

LEADING CHANGE TOOLKIT™

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

Outcome Expectancy of Evidence Based-Practice (OE-EBP)

Pragmatic Testing and Content Validity Data

Summary of Pragmatic properties

The OE-EBP tool had an overall **objective pragmatic score** of **16** out of **20**. According to this objective pragmatic assessment, the OE-EBP tool's strengths include being available in the public domain, having acceptable language, not requiring training for administration, and having less than 50 items. The OE-EBP lost scores because not enough instructions exist for interpreting scores.

Based on two RNAO stakeholders, the OE-EBP tool was rated **2.5** out of **4** for **likelihood to use**. The OE-EBP tool has an overall **stakeholder facing assessments** score of **16.5** out of **24**.

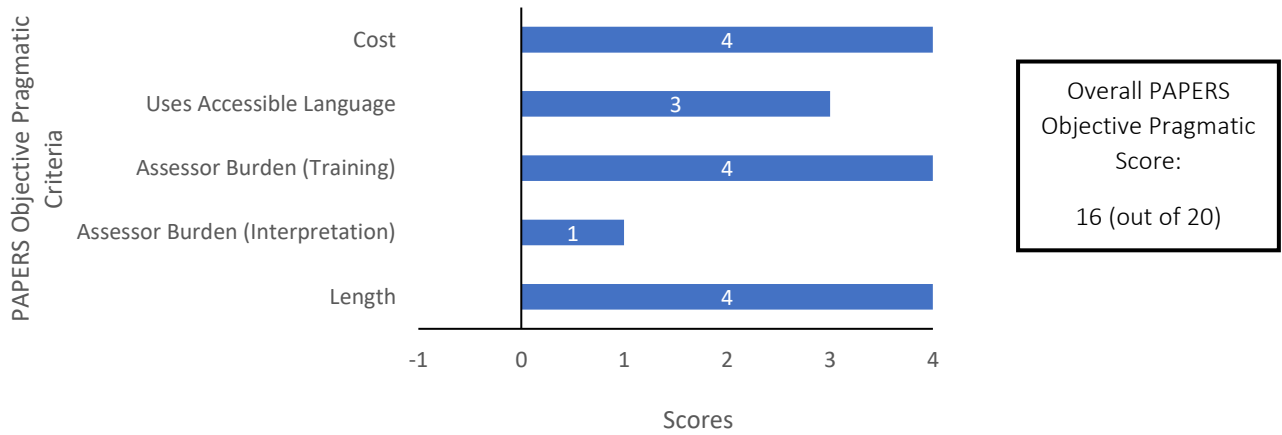
Tool Pragmatic Properties

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.

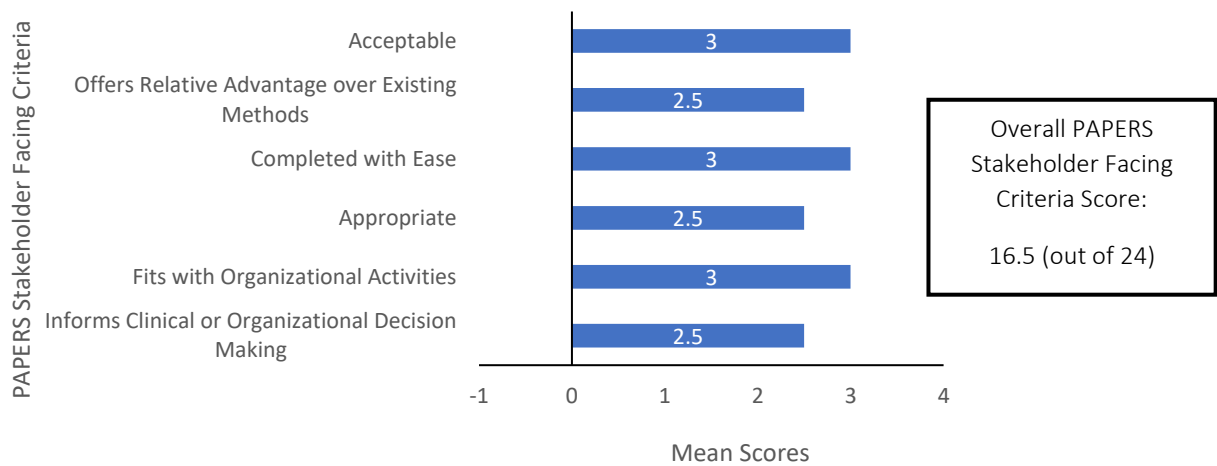
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PAPERS Objective Pragmatic Criteria - Scoring details below



