

Center for Epidemiologic Studies Depression Scale

Radloff, L. S.

1977

Description of Measure

Purpose

To measure self-reported symptoms associated with depression experienced in the past week.

Conceptual Organization

The Center for Epidemiologic Studies Depression Scale (CES-D) includes 20 items comprising six scales reflecting major dimensions of depression: depressed mood, feelings of guilt and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite, and sleep disturbance.

Item Origin/Selection Process

The items were selected from a pool of items from previously validated depression scales (e.g., Beck, Ward, Mendelson, Mock, & Erbaugh, 1961; Gardner, 1968; Raskin, Schulterbrandt, Reatig, & McKeon, 1969; Zung, 1965). The main components of depressive symptomatology (depressed mood, feelings of guilt and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite, and sleep disturbance) were identified from clinical literature and factor analyses.

Materials

Non-copyrighted form is included in this manual. Also see Radloff (1977).

Time Required

5 minutes.

Administration Method

The CES-D may be self or interviewer-administered. If all the respondents in a study are literate, the form may be self-administered with appropriate instructions. If the inventory is

interviewer-administered, it is helpful for the interviewer to give the respondent a card listing the response choices.

Training

Minimal

Scoring

Score Types

Response categories indicate the frequency of occurrence of each item, and are scored on a 4-point scale ranging from 0 (rarely or none of the time) to 3 (most or all of the time). Scores for items 4, 8, 12, and 16 are reversed before summing all items to yield a total score. Total scores can range from 0 to 60.

Score Interpretation

Higher scores (both item and total scores) indicate more depressive symptoms. A score of 16 or higher has been used extensively as the cut-off point for high depressive symptoms on this scale (Radloff, 1977). However, false positives on the order of 15% to 20% have resulted from use of this cut-off point, leading some researchers to suggest that a higher cut-off point be used (Boyd, Weissman, Thompson, & Myers, 1982; Zich, Attkisson, & Greenfield, 1990).

Psychometric Support

Reliability

The CES-D has been shown to be a reliable measure for assessing the number, types, and duration of depressive symptoms across racial, gender, and age categories (Knight, Williams, McGee & Olaman, 1997; Radloff, 1977; Roberts, Vernon, & Rhoades, 1989). High internal consistency has been reported with Cronbach's alpha coefficients ranging from .85 to .90 across studies (Radloff, 1977).

Validity

Concurrent validity by clinical and self-report criteria, as well as substantial evidence of construct validity have been demonstrated (Radloff, 1977). However, there is evidence that the

CES-D, while a useful measure of the level of depressive symptoms, may not be a good tool for screening for clinical depression or major depression (Roberts, Vernon, & Rhoades, 1989).

LONGSCAN Use

Data Points

Pre-Age 4: MW & NW sites only

Age 4, 6, 12: all sites

Age 14: Optionally administered by sites

Respondent

Primary maternal caregiver

Mnemonic and Version

DEPA: Pre-Age 4, Age 4, & Age 6

DEPB: Age 12 & 14. No change. Version was changed because of a change in the data entry system.

Rationale

Depression is a well-established risk factor for inadequate care giving (Downey & Coyne, 1990). The CES-D was selected for the LONGSCAN study because it is one of the best known and most widely used measures of depressive symptomatology in the general population, with documented reliability and validity in the published literature.

Administration and Scoring Notes

The CES-D was administered to primary caregivers in the LONGSCAN consortium at the Age 12 interview using an audio-computer administered self-interview (A-CASI). Prior to this administration was done using a paper and pencil format. A study comparing the administration of the CES-D by conventional versus the computerized method found no significant differences between reported means and variances of the two methods. Equivalent form reliability and internal consistency of the two CES-D forms were both very high (Gonzalez, Spiteri, and Knowlton, 1995).

Results

Descriptive Statistics

Table 1 provides the mean scores on the CES-D based on the responses of caregivers who were administered this instrument at the Age 4 and Age 6 interview by race and study site. Variation in scores are seen across racial categories and study sites. Black caregivers had higher scores than any other race at both interviews. Mean scores on the measure were lowest in the SW site. These lower scores are likely due to the fact that over two-thirds of the children were living with substitute caregivers (relative and non-relative guardians, and adoptive and foster parents), who presumably have greater protective resources than the biological caregivers in LONGSCAN.

Table 1 about here

Table 2 displays the percentages of caregivers scoring at or above the cutoff point at the Age 4 and 6 interviews. Black caregivers showed the highest rates of depressive symptoms at both time points, while Multiracial and caregivers of “Other” races showed the lowest. The EA site, the sample with the greatest percentage of Black respondents, had the highest rates of possible clinical depression. Consistent with the results shown in Table 1, the SW site showed the lowest rates of depressive symptomatology.

Table 2 about here

Reliability

Table 3 provides an assessment of internal consistency of the CES-D, as measured by Cronbach’s alpha, for respondents at the Age 4 and Age 6 interviews. Alpha coefficients, presented by caregiver race and by study site, range from .84 to .92 across the two data points. Like other researchers (See Psychometric Support.), we observed evidence of high internal consistency for the CES-D across all groups at both data points.

Table 3 about here

Validity

To assess the validity of the CES-D, we examined the relationship between scores on the CES-D and scores on two other measures: the Everyday Stressors Index and history of consumption of alcoholic beverages. It was hypothesized that primary caregivers who report more stress on the Everyday Stressors Index (at the Age 4 interview) would also report higher depressive symptoms. This was supported: the estimated correlation between the two measures was .57 ($p < .0001$). We also compared the total scores on the CES-D of primary caregivers who reported having ever drunk alcoholic beverages ($M = 13.0$, $SD = 11.1$) at the Age 4 interview, to those who did not ($M = 11.25$, $SD = 10.39$). We found that caregivers reporting a history of alcoholic beverage consumption were significantly more depressed ($\chi^2(1, 1134) = 6.67$, $p < .01$).

