



MEASURES FOR STAGES OF DEMENTIA

TOOLS FOR **DEMENTIA** PRACTICE & RESEARCH

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Care professionals working with persons living with dementia often discuss dementia in terms of its stages. These stages refer to different points in the progression of a person's dementia.

Determining the stage of dementia is important in research and clinical practice as it helps researchers and clinicians monitor the effectiveness of pharmacological and psychosocial interventions and decide the most appropriate intervention for the person living with dementia.

Rather than using 'mild/early stage', 'moderate/middle stage', and 'severe/late stage' dementia as descriptors of the stages of dementia, scales have been developed to provide more specific descriptors of the progression of a person's condition, each having a more comprehensive description of several symptoms. Scales to decide the stage of dementia are a common point of reference that aid communication in a multidisciplinary team that supports the person living with dementia in their care journey. These scales can help the team to better understand and prepare for changes over the different stages.

The psychometric properties of several clinical staging scales for dementia were compared and evaluated in a systematic review by Rikkert et al. (2011).¹ The reviewers stated that is important for dementia staging instruments to have:

- Discriminatory validity: Power to differentiate distinct groups of persons living with dementia at different levels of cognitive, behavioural and functional abilities; and
- Predictive validity: Power to estimate the duration in which a person living with dementia will remain in a specific stage, and to predict when the next stage may begin.

Results from the systematic review, however, show that no one staging scale has consistent, strong evidence of excellent psychometric properties; is applicable throughout the entire course of dementia, and is most widely used in various cultural settings.¹

The table below summarises three established dementia staging instruments widely used in the Singapore context:

Tool	About the Instrument	Strengths & Limitations	Psychometric Properties	Permission to Use
<p>Clinical Dementia Rating² (CDR)</p> <p>Click here for more information about the instrument.</p>	<p>A 5-point system based on a person's cognitive ability and how they function</p>	<p>Strengths:</p> <ul style="list-style-type: none"> ● Best-evidenced scale; ● Studied from an international perspective; ● Widely used in dementia research; ● Available in 14 languages, ● Counts scores from formalised cognitive or functional performance testing; and ● Scores the highest in validity testing amongst the instruments listed in this document. <p>Limitations:</p> <ul style="list-style-type: none"> ● Takes a longer time to administer relative to other scales (around 20 to 40 minutes). 	<p>Reliability:</p> <p>Multiple studies have reported:</p> <ul style="list-style-type: none"> ● High percentage agreement between raters, 85%;³ and ● High interrater agreement between clinical nurse specialists and physicians for the presence and severity of dementia, $k = .75$.⁴ <p>Validity:</p> <p>Multiple studies have reported:</p> <ul style="list-style-type: none"> ● Concurrent validity correlations range from .30 to .70; and ● Very strong discriminant validity.¹ 	<p>Prospective users of the CDR should be trained to administer the semi-structured interview and use the Scoring Table in a valid, reliable manner.</p> <p>Reprinting of the CDR Scoring Table and rules requires permission from the publisher.</p> <p>A license must be obtained to use the CDR. To license the CDR (non-profit and for-profit), please refer to the following link:</p> <p>https://otm.wustl.edu/washu-innovations/tools/.</p>

<p>Functional Assessment Staging Test⁵ (FAST)</p> <p>Click here for the journal article.</p> <p><i>The article lists the descriptions for the different stages.</i></p>	<p>A 7-stage system based on a person’s level of functioning and ability to perform activities of daily living (ADLs)</p>	<p>Strengths:</p> <ul style="list-style-type: none"> ● Most commonly used in Singapore; ● Easy and quick to stage (approximately 2 minutes); and ● Best studied for reliability and showed good to excellent reliability results. <p>Limitations:</p> <ul style="list-style-type: none"> ● Relies more on history taken from persons living with dementia and/or their caregivers, is completed merely by information available through professional observations of care delivery or during an interview. 	<p>The FAST is reliable and valid in evaluating functional deterioration in persons with Alzheimer’s Disease throughout the entire course of the condition:</p> <ul style="list-style-type: none"> ● Excellent reliability: <ul style="list-style-type: none"> ○ Rater consistency (fixed effect Intraclass Correlation Coefficient [ICC]) was 0.86 ($p < .01$); and ○ Rater agreement (random effect ICC) was 0.87 ($p < .01$).⁶ ● Excellent concurrent validity (FAST test was compared to the Ordinal Scales of Psychological Development [OSPD]): <ul style="list-style-type: none"> ○ Pearson product moment correlation coefficients between FAST levels and each OSPD subtest ranged from -0.60 to -0.79 ($p < .001$); and ○ Pearson correlation coefficient between FAST test and total OSPD test 	<p>Cite the developers to use the scale. No other permissions are required.</p>
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Tool	About the Instrument	Strengths & Limitations	Psychometric Properties	Permission to Use
			score was at -0.79 ($p < .001$). ⁶	
Global Deterioration Scale ⁷ (GDS) Click here to access the scale, and here for the journal article.	A 7-stage system based on the amount of cognitive decline	<p>Strengths:</p> <ul style="list-style-type: none"> • Takes only two minutes to complete once relevant clinical information has been collated; • Validated against results from biomarker studies; and • Mainly used in research or service development to categorise persons living with dementia by their severity. <p>Limitations:</p> <ul style="list-style-type: none"> • May not be sensitive enough to pick up subtle changes in a person living with dementia. 	<p>Reliability:</p> <ul style="list-style-type: none"> • Good to excellent interrater reliability, ranging from .82 to .92.⁸ <p>Validity:</p> <ul style="list-style-type: none"> • Validated twice against biomarkers – GDS correlated significantly with: <ul style="list-style-type: none"> ○ Computerised Tomography (CT) scan rankings of ventricular dilation ($r = .62$); and ○ CT scan-based assessments of sulcus enlargement ($r = .53$). 	Cite the developers to use the scale. No other permissions are required.

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