



Reliability and Validity of Katz ADL Index

Type	Rating	References
Reliability		
Interrater variability	Low	Brorsson B, Asberg KH. <i>Scand J Rehabil Med</i> 1984;16(3):125-32.
Internal consistency	$\alpha = 0.87$	Ciesla JR, et al. <i>Eval Health Prof</i> 1993;16(2):190-203.
	$\alpha = 0.94$	Hamrin E, Lindmark B. <i>Scand J Caring Sci</i> 1988;2(3):113-22.
Coefficient of Scalability	0.74 to 0.88	Brorsson B, Asberg KH. <i>Scand J Rehabil Med</i> 1984;16(3):125-32.
Validity		
Construct	Factor analysis = single factor with all item correlations with the factor being 0.5 or greater Coefficient of scalability = 0.6	Ciesla JR, et al. <i>Eval Health Prof</i> 1993;16(2):190-203.
Content	Good	Law M, Letts L. <i>Am J Occup Ther</i> 1989;43(8):522-8.
Concurrent (convergent)	Correlation with Activity index = 0.95	Hamrin E, Lindmark B. <i>Scand J Caring Sci</i> 1988;2(3):113-22.
Predictive	Good for mortality	Brorsson B, Asberg KH. <i>Scand J Rehabil Med</i> 1984;16(3):125-32.

MORE ON THE PSYCHOMETRIC PROPERTIES OF THE KATZ INDEX OF INDEPENDENCE IN ACTIVITIES OF DAILY LIVING

The Katz index's use of dichotomous scoring—that is, it allows only two possible scores, “dependent” or “independent”—arose from extensive field testing of the index, including testing of a version that permitted gradations in scores of each activity of daily living (ADL).^{1,2} Katz and colleagues developed an alternative system in 1970 that employed a seven-stage scoring system, with A signifying independence in all six ADLs, B signifying independence in all but one, and so on until G, signifying dependence in all ADLs. But the middle grades were complicated by specifications of functional loss in certain ADLs. Guralnik and colleagues pointed out that without exact guidelines for interviewers to score reported levels of disability, it's difficult to accurately assess functional status using more than two response categories.³ Dichotomous scoring was found to ease the use of the Katz index.

Brorsson and Asberg reported a satisfactory coefficient of scalability (C of S), a measure of construct validity, of 0.74 to 0.88.⁴ External validity is supported by the accuracy of the Katz index in predicting functional outcomes over time for older adults in short-term care, hospitalized patients, and patients who have had a stroke.^{2,4,5} Hamrin and Lindmark reported convergent (or concurrent) validity as a high correlation of 0.95 between the Activity index and the Katz index.⁵

Hamrin and Lindmark reported an α reliability coefficient of 0.94 in their study of functional ability in stroke patients.⁵ Law and Letts reported poor test-retest reliability (no statistics reported) in their review of ADL scales.⁶ Brorsson and Asberg found that interobserver variability was low (no statistics reported), with an overall high level of usability of the index.⁴

There is evidence of construct validity. Brorsson and Asberg reported a satisfactory C of S: 0.74 to

0.88.⁴ Predictive validity has also been demonstrated.^{2, 4, 5}—*Meredith Wallace, PhD, APRN,BC, and Mary Shelkey, PhD, ARNP*

REFERENCES

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2. Katz S, et al. Progress in development of the index of ADL. *Gerontologist* 1970;10(1):20-30.
3. Guralnik JM, et al. Physical performance measures in aging research. *J Gerontol* 1989;44(5):M141-6.
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5. Hamrin E, Lindmark B. Evaluation of functional capacity after stroke as a basis for active intervention. *Scand J Caring Sci* 1988;2(3):113-22.
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