

# 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 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 retardation, 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

Available for free here:

[https://scireproject.com/wp-content/uploads/worksheet\\_center\\_for\\_epidemiologic\\_studies\\_depression\\_scale\\_ces-d.pdf](https://scireproject.com/wp-content/uploads/worksheet_center_for_epidemiologic_studies_depression_scale_ces-d.pdf)

**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; mixed injury types; > 1 year post-SCI)

**Using CES-D score of  $\geq 16$ :**

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, 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; mixed injury types; > 1 year post-SCI)

#### **Moderate** correlation between CES-D and Fatigue Severity Scale:

$r = 0.58$

(Anton et al. 2008; n=48, 31 males; mixed injury types; mean 14.9 years post-SCI)

#### **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, 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; mixed injury types; > 1 year post-SCI)

#### **High** Internal Consistency:

CES-D-20  $\alpha = 0.89-0.91$

(Miller et al. 2008; N=47, 30 males; mixed injury types; > 1 year post-SCI)

(Rintala 2013; N=69, all male; mixed injury types; 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, 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**