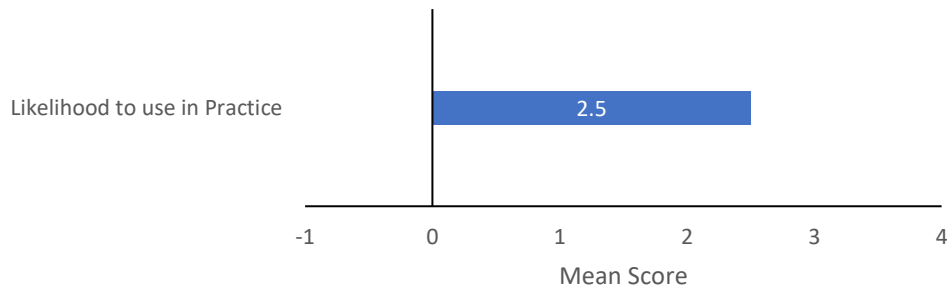
PAPERS Stakeholder Facing Criteria (n =2 stakeholders) - Scoring details below



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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 OE-EBP 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 OE-EBP tool, this refers to the extent that individuals can use the OE-EBP tool to assess barriers/facilitators to knowledge use and monitor knowledge use by:

- evaluating individual’s confidence in ability to improve the quality of patient care by following the five steps of evidence-based practice.

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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 OE-EBP tool has evidence of content validity.

Content Validity Requirement 1:

- The tool developers constructed the OE-EBP items according to the highly cited five steps of evidence-based practice (EBP) (Sackett et al. 2000; Bradley & Herrin 2004; Green 2006), Bandura’s Social Cognitive Theory (Bandura 2006), and the extant literature pertaining to the construct of self-efficacy (Chang & Crowe, 2010).
- An expert panel of three nurse researchers evaluated the content validity of the OE-EBP scale. These nurse researchers provided comments and these comments were incorporated during tool development (Chang & Crowe, 2010).

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Content Validity Requirement 2:

- The expert panel of three nurse researchers are experienced in conducting and participating in EBP activities, tool/questionnaire development, and in the topic of self-efficacy and outcome expectancy (Chang & Crowe, 2010).
- Psychometric testing of the OE-EBP scale was conducted with a total sample of 174 registered nurses and registered midwives working in acute care hospitals in Queensland Australia. The sample was partly recruited through a random distribution of surveys to registered nurses and midwives ($n = 134$) and through convenient sampling of registered nurses and midwives who attended an EBP workshop at one hospital ($n = 40$) (Chang & Crowe, 2010).

Content Validity Requirement 3:

- According to Bandura's Social Cognitive Theory (Bandura 2006) and the literature on self-efficacy summarized by the tool developers, individuals' confidence in their ability to affect change or improve condition through the enactment of a particular behaviour is a component of self-efficacy (Chang & Crowe, 2010). Hence, we can argue that this validates the need to measure outcome expectancy.
- An expert panel validated the content validity of the OE-EBP scale in measuring outcome expectancy. Further, the tool developers reported that there is no correlation between participants' EO-EBP scores and their scores from a EBP knowledge quiz; hence differentiating the tool from measuring knowledge of EBP (Chang & Crowe, 2010).

Content Validity Requirement 4:

- An expert panel of three nurse researchers evaluated the comprehensiveness of the EO-EBP items in measuring outcome expectancy (Chang & Crowe, 2010).

Limitations:

- The authors reported that the initial validation study did not assess the ability of the EO-EBP scale to predict changes in outcome expectancy over time or after an intervention. Further, the authors reported that their sample may not be representative because individuals who returned the survey could potentially have more interest in EBP than those who did not return the survey. Furthermore, the sample consisted mostly of novice registered nurses and midwives, which also limits the generalizability of the authors' findings (Chang & Crowe, 2010).

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References

- Chang, A. M., & Crowe, L. (2011). Validation of scales measuring self-efficacy and outcome expectancy in evidence-based practice. *Worldviews on Evidence-Based Nursing, 8*(2), 106-115.
- 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>