The Clinical Utility of the Cornell Scale for Depression in Dementia as a Routine Assessment in Nursing Homes

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Objective: *To examine the clinical utility of the Cornell Scale for Depression in Dementia (CSDD) in nursing homes.* **Setting:** *14 nursing homes in Sydney and Brisbane, Australia.* **Participants:** *92 residents with a mean age of 85 years.* **Measurements:** *Consenting residents were assessed by care staff for depression using the CSDD as part of their routine assessment. Specialist clinicians conducted assessment of depression using the Semi-structured Clinical Diagnostic Interview for DSM-IV-TR Axis I Disorders for residents without dementia or the Provisional Diagnostic Criteria for Depression in Alzheimer Disease for residents with dementia to establish expert clinical diagnoses of depression. The diagnostic performance of the staff completed CSDD was analyzed against expert diagnosis using receiver operating characteristic (ROC) curves.* **Results:** *The CSDD showed low diagnostic accuracy, with areas under the ROC curve being 0.69, 0.68 and 0.70 for the total sample, residents with dementia and residents without dementia, respectively. At the standard CSDD cutoff score, the sensitivity and specificity were 71% and 59% for the total sample, 69% and 57% for residents with dementia, and 75% and 61% for residents without dementia. The Youden index (for optimizing cut-points) suggested different depression cutoff scores for residents with and without dementia.* **Conclusion:** *When administered by nursing home staff the clinical utility of the CSDD is highly questionable in identifying depression. The complexity of the scale, the time required for collecting relevant information, and staff skills and knowledge of assessing depression in older people must be considered when using the CSDD in nursing homes.* (Am J Geriatr Psychiatry 2015; 23:784–793)

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Depression is recognized as the most common psychiatric disorder in the elderly, leading to poor quality of life, limited activities of daily living, and an increased risk of medical comorbidity and suicide.[1–3] The incidence and prevalence of depression has been consistently high in residential aged care homes (nursing homes, hereafter): ranging from 6% to 24% for major depression and 25%–40% for depressive symptoms or minor depression,[4–7] (in particular among residents with dementia[8,9]). Approximately 52% of all permanent aged care residents in Australia are reported to have mild, moderate, or major depressive symptoms.[10] Similarly, U.S. statistics report 54.4% of the residents in nursing homes are diagnosed with depression over the first year of stay.[11] The treatment and management of depression in nursing homes remain a challenge.[6,7,12] A fundamental issue is the lack of adequate depression assessment in nursing homes, where dementia is common but staff awareness of depression and its assessment are poor, and is associated with limited workforce capabilities and capacity.[13]

Since its introduction in late 1980s, the Cornell Scale for Depression in Dementia (CSDD) has been widely recommended as the preferred measure of depression for people with dementia or cognitive impairment. Its use has also been validated in people without dementia.[14,15] It has good validity, including high sensitivity and specificity in detecting depression when compared against gold standards.[14,16,17] Although the CSDD's internal consistency is excellent, further work is necessary to improve inter-rater reliability.[17,18] Notably, most studies testing the reliability and validity of the CSDD are based on ratings by specialist clinicians or trained researchers. It is not known how reliable the CSDD is when administered by nursing home staff, as there is no standardized process in place to assess the rater's knowledge and skill base prior to administering the CSDD, a condition required by the instrument developers. A U.S. study conducted in long-term care settings found that a modified version (CSDD-M-LTCS) of the CSDD administered by direct care staff who were trained in the use of the CSDD failed to discriminate residents with depression and had low inter-rater reliability.[19] In that study, the low accuracy rates may have been due to assessments relying solely on proxy (other care staff) interviews, rather than on multiple sources of information (e.g., including resident interviews and their medical records).

Few studies have systematically assessed nursing home staff's use of the CSDD as routine assessment. Despite limited evidence concerning skilled use of the CSDD in the nursing home setting, the CSDD has been continually recommended as the tool of choice for assessing depression in older people with and without dementia. The Australian government adopted the CSDD as part of the mandatory Aged Care Funding Instrument (ACFI) in 2008, which is the means of allocating the government subsidy to aged care providers.[20] The ACFI data provide an indication of the relative care needs of nursing home residents and the costs associated with managing such needs. The choice of the CSDD was based on the advice to Government that the tool does not rely solely on self-reporting by people with significant cognitive impairment, such as occurs in dementia, and the demonstrated validity of the CSDD for people with and without dementia.[17] The inclusion of the CSDD as part of the ACFI had the additional purpose of raising awareness of the importance of depression assessment and management in residents, and of addressing the prevailing ad hoc practice of depression assessment in nursing home settings.

Key issues concerning the appropriate use of the CSDD in nursing homes warrant consideration. These include the complex nature of the scale that requires specialist knowledge and skills and the need for adequate time to administer the scale.

The CSDD has been identified as being "a complex instrument that requires specific training in its administration" (p. 37).[21] Two Australian nursing home studies demonstrated that CSDD items 16–19, measuring suicidal ideation, self-deprecation, pessimism and mood-congruent delusions, were frequently omitted by staff as they found it difficult to evaluate ideational disturbance in residents unable to converse comprehensibly.[6,22] A third study using the ACFI data found that the frequency of non-completion for these four items ranged from 41.5% to 43.5% when implemented by a trained research nurse and 50%–54.3% by nursing home staff.[23] Furthermore, the authors found no correlation between the CSDD rating obtained by the trained research nurse and the ACFI depression domain score.[23] It is not surprising, therefore, that 20 of the 98 submissions made to the first Australian national review of the ACFI raised specific concerns about the use of the CSDD—for example, its complexity in obtaining