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# A Review of Screening Instruments for Assessing Cognition and Mental Status in Older Adults

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## Abstract

Older adults in non-psychiatric acute and long-term care settings need to be screened routinely for cognitive function and mental status by clinicians and health care providers. Screening instruments increasingly are being used in order to evaluate programs, implement clinical decisions and conduct research. The purpose, scope and depth of needed assessment guides the selection of the screening instrument. This article critically reviews 11 screening instruments used to assess cognitive function and mental status in older adults: Dementia of the Alzheimer Type Inventory, Brief Cognitive Rating Scale, Blessed Dementia Scale, Cognitive Capacity Screening Examination, Cognitive Levels Scale, FROMAJE, Global Deterioration Scale, Mini-Mental State Exam, Clinical Dementia Rating, Mental Status Questionnaire and the Short Portable Mental Status Questionnaire. Since cognitive impairment is a broad construct, the descriptors used to search the literature were the following: age-associated memory impairment, acute confusional states, Alzheimer's disease, cognition, confusion, delirium, dementia, mental status, multi-infarct dementia, Pick's disease, primary degenerative dementia, pseudodementia and senile dementia of the Alzheimer's type. The Brief Cognitive Rating Scale and the Dementia of the Alzheimer Type Inventory are the only two instruments capable of distinguishing Alzheimer's from other dementias, and the CDR is the only instrument that assesses hobbies.

Cognitive impairment (Cl), a generic term, refers to disturbances in cognitive functioning. As the older population increases in number, so does the incidence of CI[1] Since CI often goes undetected in non-psychiatric settings, routine screening of older medical patients is recommended.[2–4] Cognitive function and mental status have overlapping characteristics, and these terms are often used interchangeably in the literature. However, they are not the same (see Table 1, p. 19), and both conditions may be assessed with screening instruments. Typical nursing diagnoses for these conditions include impaired thinking, or alterations in thought processes. These diagnoses, however, do not identify the specific processes diminished or compromised.

Many clinicians and health care providers use the patient's level of orientation to time, place and person as a quick indicator of cognitive functioning. In a recent nursing study, patients who were oriented during the administration of the Cognitive Capacity Screening Examination (CCSE) also had other deficits in cognitive function, e.g., abstraction, concentration and memory.[5] After conducting mental-status examinations on patients with

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CI, physicians also determined that assessment of orientation items alone, or use of global descriptions such as “confused” and “disoriented,” were unacceptably insensitive.[6–7]

This article defines the cognitive domains typically assessed, and evaluates the applicability of 11 cognitive-function and mental-status screening instruments for clinical practice. These 11 instruments were used to assess all types of CI Since CI is a broad construct, the following descriptors had to be used in searching various databases: acute confusional states, age-associated memory impairment, Alzheimer’s disease (AD), cognition, confusion, delirium, dementia, mental status, multi-infarct dementia, Pick’s disease, primary degenerative dementia, pseudodementia and senile dementia of the Alzheimer’s type (SDAT).

## Assessment of Cognitive Impairment

Cognitive function, as a broad construct, includes the 12 categories of attention span, concentration, intelligence, judgment, learning ability, memory, orientation, perception, problem-solving, psychomotor ability, reaction time and social intactness. These categories were determined, but not defined, after Kane and Kane reviewed numerous cognitive-function and mental-status screening instruments.[8] Not all screening instruments include all 12 categories; however, devices for measuring all or some of the 12 form the major content of cognitive screening instruments (see Table 2, p. 20). The following definitions of the 12 domains include the usual assessment techniques:

### Attention span.

This is the ability to focus in a sustained manner or for a sustained period of time on one activity or object.[9]

### Concentration.

The ability to concentrate is manifested by the individual’s ability to pay attention and answer questions, ignoring unimportant or irrelevant external stimuli.[9]

### Intelligence.

Broadly defined, intelligence is the ability to comprehend or understand. General intelligence usually includes verbal aptitude, calculation skills, and spatial-relationship skills.[10] There is evidence that as people age, non-cognitive factors such as motivation, response speed and sensory deficits play increasingly significant roles in intellectual performance. When referring to older adults, a distinction must be made between the terms “intelligence” and “competence.” Intelligence is described as an inference of underlying traits, based on observations in many situations. Competence is a more situation-specific combination of intellectual traits that with adequate motivation will permit adaptive behavior.[11] Intelligence is usually determined by similarities and vocabulary tests, and mathematical tests, e.g., the individual is required to add or subtract three or seven from 100 five consecutive times.

