Center for Epidemiological Studies Depression Scale (CES-D and CES-D-10)

Assessment Overview

Assessment Area

ICF Domain:
Body Function
Subcategory:
Mental Functions

You Will Need

Length:
5-10 minutes, 10 (CES-D-10) or 20 (CES-D) items
Scoring:
Items scored 0-4. Total score is the sum of all items: 0-30 for CES-D-10 and 0-60 for CES-D. Higher scores indicate greater symptoms
Training:
None but knowledge about depression and mental health is helpful

Summary

The Center for Epidemiological Studies Depression Scale (CES-D) was developed to identify current depressive symptomatology related to major or clinical depression in adults and adolescents. It is a screening measure (NOT a diagnostic tool).

Items include depressed mood, feelings of guilt, worthlessness and helplessness, psychomotor impairment, loss of appetite and sleep difficulties. There are 10 and 20 item versions of the scale. The most commonly used version of the CES-D is the 20-item version; thus when articles state CES-D, they usually refer to the 20 item version. The CESD-R (not discussed here) was developed in 2004 as a revision of the original CES-D.

Availability

Worksheet: Can be found here.

Languages: Translations are available

Assessment Interpretability

Minimal Clinically Important Difference

Not established in SCI

Statistical Error

Not established in SCI

Typical Values

Mean (Range) CES-D score:
15.2 (0-42)
39% of sample scored over 15
30% of sample scored over 19

(Miller et al. 2008; n=47; 30 males, 17 females; mean age: 40.6 years; 20 ASIA A, 18 ASIA B; > 1 year post-SCI)

Using CES-D score of ≥16:
True Positive = 163, False Negatives = 24, False Positives = 34, True Negatives = 115.
Positive Predictive Value = 0.827, Negative Predictive Value = 0.827
Likelihood ratio = 3.82

(Kennedy et al. 2019, military service members with a history of mild traumatic brain injury; Depressive Disorder Diagnosis: N=187 (87.2% male), mean age (SD): 38.48 (7.53); No Depressive Disorder Diagnosis: N=149 (86.6% male), mean age (SD): 36.72 (7.80))

Measurement Properties

Validity – Low to High

Low to High correlation with SF-36 subscales:

CES-D: r = 0.27-0.75

CES-D-10: r = 0.37-0.71

Moderate correlation with Visual Analogue Scale – Fatigue:

CES-D: r = 0.52

CES-D-10: r = 0.57

(Miller et al. 2008; n=47; 30 males, 17 females; mean age: 40.6 years; 20 ASIA A, 18 ASIA B; > 1 year post-SCI)

Moderate correlation between CES-D and Fatigue Severity Scale:

r = 0.58

(Anton et al. 2008; n=48, 31 males, 17 females; mean age: 40.4 years; 48 motor complete SCI, 26 tetraplegia, 30 ASIA A; mean time since injury: 14.9 years)

Moderate to High area under the curve (ROC) analysis:

AUC (SD) = 0.897 (0.017)

95% CI = 0.864-0.931

(Kennedy et al. 2019, military service members with a history of mild traumatic brain injury; Depressive Disorder Diagnosis: N=187 (87.2% male), mean age (SD): 38.48 (7.53); No Depressive Disorder Diagnosis: N=149 (86.6% male), mean age (SD): 36.72 (7.80))

Number of studies reporting validity data: 4

Reliability – Low to High

Low to High Test-retest Reliability:

CES-D ICC = 0.87

CES-D-10 ICC = 0.85

Items ICC = 0.11-0.73

(Miller et al. 2008; n=47; 30 males, 17 females; mean age: 40.6 years; 20 ASIA A, 18 ASIA B; > 1 year post-SCI)

High Internal Consistency:

CES-D-20 α = 0.89-0.91

(Miller et al. 2008; n=47; 30 males, 17 females; mean age: 40.6 years; 20 ASIA A, 18 ASIA B; > 1 year post-SCI)

(Rintala 2013; n=69, 69 males; ASIA A-D; paraplegia and tetraplegia; mean (SD) time since injury: 12.8(7.2) years)

Number of studies reporting reliability data: 3

Responsiveness

Floor/Ceiling Effect:
Not established in SCI

Effect Size:
Using a cut point of 16 or more on CES-D total score:
Sensitivity = 0.87
Specificity = 0.77
Accuracy = 82.7%
Youden index = 0.644

(Kennedy et al. 2019, military service members with a history of mild traumatic brain injury; Depressive Disorder Diagnosis: N=187 (87.2% male), mean age (SD): 38.48 (7.53); No Depressive Disorder Diagnosis: N=149 (86.6% male), mean age (SD): 36.72 (7.80))

Number of studies reporting responsiveness data: 2