

Assessment Tool	Behavioral Domains	Who Administers and How	Number of Items	Response Categories	Estimated Time to Administer	Setting and Target Population	Reliability and Validity
Part V: Specific Behavior Scales-Sleep Scales							
41. Pittsburgh Sleep Quality Index (PSQI)	Sleep quality Sleep latency Sleep duration Habitual sleep efficiency Sleep disturbances Use of sleep medications Daytime dysfunction	Self-rated or patient interview	19-items self-rated 5-items rated by bedpartner or roommate are part of the original scale but are not included in the scoring	Based on past month First 4 items ask for time or amount of sleep Items 5-18 items rated 0 = not in the past month to 3 = three or more times a week 1 global item rated 0 = very good to 3 = very bad Scoring is done in 7 components and then all components are totaled. Scores can range from 0 to 21 A score of 5+ indicates poor sleeper	5-10 minutes for subject to complete; 5 minutes to score	General population in all health care settings, has been used with patients with dementia	$\alpha=.83$ Test-retest: no difference found ($t=2.32, p=.03$) Sensitivity 89.6%, specificity 86.5% ($kappa=.75, p<.001$) in distinguishing good and poor sleepers

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42. The Sleep Disorders Inventory (SDI)	Sleep	Informant interview	7 items rated by frequency, severity and caregiver distress	<p>Based on past 2 weeks</p> <p>Frequency rated 0 = not present to 4 = once or more per day (every night)</p> <p>Severity rated 0 = not present to 3 = marked Caregiver Distress rated 0 = not at all to 5 = very severely/extremely</p> <p>Avg. Frequency and avg. severity scores are multiplied to calculated total score</p> <p>Range 0-12</p> <p>Higher scores indicated more sleep disturbance</p>	Not specified	AD patients in community and living with caregiver	Content validity: correlation with NPI sleep subscale $r = .341, p < .05$

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43. Epworth Sleepiness Scale (ESS)	Daytime sleepiness	Patient or informant interview	8 items	Based on recent times (no exact period given) Rated 0 = no chance of dozing to 3 = high chance of dozing Range 0-24 Higher scores indicate greater daytime sleepiness Scores of ≥ 10 indicate above normal daytime sleepiness	Not specified	General population in any health care setting, has been used in studies of people with dementia	Internal consistency $\alpha = .74-.88$

Table 1. Notes

¹ The Behavioral Domain column lists area using the labeling of behaviors as reported within the cited article.

α = Cronbach's alpha

ABID = Agitated Behavior in Dementia Scale

ABS = Aggressive Behavior Scale

ADL = Activities of Daily Living

AES - C = Apathy Evaluation Scale - Clinician

AES - I = Apathy Evaluation Scale - Informant

AES - S = Apathy Evaluation Scale - Self

AES = Apathy Evaluation Scale

AI = Activity Inventory

AWS = Algase Wandering Scale

V2 = version 2

BAI = Beck Anxiety Inventory

BARS = Brief Agitation Rating Scale

BDI = Beck Depression Inventory

BEHAVE-AD = Behavioral Pathology in Alzheimer's Disease

BRSD = CERAD Behavior Rating Scale for Dementia

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<p>BSSD = Behavioral Syndromes Scale for Dementia CABOS = Computer Assisted Behavioral Observation Systems CCL - A = Cognition Checklist for Anxiety CCL - D = Cognition Checklist for Depression CDR = Clinical Dementia Rating Scale CES-D = Center for Epidemiologic Studies Depression Scale CMAI = Cohen Mansfield Agitation Inventory CMAI = Cohen-Mansfield Agitation Inventory CSDD = Cornell Scale for Depression in Dementia DAIR = Dementia Apathy Interview and Rating Scale DASS = Depression Anxiety Stress Scale DBD = Dementia Behavior Disturbance Scale DBRS = Disruptive Behavior Rating Scales DMAS = The Dementia Mood Assessment Scale DSM-IV = Diagnostic and Statistical Manual of Mental Disorders IV DSS = Dementia Signs and Symptoms Scale ESS = Epworth Sleepiness Scale FrSBe = Frontal System Behavioral Scale GAI = Geriatric Anxiety Inventory GDS = Geriatric Depression Scale HADS = Hospital Anxiety and Depression Scale HAM-A = Hamilton Rating Scale for Anxiety HAM-D = Hamilton Rating Scale for Depression HD = Huntington's Disease IADL = Instrumental Activities of Daily Living IAS = Irritability Apathy Scale KBCI = Key Behavior Change Inventory LARS = Lille Apathy Rating Scale MCI = Mild Cognitive Impairment MDS = Minimum Data Set mMMSE = Modified Mini-Mental Status Exam MOAS = Modified Overt Aggression Scale NHBPS = The Nursing Home Behavior Problem Scale NOISE = Nurse Oriented Scale for Inpatient Evaluation NOSGER = Nurses' Observation Scale for Geriatric Patients</p>							

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<p>NPI = Neuropsychiatric Inventory NPI-C = Neuropsychiatric Inventory - Clinician NPI-Q = Neuropsychiatric Inventory - Questionnaire NRS = The Neuro-behavioral Rating Scale OAS = Overt Aggression Scale OASS = Overt Agitation Severity Scale PANSS = Positive and Negative Symptom Scale PAS = Pittsburgh Agitation Scale PD = Parkinson's Disease PHQ-9 = Patient Health Questionnaire - 9 PLUT = Plutchik Scale PSQI = Pittsburgh Sleep Quality Index RAGE = Rating Scale for Aggressive Behavior in the Elderly RAID = Rating Anxiety in Dementia RAS = Ryden Aggression Scale RMBPC = Revised Memory and Behavior Problem Checklist SANS = Scale for the Assessment of Negative Symptoms SDI = The Sleep Disorders Inventory SF - 20 = 20-item Short Form Survey TBI = Traumatic Brain Injury</p> <p>Brief Psychiatric Rating Scale not included since generally used to assess psychosis in patients with schizophrenia.</p> <p>Scale for the Assessment of Negative Symptoms (SANS) and Positive and Negative Symptom Scale (PANSS) are not included since primarily used in patients with schizophrenia.</p> <p>Unified Parkinson's Disease rating scale not included as it is a single item for apathy that does not have any reliability measure.</p> <p>Hamilton Depression Rating Scale not included because it was first published in 1960 and is no longer considered the gold standard. While it has adequate internal reliability, many of the items do not contribute to depression severity, response options are not optimal, and the retest reliability is poor. Content validity has also been found to be poor (Bagby, Ryder, Schuller & Marshall, 2004).</p> <p>The Mini Nutritional Assessment was not included because it does not address behavior. The Nutritional Risk Index and DETERMINE Your Nutritional Health Checklist were not included because they do not address behavior and because validity has not been established.</p> <p>GDS was not included as at least two studies have found it not to be as reliable and valid in a dementia population as in the general geriatric population (Burke, 1989; Korner, 2006).</p>							

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<p>CES-D was not included as there was no evidence of reliability and validity in a dementia population.</p> <p>State/Trait anxiety scale: originally published prior to 1980.</p> <p>Geriatric Evaluation by Relative's Rating Instrument (GERRI) Schwartz, G. (1983). Development and validation of the Geriatric Evaluation by Relative's Rating Instrument (GERRI). Psychological Reports. 53: 479-88-not included because there is no subscale for neuropsychiatric symptoms.</p> <p>Clinical Assessment of Psychopathology among Elderly Residents (CAPER): Reichenfeld (1992) not included because it does not address specific behaviors of dementia-it is for diagnosis of psychotic disorders. It is also based on psychiatrist interview.</p>							