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### Judgment.

Judgment is the mental ability to perceive and distinguish the relationship between two objects.[12] An individual is evaluated for appropriate and realistic behavior that is based on an awareness of the environment and the consequences of his or her behavior. Parameters usually assessed include physical and psychological needs, ability to form appropriate goals and plans, and ability to act on these goals and plans. Other important indicators of judgment are the individual's ability to handle financial matters or drive a car.

### Learning ability.

Learning is a sustained, highly deliberate effort to acquire knowledge or a skill.[13] An important learning difference for older adults is the increased time required for acquisition of knowledge or skills, and retrieval of information from memory. Older adults' ability to learn may be improved with a longer acquisition and response period, with particular emphasis placed on a self-paced approach. The amount of material and the number of task demands presented during instruction may also influence learning ability.

### Memory.

In a broad sense, memory implies the ability to recall previously experienced ideas, impressions, information and sensations.[10] It is clinically helpful to differentiate between immediate retention (memory of the recent past) and recall (memory of the remote past). Memory is usually assessed by an individual's ability to remember and recall specific words during an interview.

### Orientation.

Orientation usually consists of an individual's knowledge of person, place and time.[9] Orientation is evaluated from an individual's ability to answer self-referent questions, i.e., questions dealing with the who, what, where and when of a situation. Does the person recognize the function of and identify those around him or her?

### Perception.

Perception generally refers to the processes involved in the acquisition and interpretation of information from one's environment.[14] There is a relationship between quality of the sensory apparatus and cognitive functioning. Assessment is usually accomplished through observation of an individual's capacity to accurately reproduce a design drawn by an examiner, and to do this with a reasonable degree of coordination and speed.

### Problem-solving.

Problem-solving comprises the set of cognitive activities required to transform one state or condition into another. Reaching a solution to a problem involves three steps: analyzing the given state or condition, determining what new condition is desired, and generating and weighing alternative strategies for getting from the given condition to the desired condition. [15] A naturalistic example of problem-solving would be to ask grocery shoppers to determine the best buys on a particular set of products. An example from the Mini-Mental State Exam

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is the three-stage command: Take a paper in your right hand, fold it in half and put it on the floor.[16]

### Psychomotor ability.

Psychomotor behaviors pertain to motor effects of cerebral or psychic activity that lead to purposeful or goal-directed behaviors.[9]

### Reaction time.

Reaction time in the purest sense is the time that elapses between the application of a stimulus and the resultant reaction.[17] Reaction time is assessed by determining response time to abstract shapes, letters, visual stimuli and words.

### Social intactness.

Socialization is a process of individual integration into society and learning to behave in socially acceptable ways. Social intactness as an adult includes a narrow range of skills and attitudes that are necessary to perform social roles, such as occupational skills.[10] Social intactness is usually determined by assessing the quality and quantity of an individual's social support network and the appropriateness of social interactions.

## Research on Screening Instruments

Many different screening instruments can be used to determine the presence, absence or degree of cognitive impairment. The problem in selecting screening instruments involves their multiple and often coinciding measurement purposes: affective functioning; cognitive functioning; affective and cognitive functioning combined; affective, cognitive and functional abilities combined; functional ability; and mental status. There is overlap between the domains measured within the areas of cognitive function and mental status. Cognitive function is an element of mental status (see Table 1, p. 19). A study might use a screening instrument to assess one domain, such as mental status, and discuss results or outcomes as if the instrument was measuring cognitive function.

This article critically reviews 11 screening instruments used to assess cognitive impairment and mental status in older adults: Dementia of the Alzheimer Type Inventory (DAT),[18] Brief Cognitive Rating Scale (BCRS),[19] Blessed Dementia Scale (BDS),[20] Cognitive Capacity Screening Examination (CCSE),[21] Cognitive Levels Scale (CLS),[22] Function, Reason, Orientation, Memory, Arithmetic, Judgment and Emotional Status (FROMAJE),[23] Global Deterioration Scale (GDS),[24] Mini-Mental State Exam (MMSE),[16] Clinical Dementia Rating Scale,[25] Mental Status Questionnaire (MSQ),[26] and the Short Portable Mental Status Questionnaire (SPMSQ) (see Table 3).[27]

Since mental status and cognitive function are used interchangeably in the literature, assessing the level of Cl is complicated. Precise differentiation of acute confusional states, delirium, dementia, depression and pseudodementia is tricky since the presenting symptoms often overlap. Because many common disorders may cause or simulate dementia, a brief mental-status screening instrument, such as the MSQ, can help evaluate and/or differentiate

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dementia from depression. Depression is often identified through a mental-status examination or a specific screening instrument such as the Beck Depression Inventory.[28] Alzheimer's disease (AD) is difficult to diagnose, but recently developed criteria for use in diagnosing probable, possible and definite AD are available.[29] The BCRS and the DAT are the only two screening instruments capable of distinguishing AD from other dementias.

