmatic properties

The EBPAS-50 had an overall **objective pragmatic score** of **15** out of **20**. According to this objective pragmatic assessment, the EBPAS-50's strengths include being available in the public domain, having acceptable language, and not requiring training for administration. The EBPAS-50 lost scores because interpretation of the total score is not clearly outlined, and the length of the tool is 50 items.

Based on two RNAO stakeholders, the EBPAS-50 was rated **1.5** out of **4** for **likelihood to use**. The EBPAS-50 has an overall **stakeholder facing assessments** score of **14** out of **24**.

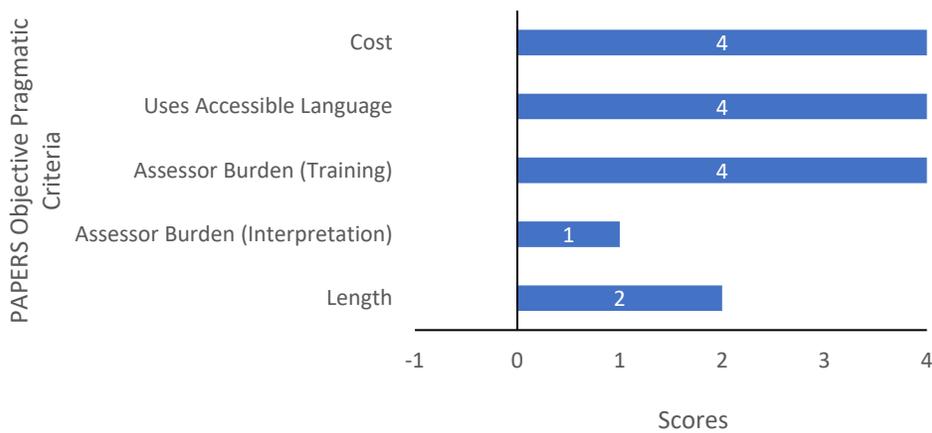
Tool Pragmatic Properties

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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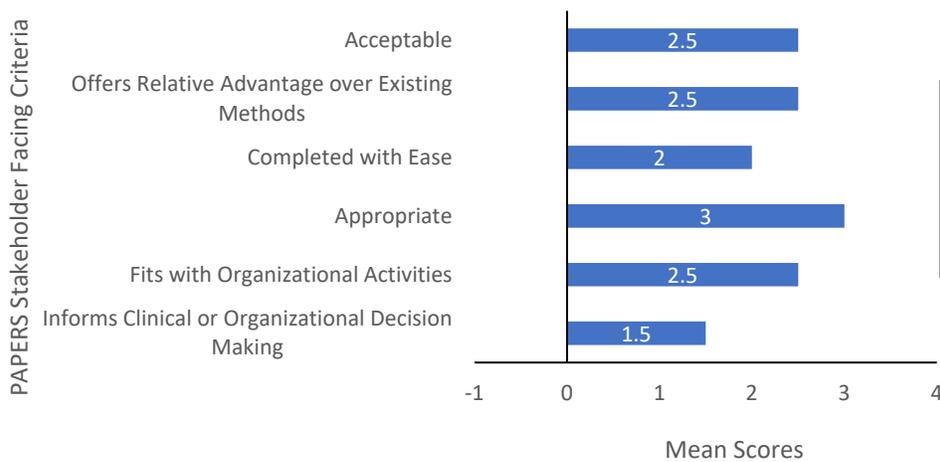
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PAPERS Objective Pragmatic Criteria - Scoring details below



Overall PAPERs Objective Pragmatic Score: 15 (out of 20)

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

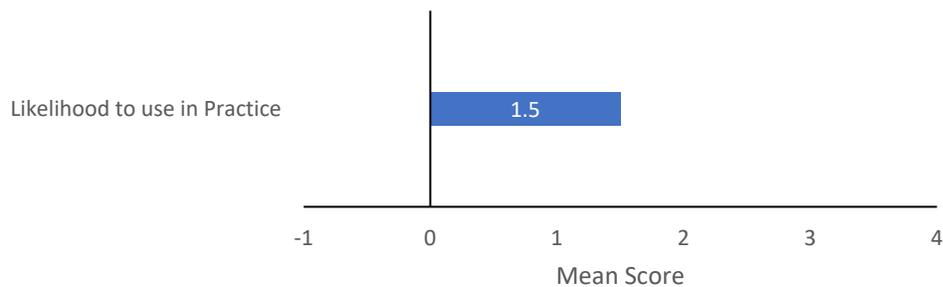


Overall PAPERs Stakeholder Facing Criteria Score: 14 (out of 24)

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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 checklist by Mokkink et al. (2010), the EBPAS-50 has evidence of content validity.

