

## ORGANIZATION NEWS

### Highlights From the Rehabilitation Measures Database

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# Measurement Characteristics and Clinical Utility of the Kohlman Evaluation of Living Skills Among Older Adults

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There is a strong desire for older adults to age in place and continue living at home.<sup>1</sup> However, many factors affect the ability for older adults to live successfully in the community. Assessment of performance and independence in activities of daily living is essential in understanding the amount and type of assistance needed for successful community living in this population. The Kohlman Evaluation of Living Skills (KELS) is an observation- and interview-based assessment used in inpatient or outpatient facilities to evaluate function in the areas of self-care, safety and health, money management, community mobility and telephone, and employment and leisure participation for older adults.<sup>2</sup> This 17-item measure rates individuals' performances in these areas as Independent, Needs Assistance, or Not Applicable, ultimately resulting in a final score that indicates the level of assistance an individual would need to live independently in the community.<sup>2</sup> The KELS is psychometrically sound for the older adult population, exhibiting adequate to excellent validity measures.<sup>1,3</sup> The KELS has been translated into several languages and shown to be valid across different cultural groups and settings.<sup>2</sup> The scoring manual and scoring forms are available for purchase from the American Occupational Therapy Association online store for \$99 for American Occupational Therapy Association members and \$140 for nonmembers.

This abbreviated summary provides a review of the psychometric properties of the Kohlman Evaluation of Living Skills (KELS) in older adults. A full review of the KELS and reviews of over 440 other instruments for patients with various health conditions can be found at [www.sralab.org/Rehabilitation-Measures](http://www.sralab.org/Rehabilitation-Measures).

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This instrument summary is designed to facilitate the selection of outcome measures by clinicians. The information contained in this summary represents a sample of the peer-reviewed research available at the time of this summary's publication. The information contained in this summary does not constitute an endorsement of this instrument for clinical practice. The views expressed are those of the summary authors and do not represent those of authors' employers, instrument owner(s), the *Archives of Physical Medicine and Rehabilitation*, the Rehabilitation Measures Database or the United States Department of Health and Human Services. The information contained in this summary has not been reviewed externally.

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#### BIBLIOGRAPHY

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		<b>Measure Name:</b>		<b>Acronym:</b>	<b>Items:</b>	<b>Summary Authors:</b> Claire Mercer, OTS Victoria Turnbull, OTS Serena Saake, OTS Ada Terman, OTR/L Heidi Fischer, OTR/L, OTD Linda Ehrlich-Jones, RN, PhD													
		Kohlman Evaluation of Living Skills		KELS	17														
<b>Populations Reviewed:</b>	<b>Admin Time:</b>	<b>Score Min/Max</b>	<b>Training Required:</b>																
Older Adults	30-45 min	0-17	None																
<b>Purpose and Administration Instructions:</b>						<b>Floor / Ceiling Effects:</b>													
<ul style="list-style-type: none"> <li>Assesses community living skills through observation of performance and patient interview</li> <li>Determines level of assistance necessary for an individual to live in the community</li> </ul>						None													
<b>Required Equipment:</b>																			
KELS flash drive (banking, reading/writing, price tags, bank information card, sample of recorded message card, check form, money order form, utility bill, score form), reading and writing form, KELS score form, pencil, paper, household situation pictures, telephone book, cell phone, tablet/notebook/laptop, toothbrush, deck of cards, check form, utility bill with current date, money, envelope, landline telephone																			
<b>Validity:</b>				<b>Scoring Instructions:</b>		<b>Scoring Interpretation:</b>													
<p><i>Concurrent Validity</i>  <b>MMSE: Excellent</b> (<math>r = -0.757</math>)<sup>1*</sup>  <b>FIM: Excellent</b> (<math>r = -0.707</math>)<sup>1*</sup>  <b>RTI: Excellent</b> (<math>r = -0.895</math>)<sup>1*</sup>  <i>Discriminant Validity</i>                      Community living, sheltered housing, or daycare  <b>Excellent</b> (Post hoc Scheffe range: <math>P = .01-.000</math>)<sup>1*</sup>  <b>mPPT:</b> Comparison between mPPT and KELS showed significant impairment in ADLs as but no significant impairment in mPPT scores<sup>4</sup>  <i>Predictive Validity</i>  <b>Self-neglect status</b>  <b>Excellent</b> (<math>\chi^2 = 5.0, P = .025</math>)<sup>3</sup>  <i>Convergent Validity</i>  <b>mPPT: Adequate</b> (<math>r = -.472, P &lt; .001</math>)<sup>5</sup>  <b>8FW: Poor</b> (<math>r = .264, P = .001</math>)<sup>5</sup>  <b>KEBT: Poor</b> (<math>r = -.068, P = .456</math>)<sup>5</sup>  <b>GDS: Adequate</b> (<math>r = .318, P &lt; .001</math>)<sup>5</sup>  <b>MMSE: Adequate</b> (<math>r = -.508, P &lt; .001</math>)<sup>5</sup>  <b>EXIT: Excellent</b> (<math>r = .705, P &lt; .001</math>)<sup>5</sup>  <b>CLOX1: Excellent</b> (<math>r = -.629, P &lt; .001</math>)<sup>5</sup>  <b>CLOX2: Adequate</b> (<math>r = -.421, P &lt; .001</math>)<sup>5</sup></p>				<p><b>17 items are scored through observation and patient report</b>                      • Each skill is rated “independent” (0 points), “needs assistance” (1 point), or “not applicable” (0 points)                      • Work and Leisure items receive ½ point for each “needs assistance”                      • Items are scored for a total of 0-17</p>		<p>• A total score of 6-17 indicates need for assistance to live in community.                      • A total score of 5.5 or less indicates a client is capable of living independently.</p>													
<b>Reliability:</b>				<b>Abbreviations:</b>															
<p><i>Inter-rater reliability</i>                      100% agreement between 2 OTs rating 10 subjects<sup>1*</sup>  <b>Adequate to excellent</b> interrater reliability (ICC = .74-.98)<sup>2</sup></p>				<p>OT: Occupational Therapists                      MMSE: Mini-Mental State Examination                      FIM: Functional Independence Measure                      RTI: Routine Task Inventory                      mPPT: Modified Physical Performance Test</p> <p>EXIT: Executive Interview                      CLOX: Clock Drawing Task                      8FW: 8-Foot Walk                      KEBT: Knee Extension Break Test                      GDS: Geriatric Depression Scale                      ADL: activities of daily living                      ICC: intraclass correlation coefficient</p>															
<b>Considerations:</b>				<b>Cut-off Criteria:</b>															
<p>Can be administered by any health professional                      Statistics reported with an asterisk (*) are derived from alternate language versions.                      KELS can be administered via computer or through paper and pencil                      Not appropriate for settings with long lengths of stay</p>				<table border="1"> <thead> <tr> <th></th> <th><i>r</i></th> <th>ICC</th> </tr> </thead> <tbody> <tr> <td><b>Excellent</b></td> <td>≥ .6</td> <td>≥ .75</td> </tr> <tr> <td><b>Adequate</b></td> <td>.31-.59</td> <td>.40-.74</td> </tr> <tr> <td><b>Poor</b></td> <td>≤ .3</td> <td>&lt; .4</td> </tr> </tbody> </table>					<i>r</i>	ICC	<b>Excellent</b>	≥ .6	≥ .75	<b>Adequate</b>	.31-.59	.40-.74	<b>Poor</b>	≤ .3	< .4
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