All older adults in non-psychiatric settings need to be screened routinely with instruments that are reliable and valid. In addition to reliability and validity, instruments must have sensitivity, specificity and predictive value, all of which are necessary for accurate measurement.[30] A screening instrument is sensitive if it correctly classifies a characteristic; it is specific if it correctly identifies the absence of a characteristic; and it is predictive if a positive characteristic identified is truly present. Eleven instruments, used as screening devices for research on CI, are summarized, evaluated and reviewed for their usefulness in clinical practice in Table 4 (p. 23). This list does not include instruments specifically measuring levels of depression or functional ability. However, functional ability may be a component or a subcategory within an instrument.

## Dementia of the Alzheimer Type Inventory (DAT)

The DAT was designed to distinguish AD from other dementias and is used in the differential diagnosis of SDAT. The DAT measures the clinical signs and symptoms of abnormal cognition, amnesia, aphasia, inappropriate lack of concern, normal motor functions and visuospatial skills. The authors suggest applying the DAT to patients who meet the criteria for a dementia syndrome, but for whom the etiology is unknown. In a retrospective study of 50 patients, the DAT correctly identified 100 percent of those individuals with SDAT and 94 percent of those individuals without SDAT.[18] The DAT has limited usefulness with patients who present atypical signs and symptoms of AD.

## Global Deterioration Scale (GDS)

The GDS includes seven broad stages and was initially developed to differentiate the characteristics of normal aging, age-associated memory impairment (AAMI) and primary degenerative dementia, particularly AD. GDS stages range from one — no cognitive decline — to seven — very severe cognitive decline.[31] The scale is useful for clinicians and health care providers in assessing the magnitude and progression of cognitive decline and functional ability.[32–33] The GDS has been tested successfully as a screening instrument with individuals in the community[34–36] and with residents in long-term care facilities.[37]

## Brief Cognitive Rating Scale (BCRS)

The BCRS, a companion to the GDS, was developed as a multiaxial rating scale to assess clinical symptomatology of cognitive decline in age-associated memory impairment (AAMI), AD and primary degenerative dementia.[38–40] The BCRS has seven sections and is divided into five axes: concentration, recent memory, past memory, orientation, and functioning and self-care. The BCRS uses seven rating points that correspond to the seven stages of cognitive decline within each axis and range from not present or normal to very

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severe. The BCRS is reliable and can be used easily by examiners of different professional backgrounds and experience. The instrument can assess the magnitude of CI in patients within a long-term care facility or an office.[26] Axis five — functioning and self-care — is unable to predict level of care based on diagnosis. The BCRS has also been used as a cognitive screening instrument in a study of agitated behaviors in nursing home residents.[41]

## Blessed Dementia Scale (BDS)

The BDS is a 17-item screening instrument used to determine the presence of dementia. It contains items that measure changes in everyday activities and habits, and in personality, interests and drives. This screening instrument has been recognized as a quantitative aid in the clinical examination for Alzheimer's disease by the National Institute of Neurological and Communicative Disorders and Stroke and the Alzheimer's Disease and Related Disorders Association work group.[29] The BDS is sensitive and specific as a screening test for dementia, as well as for activities of daily living and transitional health status.[42–46]

Conflicting results, however, have been found in longitudinal studies of AD and SDAT subjects concerning prediction of the course of the illness. In a longitudinal study of more than 30 months, the BDS, Face-Hand Test and the SPMSQ were unable to predict the progression or stability of the clinical course.[46] Age at onset was not found to be a strong predictor of the rate of progression of dementia in AD patients. Progression of dementia was predicted in 77 of the 165 patients diagnosed with AD after repeated administrations of the BDS over a five-year period.[47]

## Clinical Dementia Rating (CDR)

The CDR rates global cognitive performance and degree of dementia in six major categories: memory, orientation, judgment and problem-solving, community affairs, home and hobbies, and personal care. It summarizes those ratings into a single score. Level of impairment is rated along a five-point scale from none to severe.[48] The instrument has been tested in longitudinal studies of patients with SDAT[49–50] and is a reliable indicator when used by various clinicians and health care providers.[51–52] Agreement between clinical nurse specialists and physicians was higher at the two extremes of the dementia scale—questionably demented (CDR 0.5) or severely demented (CDR 3). Lowest agreement occurred when a patient was rated mildly demented (CDR 1) or moderately demented (CDR 2).