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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 Attitude Scale – 50 (EBPAS- 50), this refers to the extent that individuals can use the EBPAS-50 to assess barriers/facilitators to knowledge use and monitor knowledge use according to the following subscales:

- Requirements
- Appeal
- Openness
- Divergence
- Limitations
- Fit
- Monitoring
- Balance
- Burden
- Job Security
- Organizational Support
- Feedback

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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 checklist by Mokkink et al. (2010), the EBPAS-50 tool has evidence of content validity.

Content Validity Requirement 1:

- Initial pool of items to create the first EBPAS (consisted of 15 items) was developed from the extant literature review on the domains of health care providers that is predictive of evidence based practice (EBP), and consultation with mental health service providers and child and adolescent service researchers (Aarons, 2004)
- The initial EBPAS was expanded to identify additional dimensions pertinent to providers' attitudes towards EBP. Item generation and domain identification was conducted on four phases (Aarons et al., 2012):

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- First, the first author of the development paper and project coordinator generated 63 items representing 12 potential domains based on a literature review and their experiences of conducting studies relevant to health care provider’s attitudes towards adopting EBP and with the 51 mental health programs that helped developed the initial 15 item EBPAS tool.
- Secondly, the tool developers conducted a focus group with six program managers from different mental health programs in San Diego County to identify new items and evaluate the 12 potential domains. This activity identified an additional 33 items.
- Thirdly, the tool developers conducted a second focus group with eight clinicians. This activity did not identify any new domains but identified an additional 37 items.
- The first author of the tool development paper, a post-doctoral fellow and two research assistants assessed the 133 items generated from the above activities for redundancies and inductively organized items into categories based on similarities. This activity resulted into 127 items organized into 19 categories.
- Items reduction and the final subscales (35 items organized into eight subscales) was determined according to structural validity assessments (i.e., items with low factor loadings, inconsistent scores, or low interpretability were eliminated). In addition to the initial 15 EBPAS items (organized in 4 subscales), the EBPAS- 50 was created with 50 items organized into 12 subscales.

Content Validity Requirement 2:

- Item generation for the EBPAS-50 was based according to the literature, and experts and clinicians’ attitudes, experience, and knowledge of EBP as outlined above (Aarons et al., 2012).
- The EBPAS-50 was validated with a sample of 420 clinical and case management service providers from 51 public sector mental health programs providing mental health in San Diego County, California (Aarons et al., 2012).

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Content Validity Requirement 3:

- The first author of the tool development paper, a post-doctoral fellow and two research assistants evaluated the relevance of the 133 items garnered from the literature review and focus groups to create the final set of items that went through further validation testing. Only items that had moderately or highly correlated with the scales were kept in the final instrument. Furthermore, the tool developers reported that the additional eight subscales were significantly different from the four subscales in the original 15 item EBPAS. Hence, we can argue that the EBPAS-50 has 12 different subscales, of which have items that had moderate to high factor loadings with their respective subscales (Aarons et al., 2012).

Content Validity Requirement 4:

- The tool developers comprehensively identified items that are potentially relevant to measuring providers' attitudes towards EBP by assessing the literature, conducting focus groups with clinicians, and through using the researchers' own expert knowledge (Aarons et al., 2012).
- Further, we can argue that the addition of eight distinct subscales to measure the construct of providers towards EBP further supports the comprehensiveness of the EBPAS-50 (Aarons et al., 2012).

Limitations:

- The tool developers stated that convergent, divergent, and criterion validity needs to be assessed for the EBPAS-50. Further, the factor analysis conducted in the development paper to determine the additional 35 items (8 subscales) did not include the 15 items already existing in the original EBPAS. Perhaps the results would have been different with the inclusion of these items (Aarons et al., 2012).

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- Aarons, G. A. (2004). Mental health provider attitudes toward adoption of evidence-based practice: The Evidence-Based Practice Attitude Scale (EBPAS). *Mental health services research, 6*(2), 61-74. <https://doi.org/10.1023/B:MHSR.0000024351.12294.65>
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- 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>