

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 the clinical question?

Yes No Unknown

Comments:

A. What is the study purpose/objective? _____

B. What are the Inclusion Criteria? _____

C. What are the Exclusion Criteria? _____

* **Bolded** questions represent the key criteria for each section.

* Lettered questions (A., B., ...) provide additional information to better answer the bolded questions.

VALIDITY: ARE THE STUDY MEASURES VALID OR CREDIBLE?

1. Is the study purpose clearly defined and focused on examining one or more measurement properties (validity, reliability)?

Yes No Unknown

Comments:

2. Is the instrument described?

Yes No Unknown

Comments:

3. Is the protocol for administration and scoring standardized?

Yes No Unknown

Comments:

4. Are the observers/testers appropriately trained or certified?

Yes No Unknown

Comments:

5. Were the data collected on an appropriate or representative sample?

Yes No Unknown

Comments:

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

Yes No Unknown

Comments:

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

Yes No Unknown

Comments:

8. Does the measure sample the content/domain adequately?

Yes No Unknown

Comments:

9. Is there evidence of the test's construct validity (factor analysis)?

Yes No Unknown

Comments:

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- A. Does the test discriminate between two groups (known-groups method)? Yes No Unknown

Comments:

- B. Do the test values agree with values of a similar test or gold standard (concurrent or convergent validity) or with a future outcome (predictive validity)? Yes No Unknown

If yes, then:

- i. What is the strength of the correlation? *Comments:*

- ii. What are the confidence limits, if given? *Comments:*

Comments:

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

Comments:

- A. Was there freedom from conflict of interest in the sponsor/funding agency? Yes No Unknown

Comments:

- B. Was there freedom from conflict of interest in the investigators? Yes No Unknown

Comments:

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

- 11. What is the internal consistency (Cronbach's alpha)?**
(relevant where scales have multiple items that sum up to a total score)

Comments:

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

Comments:

- 13. Have appropriate statistical measures been used to assess agreement between two or more observers (inter-rater reliability)?** Yes No Unknown

Comments:

- 14. Have appropriate statistical measures been used to assess test-retest reliability (stability coefficient)?** Yes No Unknown

Comments:

- Was an appropriate test-retest interval used? Yes No Unknown

Comments:

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

Comments:

- 16. Is there evidence of floor or ceiling effects?** Yes No Unknown

Comments:

* A table is also available for calculation or presentation of study results on the last page of this form.

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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

Comments:

A. Is use of the instrument feasible in my care setting? Yes No Unknown

Comments:

B. Were all patient important outcomes considered? (Are substitute endpoints valid?) Yes No Unknown

Comments:

C. Are the likely benefits worth the potential harm and costs? Yes No Unknown

Comments:

D. Were the patients in this study similar to my population of interest? Yes No Unknown

Comments:

18. Are your patient's values and preferences satisfied by the treatment and its consequences? Yes No Unknown

Comments:

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

Comments:

Additional Comments or Notes: _____

* 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.

- 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 +	Psychometric Study	Cohort – Prospective	Cohort – Retrospective	Cross – Sectional	Descriptive Study Case Series	Expert Opinion Case Reports
Diagnosis / Assessment	1a 1b	2a 2b	2a 2b	3a 3b	4a 4b	4a 4b	4a 4b	5a 5b

+ CCT = Controlled Clinical Trial

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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 Part, 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.

STUDY CALCULATIONS – RESULTS TABLE:

	Sample Size	Reliability	Level of Agreement (Kappa, ICC, etc.)	Confidence Limits [95% CI]	Test–Retest Interval	Effect Size	Standard Response Mean	p value
Instrument/Test 1:	N =	Test–Retest: Inter–Rater:	Test–Retest: Inter–Rater:	Test–Retest: (–) Inter–Rater: (–)				
Instrument/Test 2:	N =	Test–Retest: Inter–Rater:	Test–Retest: Inter–Rater:	Test–Retest: (–) Inter–Rater: (–)				
Instrument/Test 3:	N =	Test–Retest: Inter–Rater:	Test–Retest: Inter–Rater:	Test–Retest: (–) Inter–Rater: (–)				
Instrument/Test 4:	N =	Test–Retest: Inter–Rater:	Test–Retest: Inter–Rater:	Test–Retest: (–) Inter–Rater: (–)				
Instrument/Test 5:	N =	Test–Retest: Inter–Rater:	Test–Retest: Inter–Rater:	Test–Retest: (–) Inter–Rater: (–)				