Measuring Depression in Persons with Spinal Cord Injury
A summary for clinicians

Background

Symptoms of depression are common among people with spinal cord injuries (SCI). Because depressive symptoms can result in a variety of negative outcomes including poorer functional independence and community integration and an increase in secondary complications, clinicians need to know how to measure depression in this population. Accurate screening for depression and measurement of symptom severity are crucial if progress is to be made in clinical practice.

This summary describes a systematic review on the psychometric characteristics of depression measures, including depression screening instruments, measures of symptom severity and diagnostic interviews used in clinical settings with individuals with SCI. The objective of this review was to evaluate the state of the knowledge of the measurement of depression in persons with SCI. Seven scales, used in past studies to evaluate depression symptoms in people with SCI, were identified through a literature search and included in the review: the Beck Depression Inventory (BDI), Center for Epidemiological Studies, Depression (CES-D), Older Adult Health and Mood Questionnaire (OAHMQ), Zung Self-Rating Depression Scale (SDS), Inventory to Diagnose Depression (IDD), Patient Health Questionnaire (PHQ-9), and the Structured Clinical Interview for the DSM (SCID).

The BDI, CES-D, OAHMQ and the SDS are Depression Severity Measures, the IDD and the PHQ-9 are Depression Screening Measures and the SCID, is a diagnostic interview.

Key Results

Currently, there is not sufficient evidence to place any single measure above any others as the most preferable one to use. We present our results by type of depression measure: depression severity, depression screening and diagnostic interview.

Depression Severity Measures

- The BDI is the most widely used of all the instruments included in this review. It was used in 44 studies with 2 studies reporting psychometric data. Internal consistency is excellent, sensitivity and specificity are reported high.

2 Internal consistency reliability is used to judge the consistency of results across items on the same test.
3 The sensitivity of a measure refers to how well a screening instrument detects a target disorder in a person who actually has the disorder or problem.
4 Specificity refers to the ability of a screening measure to successfully identify those people without the target disorder or problem.
5 AUC values of .0.80 or higher indicate good-to-excellent diagnostic accuracy.
• CESD was used in 37 studies, with psychometric data reported in 12 studies. Internal consistency is reported good to excellent with high sensitivity and modest specificity.

• OAHMQ was used in 11 studies, with psychometric data reported in 4. Internal consistency is excellent. Neither sensitivity nor specificity has been reported.

• SDS was used in 8 studies, with 1 reporting psychometric data. Internal consistency is excellent with high sensitivity and moderate specificity.

Depression Screening Measures

• The IDD was used in 11 studies, with psychometric data reported in 2. Internal consistency was not reported; sensitivity and specificity varied by condition (paraplegia or tetraplegia.

• PHQ-9 was used in 5 studies, with psychometric data reported in 2. Internal consistency is excellent. Neither sensitivity nor specificity was reported.

Diagnostic Interview

• SCID was used in 1 study that reported psychometric data. Good test-retest reliability was reported.

Our Systematic Review Process

**Search strategy:** We searched English-language peer-reviewed citations from MEDLINE, CINAHL, PsychINFO, ProQuest, Google Scholar and Web of Science.

**Selection criteria:** Articles that reported a study of depression in persons with SCI; published after 1980; written in English; conducted in adults older than 18 years of age; study population included persons with SCI (but need not exclusively be SCI) and were peer reviewed.

*Two reviewers* screened 377 abstracts on SCI and depression topics to identify 144 containing classifiable psychometric data and independently abstracted data. Disagreements were resolved through discussion.

**Twenty-four studies** reporting psychometric data on 7 depression measures in SCI samples were identified, including 7 validity studies.

Clinical Tip

Although there is not enough evidence to support any single measure above others, use measures such as those listed here that have some support for reliability and/or validity over those with no available data.

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6 In test-retest reliability, the test is administered twice at two different points in time to assess the consistency of a test across time, during which no actual change is expected.