## Cognitive Capacity Screening Examination (CCSE)

The CCSE, a 30-item questionnaire, was developed as a sensitive instrument for detecting the presence of an organic mental syndrome, e.g., delirium in the medically ill. The CCSE measures domains other screening instruments do not measure (areas of abstraction and language) and has been tested with geriatric patients.[7] Foreman evaluated the reliability and validity of three mental-status instruments — CCSE, MMSE and the SPMSQ — with hospitalized medical-surgical patients, 65 years of age or older.[53] The CCSE was found to be the most valid and reliable measure of mental status. However, it is more appropriate for

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cognitively intact patients than for patients with moderate to severe CI, and it is not specific enough to differentiate among types of dementias.[54] Disadvantages of using the CCSE include the five-minute time limit, educational level of the individual and the instrument's inability to differentiate levels of CI.

## Cognitive Levels Scale (CLS)

The CLS is a method for measuring cognitive disabilities and the degree of social dysfunction in people with mental disorders. Cognitive disabilities, according to the CLS, are divided into six levels, from profoundly disabled (level one) to normative behavior (level six). The levels were derived from observations of acutely ill psychiatric patients made by physical therapists during therapy sessions. The theoretical descriptions are applied to routine tasks and have implications for functioning at home and at work. In a nursing study, the CLS was used as a screening instrument to predict visual deficits of AD patients. The 12 subjects had cognitive levels from two through five, according to the CLS scale.[55]

## FROMAJE

The FROMAJE was developed to assist primary care clinicians and other health care providers in mental-status testing. Its primary purpose is to rule out dementia by classifying individuals into the four categories of normal behavior, mild dementia, moderate dementia and severe dementia. The acronym FROMAJE represents seven aspects of mental status: function, reason, orientation, memory, arithmetic, judgment and emotional status. A nursing study investigated the effectiveness of two screening instruments with AD patients: the CADET, measuring self-care abilities, and the FROMAJE, measuring mental status.[56] The FROMAJE verified that AD patients have a severe level of dementia; however, it indicated a broad range of self-care abilities in these patients. The FROMAJE has also been used successfully in a long-term care facility for eight years.[57] The FROMAJE's major limitations are its dependence on language ability, cultural biases, and difficulties in administering it to hearing- or vision-impaired patients. An emotional rating of three points, possibly from depression, may cause a false positive for dementia.

### Mental Status Questionnaire (MSQ)

The MSQ was developed as a brief, 10-item, objective and quantifiable measure of mental functioning associated with chronic brain syndrome, and it is limited in differentiating other kinds of psychiatric disorders.[58–61] The MSQ is a powerful discriminator of mental status in medical geriatric patients and an adequate predictor of competence in simple self-care.[62–63] The MSQ has been used as a screening device in studies within the community[56,64–66] and in long-term care facilities.[26,67–68] Two items on the MSQ are very significant: knowing one's date of birth and naming the previous U.S. president. The MSQ has been used as a screening instrument in nursing studies of elderly hip-fractured patients who have acute confusional states,[69] and in studies of types of health education with nursing home residents.[70] The MSQ is highly influenced by the patient's subcultural background, e.g., education, ethnicity and immigrant group.[47,71] A criticism of the MSQ is that greater specificity is achieved at the cost of reduced sensitivity. In other words, mildly affected individuals maybe

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falsely labeled as having dementia.[56] The MSQ is highly useful for recognizing individuals with moderate to moderately severe dementia and in predicting institutionalization.[72]

### Mini-Mental State Exam (MMSE)

A popular screening instrument, the MMSE is used for determining levels of CI It contains 11 questions, and no time limit is placed on its administration. The MMSE has been recognized as a quantitative aid in the clinical examination for AD by the National Institute of Neurological and Communicative Disorders and Stroke and the Alzheimer's Disease and Related Disorders Association work group.[18] The MMSE has been effective in the assessment of levels of CI in the community[1,32,35–36,72,74–80,85–86] and in hospitals[81–83] and in the prediction of institutionalization.[63,72–74,84]

