

LEGEND: EVIDENCE APPRAISAL OF A SINGLE STUDY
– DIAGNOSIS / ASSESSMENT: PSYCHOMETRIC STUDY –

PROJECT / TOPIC OF YOUR CLINICAL QUESTION: _____

Reviewer: _____ **Today's Date (mm/dd/yy):** _____ **Final Evidence Level:** _____

Article Title: _____

Year: _____ **First Author:** _____ **Journal:** _____

Do the study purpose/objectives and inclusion/exclusion criteria assist in answering your clinical question?

Yes No Unknown

• Study Purpose/Objective: _____

• Inclusion Criteria: _____

• Exclusion Criteria: _____

When reading the bolded questions, consider the bulleted questions to help answer the main question.

If you are uncertain of your skills in evidence evaluation, please consult a local evidence expert for assistance:

CCHMC Evidence Experts: <http://groups/ce/NewEBC/EBDMHelp.htm>

Unfamiliar terms can be found in the LEGEND Glossary: <http://groups/ce/NewEBC/EBCFiles/GLOSSARY-EBDM.pdf>

VALIDITY: ARE THE RESULTS OF THE PSYCHOMETRIC STUDY VALID OR CREDIBLE?

1. Was the study purpose focused on examining one or more measurement properties (validity, reliability)?

Yes No Unknown

Comments:

2. Was the instrument described?

Yes No Unknown

Comments:

3. Was the protocol for administration and scoring standardized?

Yes No Unknown

Comments:

4. Were the observers/raters appropriately trained or certified?

Yes No Unknown

Comments:

5. Were the data collected on a representative sample?

Yes No Unknown

Comments:

6. Was the sample size adequate?

Yes No Unknown

(Do authors discuss whether the sample size is adequate?)

Comments:

7. Did the instrument make intrinsic sense – face validity (expert opinion, consensus)?

Yes No Unknown

Comments:

8. Did the instrument sample the content/domain adequately?

Yes No Unknown

Comments:

LEGEND: EVIDENCE APPRAISAL OF A SINGLE STUDY

– DIAGNOSIS / ASSESSMENT: PSYCHOMETRIC STUDY –

9. Was there evidence of the test's construct validity (factor analysis)? Yes No Unknown

- Did the test discriminate between two groups (known-groups method)?
- Did the test values agree with values of a similar test or gold standard (concurrent/convergent validity) or with a future outcome (predictive validity)?

If yes, then:

- What was the strength of the correlation? _____
- What were the confidence limits, if given? _____

Comments:

10. Was there freedom from conflict of interest? Yes No Unknown

- Sponsor/Funding Agency or Investigators

Comments:

**RELIABILITY: ARE THE VALID STUDY RESULTS IMPORTANT?
ARE THE RESULTS OBTAINED WITH THESE MEASURES REPLICABLE?
(TESTS, MEASURES, SCALES, INSTRUMENTS, ETC.)**

11. What was the internal consistency (i.e., Cronbach's alpha)?
(Relevant where scales have multiple items that sum up to a total score)

Comments:

12. Were appropriate statistical measures used to assess agreement between two or more occasions using the same observer (i.e., intra-rater reliability)? Yes No Unknown

Comments:

13. Were appropriate statistical measures used to assess agreement between two or more observers (i.e., inter-rater reliability)? Yes No Unknown

Comments:

14. Were appropriate statistical measures used to assess test-retest reliability (i.e., stability coefficient)? Yes No Unknown

- Was an appropriate test-retest interval used?

Comments:

15. Did the instrument capture important change (e.g., clinical significance)? Yes No Unknown

Comments:

16. Was there evidence of floor or ceiling effects? Yes No Unknown

Comments:

LEGEND: EVIDENCE APPRAISAL OF A SINGLE STUDY
– DIAGNOSIS / ASSESSMENT: PSYCHOMETRIC STUDY –

APPLICABILITY: CAN I APPLY THESE VALID, IMPORTANT STUDY RESULTS TO TREATING MY PATIENTS?

17. Can the results be applied to my population of interest? Yes No Unknown

- Is use of the instrument feasible in my care setting?
- Is the setting of the study applicable to my population of interest?
- Do the patient outcomes apply to my population or question of interest?
- Are the likely benefits worth the potential harm and costs?
- Were the patients in this study similar to my population of interest?

Comments:

18. Are my patient's and family's values and preferences satisfied by the use of the diagnostic test? Yes No Unknown

Comments:

19. Would you include this study/article in development of a care recommendation? Yes No Unknown

Comments:

ADDITIONAL COMMENTS OR CONCLUSIONS (“TAKE-HOME POINTS”): _____

QUALITY LEVEL / EVIDENCE LEVEL

- Consider each “No” answer and the degree to which this limitation is a threat to the validity of the results, then check the appropriate box to assign the level of quality for this study/article.
- Consider an “Unknown” answer to one or more questions as a similar limitation to answering “No,” if the information is not available in the article

THE EVIDENCE LEVEL IS: **Good Quality Psychometric Study** (2a)
 Lesser Quality Psychometric Study (2b)
 Not Valid, Reliable, or Applicable

TABLE OF EVIDENCE LEVELS							
DOMAIN OF CLINICAL QUESTION	TYPE OF STUDY / STUDY DESIGN						
	Systematic Review Meta-Analysis	CCT ⁺ Cohort – Prospective	Psychometric Study	Cohort – Retrospective	Cross- Sectional	Epidemiology Descriptive Case Series	Expert Opinion Case Reports
Diagnosis / Assessment	1a	2a	2a	3a	4a	4a	5a
	1b	2b	2b	3b	4b	4b	5b

⁺ CCT = Controlled Clinical Trial

Development for this appraisal form is based on:

1. Guyatt, G.; Rennie, D.; Evidence-Based Medicine Working Group.; and American Medical Association.: Users' guides to the medical literature : a manual for evidence-based clinical practice. *Users' guides to the medical literature : a manual for evidence-based clinical practice*: "JAMA & archives journals." Chicago, IL, 2002
2. Denzen, N. & Lincoln. Y. (2005). The Sage Handbook of Qualitative Research. Sage Publications: Thousand Oaks, California.
3. Freshwater, D. (2004). Deconstructing Evidence Based Practice, Routledge: New York: New York.
4. Guba, Y. & Lincoln, E. (1989). Fourth Generation Evaluation, Sage Publications: Newbury Park, California.
5. Leininger, M (1991). Culture care diversity and universality: A theory of Nursing. National League for Nursing Press: New York
6. Leininger, M. & McFarland, M. (2006). 2nd Ed. Culture care diversity and universality: A worldwide nursing theory. Jones & Bartlett Publishers: Sudbury, Mass.
7. Lincoln, Y. & Guba, E. (1985). Naturalistic Inquiry, Sage Publications: Newbury Park, California.
8. Morse, J., Swanson, J., & Kuzal, A. (2001). The Nature of Qualitative Evidence, Sage Publications: Thousand Oaks, California.
9. Phillips, et al: Oxford Centre for Evidence-based Medicine Levels of Evidence, 2001. Last accessed Nov 14, 2007 from <http://www.cebm.net/index.aspx?o=1025>.
10. Fineout-Overholt and Johnston: Teaching EBP: asking searchable, answerable clinical questions. *Worldviews Evid Based Nurs*, 2(3): 157-60, 2005.