

LEADING CHANGE TOOLKIT™

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

Health Care Evidence-Based Practice Assessment Tool (HEAT)

Pragmatic Testing and Content Validity Data

Summary of Pragmatic properties

The HEAT tool had an overall **objective pragmatic score** of **16** out of **20**. According to this objective pragmatic assessment, the HEAT 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 HEAT tool lost scores because interpretation of the total score is not clearly outlined.

Based on two RNAO stakeholders, the HEAT tool was rated **2.5** out of **4** for **likelihood to use**. The HEAT tool has an overall **stakeholder facing assessments** score of **17.5** out of **24**.

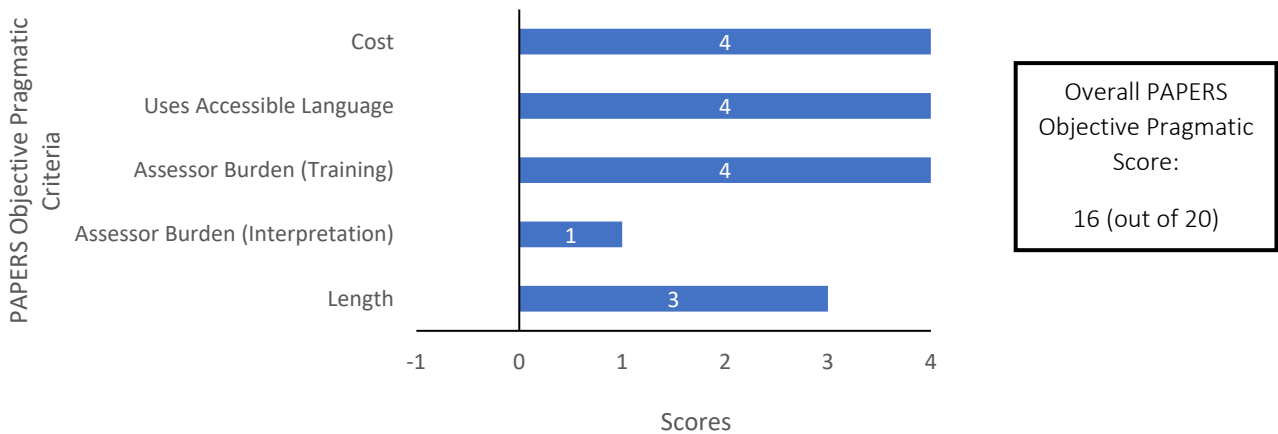
Tool Pragmatic Properties

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.

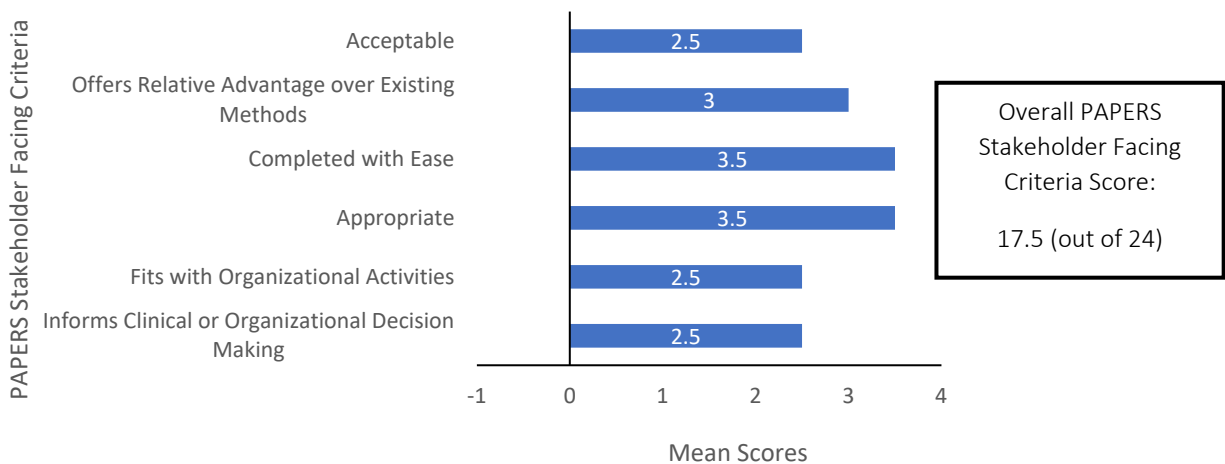
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PAPERS Objective Pragmatic Criteria - Scoring details below