The MMSE is sensitive and specific in detecting delirium and dementia in patients at a general hospital[85–86] and in residents of long-term care facilities.[87] Hospitalized patients with moderate to severe Cl may be screened with the MMSE.[39] The MMSE is also a useful screening instrument for neurological patients[88] and as a predictor of functional ability[89] in community-dwelling individuals.[90] However, in the elderly (over 60 years of age) and the poorly educated (less than 8th grade), the MMSE may overestimate the prevalence of delirium and dementia when used as the sole criterion. The MMSE is unable to differentiate patients with depression from patients with dementia, due to equal numbers of not correct responses,[91–92] and may underestimate CI in psychiatric patients.[93] Another criticism of the MMSE is that greater specificity is achieved at the cost of reduced sensitivity.[56,63] In other words, mildly affected individuals may be falsely labeled as having dementia. The MMSE is highly useful for recognizing individuals with moderate to moderately severe dementia. A modified version of the MMSE, the 3MS, is now available and incorporates four added items, more graded scoring (0 to 100), and minor changes.[94] Most notably, it includes a broader range of cognitive functions and wider coverage of difficult levels. To be more culturally relevant, the 3MS also includes items such as date and place of birth, body parts, laughing/crying, and eating/sleeping.

### Short Portable Mental Status Questionnaire (SPMSQ)

The SPMSQ, a 10-item questionnaire, was developed to detect the presence of intellectual impairment in older adults living in the community and residing in institutions. Three significant items on the SPMSQ are date of birth (day, month, year), naming the previous president and naming the day of the week.[53] The SPMSQ may be administered by a range of clinicians and health care providers, and is reliable in detecting the presence of organicity.[95] The SPMSQ classifies CI into three categories: minimal, moderate and severe.[96] However, a normal score on the SPMSQ (≤ 2) should be regarded as non-specific rather than suggestive of normal brain functioning.[97]

The SPMSQ has been used effectively in the National Long-Term Care Channeling Demonstration Project, as a screening instrument to determine if case management affected entry into nursing homes.[98] Nurses have used the SPMSQ as a screening instrument when investigating topics such as confusion;[99–102] mental status,[38] risk factors for AD,[103] Sundown Syndrome;[104] and a theoretical model of cognitive disturbance.[105] The SPMSQ is

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not, however, an adequate predictor of self-care capacity,[106] nor is it a predictor of progression or stability of the clinical course.[50]

### Other Instruments

Numerous other screening instruments are available to measure affective functioning; cognitive functioning; affective and cognitive functioning combined; affective, cognitive and functional abilities combined; functional ability; and mental status. These are mentioned only for reference and were not critiqued in this article for a number of reasons, primarily lack of available published research. Presence of Cl can be determined by the following instruments: Levels of Cognitive Functioning,[107–108] Neurobehavioral Rating Scale,[109] Cambridge Mental Disorders of the Elderly Examination,[74,79,110–111] Crichton Geriatric Behavioral Rating Scale.[112–113] The Mental Status Examination[114] was developed to describe changes in mental status and has been tested with older adults living in nursing homes.[115] The Extended Mental Status Questionnaire consists of 14 items in addition to those found in the MSQ.[116] The Brief Symptom Inventory,[117–118] the Standardized Psychiatric Interview,[119] the Sandoz Clinical Assessment,[120] the Geriatric Mental State Schedule[121] and the Comprehensive Psychopathological Rating Scales[122] screen for psychopathology in older adults. Combined cognitive function and functional ability scales include the Psychogeriatric Dependency Rating Scale,[123] the Functional Dementia Scale,[124] the Glasgow Outcome Scale,[125–126] and the Dementia Behavior Scale.[127–129]

## Conclusion

When selecting a screening instrument, the tool's purpose should be clearly understood, i.e., cognitive function, mental status and/or combinations of those categories. Typically with screening instruments, adults with less than an eighth-grade education may be identified incorrectly as cognitively impaired. By design, screening instruments are best suited to measure the presence, absence and severity of impairment. When screening instruments are selected as quick assessment tools, clinicians and health care providers need to be discriminating in their choices and base their selections on their purposes for using the instruments. Screening instruments were never designed to be the sole measure of cognitive function or mental status.