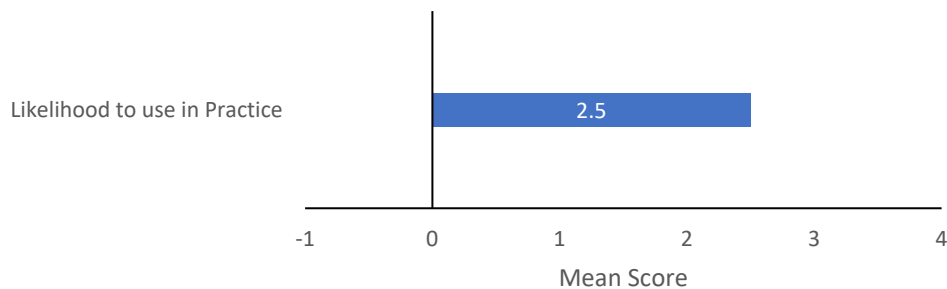
PAPERs Stakeholder Facing Criteria (n = 2 stakeholders) - Scoring details below



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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 HEAT 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 Health Care Evidence-Based Practice Assessment (HEAT) tool, this refers to the extent that knowledge users can use the this tool to identify barriers/facilitators to knowledge use and monitor knowledge use by measuring:

- Evidence based practice (EBP) Frequency,
- EBP Ability,
- EBP Desire,
- EBP Barriers,
- Individuals' overall understanding of EBP, level of EBP reflected in hospital policies and procedures and nurses' information sources.

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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 HEAT tool has evidence of content validity.

Content Validity Requirement 1:

- The modification of the Information Literacy for Nursing Practice (INLP) (Pravikoff et al., 2005) to create the HEAT tool was assessed and validated by eight PhD prepared nurse researchers regarding each item’s relevance, clarity, and wording (Sleutel et al., 2015).

Content Validity Requirement 2:

- The HEAT tool was also validated and tested on a large sample of registered nurses ($n = 6,873$) from 14 hospitals that vary in location (i.e., rural, large suburban, and medium suburban) (Sleutel et al., 2015).

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Content Validity Requirement 3:

- According to the eight nurse researchers, all the items in the HEAT tool are relevant and adequately measures intent, use, ability, desire, and barriers to using EBP (Sleutel et al., 2015).

Content Validity Requirement 4:

- According to the tool developers, the same eight PhD prepared nurse researchers were also tasked with editing, changing, or deleting questionnaire items in the HEAT tool and to suggest omitted items that they believe should be re-added from the INLP tool. We interpret this process to assure that all the items comprehensively measure the aspects of EBP that the tool developers are interested in (Sleutel et al., 2015).

Limitations:

- The limitations denoted by the tool developers were that the sample was comprised of only nurses from one large hospital system in the southwest United States. Although these limitations exist and further testing of the tool is required in different settings and with different health care professionals, the HEAT tool was still tested on a large sample from multiple institutions. Further, since the tool was developed to assess nurses' use and perceptions of EBP, it was reasonable that the HEAT tool was tested on registered nurses (Sleutel et al., 2015).

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.
- Pravikoff, D. S., Tanner, A. B., & Pierce, S. T. (2005). Readiness of US Nurses for Evidence-Based Practice: Many don't understand or value research and have had little or no training to help them find evidence on which to base their practice. *AJN The American Journal of Nursing*, 105(9), 40-51.



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Sleutel, M. R., Barbosa-Leiker, C., & Wilson, M. (2015). Psychometric Testing of the Health Care Evidence-Based Practice Assessment Tool. *Journal of nursing measurement*, 23(3), 485-498.

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>