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**TABLE 1**

Domains Assessed in Mental Status, Cognitive Function and Dementia

| Mental status | Cognitive function | Dementia |
|---|---|---|
| — | Attention span | Attention span |
| Affect and mood | — | — |
| Level of consciousness | — | Level of consciousness |
| General speech | — | — |
| — | Learning ability | — |
| Intellectual performance: | Intelligence: | Intellectual performance: |
| Abstraction | — | Abstraction |
| Attention | — | — |
| Concentration | Concentration | — |
| Insight | — | — |
| Judgment | Judgment | Impaired judgment |
| Memory | Memory | Memory impairment |
| Orientation | Orientation | Disorientation |
| Thought content | — | — |
| — | Perception | Perceptual disturbances |
| — | — | Personality changes |
| — | Problem solving | — |
| Physical appearance and behavior | — | — |
| — | Social intactness | — |
| Psychomotor behavior | Psychomotor ability | Psychomotor activity |
| — | Reaction time | — |
| — | — | Sleep-wake cycle disturbances |

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**TABLE 2**

Domains Assessed by 11 Screening Instruments

| | BCRS | BDS | CCSE | CLS | DAT | FROMAJE | CDS | MMSE | CDR | MSQ | SPMSQ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Abstraction | | | ✓ | | ✓ | ✓ | ✓ | | | | |
| Affect | | ✓ | | | ✓ | ✓ | ✓ | | | | |
| Attention span | | ✓ | ✓ | | | | ✓ | ✓ | | | ✓ |
| Concentration | ✓ | ✓ | | | | | ✓ | | | | |
| Consciousness | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | | | ✓ |
| Construction ability | | | | | ✓ | | ✓ | ✓ | | | |
| Functional ability | ✓ | ✓ | | ✓ | | ✓ | ✓ | | | | |
| General knowledge | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| Hobbies | | | | | | | | | ✓ | | |
| Intelligence | | ✓ | | | | | ✓ | | | | |
| Judgment | | ✓ | ✓ | | | ✓ | ✓ | | ✓ | | |
| Language | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | | | |
| Learning ability | | ✓ | | | ✓ | | ✓ | | | | |
| Memory | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Orientation | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Perception | | ✓ | | ✓ | | | ✓ | | | | |
| Problem solving | | ✓ | | | | | ✓ | | ✓ | | |
| Psychomotor ability | | ✓ | | ✓ | ✓ | | ✓ | | | | |
| Reaction time | | | | | ✓ | | | | | | |
| Self care | ✓ | ✓ | | ✓ | | | ✓ | | ✓ | | |
| Social intactness | | ✓ | | ✓ | | | ✓ | | | | |
| Thought content | | ✓ | ✓ | | | ✓ | ✓ | ✓ | | | ✓ |

Key to Abbreviations

BCRS — Brief Cognitive Rating Scale

BDS — Blessed Dementia Scale

CCSE — Cognitive Capacity Screening Examination

CDR — Clinical Dementia Rating

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CLS — Cognitive Levels Scale

DAT— Dementia of the Alzheimer Type Inventory

FROMAJE — Function, Reason, Orientation, Memory, Arithmetic, Judgment and Emotional Status

GDS — Global Deterioration Scale

MMSE — Mini-Mental State Exam

MSQ — Mental Status Questionnaire

SPMSQ — Short Portable Mental Status Questionnaire

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## TABLE 3

Sources for Additional Information about Screening Instruments

**BCRS and CDS**

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**CDR**

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**TABLE 4**

Summary of Uses of Screening Instruments

| | BCRS | BDS | CCSE | CLS | DAT | FROMAJE | GDS | MMSE | CDR | MSQ | SPMSQ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rapid clinical assessment | ✓ | ✓ | ✓ | | | ✓ | | ✓ | ✓ | ✓ | ✓ |
| Etiology of cognitive decline is unknown | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| Differential diagnosis — rule out dementia | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ |
| Distinguish among dementias | ✓ | | | | ✓ | | | | | | |
| Magnitude of decline | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Predict functional ability | ✓ | ✓ | | ✓ | | ✓ | ✓ | | ✓ | | |

Key to Abbreviations

BCRS — Brief Cognitive Rating Scale

BOS — Blessed Dementia Scale

CCSE — Cognitive Capacity Screening Examination

CDR — Clinical Dementia Rating

CLS — Cognitive Levels Scale

DAT — Dementia of the Alzheimer Type Inventory

FROMAJE — Function, Reason, Orientation, Memory, Arithmetic, Judgment and Emotional Status

GDS — Global Deterioration Scale

MMSE — Mini-Mental State Exam

MSQ — Mental Status Questionnaire

SPMSQ — Short Portable Mental Status Quesionnaire

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