References and Bibliography

Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. Archives of General Psychiatry, 4, 561-571.

Boyd, J. H., Weissman, M. M., Thompson, W. D., & Myers, J. K. (1982). Screening for depression in a community sample. Archives of General Psychiatry, 39, 1195-1200.

Downey, G., & Coyne, C. C. (1990). Children of depressed parents: An integrative review. Psychological Bulletin, 108, 50-67.

Gardner, E. A. (1968). Development of a symptom checklist for the measurement of depression in a population. Unpublished manuscript.

Gonzalez, G. M., Spitier, C. B., & Knowlton, J. P. (1995). An exploratory study using computerized speech recognition for screening depressive symptoms. Computers in Human Behavior, 11, 85-93.

Knight , R. G., Williams, S., McGee, R., & Olanan, S. (1997). Psychometric properties of the Center for Epidemiologic Studies Depression Scale (CES-D) in a sample of women in middle life. Behavior Research & Therapy, 35(4), 373-380.

Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. Applied Psychological Measurement, 1, 385-401.

Raskin, A., Schulterbrandt, J., Reatig, N., & McKeon, J. (1969). Replication of factors of psychopathology in interview, ward behavior, and self report ratings of hospitalized depressives. Journal of Nervous and Mental Disease, 148, 87-96.

Ritchey, F. J., La Gory, M., Fitzpatrick, K. M., and Mullis, J. (1990). A comparison of homeless, community-wide, and selected distressed samples on the CES-Depression scale. American Journal of Public Health, 80(11), 1384-1385.

Roberts, R., Vernon, S. W., & Rhoades, H. M. (1989). Effects of language and ethnic status on reliability and validity of the CES-D with psychiatric patients. Journal of Nervous and Mental Disease, 177, 581-592.

Zich, J. M., Attkisson, C. C., & Greenfield, T. K. (1990). Screening for depression in primary clinics: the CES-D and the BDI. International Journal of Psychiatry in Medicine, 20, 259-277.

Zung, W. W. K. (1965). A self-rating depression scale. Archives of General Psychiatry, 12, 63-70.

Table 1. Mean Scores on the CES-D by Caregiver Race and by Study Site. Ages 4 and 6 Interviews

	Age 4 Interview			Age 6 Interview		
	N	M	(SD)	N	M	(SD)
Total	1246	12.50	(10.87)	1218	11.92	(10.51)
Race						
White	415	11.43	(11.09)	394	11.40	(10.85)
Black	648	13.55	(10.99)	663	12.74	(10.63)
Hispanic	96	10.99	(9.16)	91	10.25	(8.78)
Multiracial	37	12.54	(8.23)	34	9.79	(7.90)
Other	46	10.96	(11.35)	30	9.50	(9.68)
Site						
EA	237	14.11	(10.42)	251	13.28	(9.93)
MW	222	13.86	(11.24)	216	12.75	(10.45)
SO	221	13.91	(11.85)	220	13.53	(12.55)
SW	316	8.72	(9.53)	297	9.09	(9.14)
NW	250	13.33	(10.56)	234	11.74	(10.02)

Source. Age 4 and 6: Based on data received at the LONGSCAN Coordinating Center through 8/24/01.

Table 2. Percentage of Caregivers Scoring above the Cutpoint for High Depressive Symptoms by Caregiver Race and Study Site. Ages 4 and 6 Interviews

	Age 4 Interview		Age 6 Interview	
	N	%	N	%
Total	1246	30.6	1218	30.1
Race				
White	415	27.7	394	27.4
Black	648	33.8	663	32.7
Hispanic	96	27.1	91	28.6
Multiracial	37	24.3	34	23.5
Other	46	26.1	30	23.3
Site				
EA	237	35.9	251	35.5
MW	222	33.8	216	33.3
SO	221	33.5	220	34.6
SW	316	18.7	297	20.2
NW	250	35.2	234	29.5

Source. Age 4 and Age 6: Based on data received at the LONGSCAN Coordinating Center through 8/24/01.

Table 3. Cronbach's Alpha Coefficients for the CES-D by Caregiver Race and by Study Site. Ages 4 and 6 Interviews

	Age 4 Interview	Age 6 Interview
	<i>α</i>	<i>α</i>
Total	.90	.90
Race		
White	.92	.92
Black	.89	.89
Hispanic	.86	.87
Multiracial	.84	.85
Other	.92	.89
Site		
EA	.86	.86
MW	.90	.89
SO	.90	.92
SW	.90	.89
NW	.90	.91

Source. Age 4 and Age 6: Based on data received at the LONGSCAN Coordinating Center through 8/24/01.

Center for Epidemiologic Studies Depression Scale DEPA

THESE QUESTIONS ARE ABOUT HOW YOU HAVE BEEN FEELING LATELY. AS I READ THE FOLLOWING STATEMENTS, PLEASE TELL ME HOW OFTEN YOU FELT OR BEHAVED THIS WAY IN THE LAST WEEK. [*Hand card*]. **FOR EACH STATEMENT, DID YOU FEEL THIS WAY:** [Interviewer: You may help respondent focus on the whichever "style" answer is easier]

0 = Rarely or none of the time (or less than 1 day)?

1 = Some or a little of the time (or 1-2 days)?

2 = Occasionally or a moderate amount of time (or 3-4 days)?

3 = Most or all of the time (or 5-7 days)?

	R	S	O	M	NR
1. I WAS BOTHERED BY THINGS THAT USUALLY DON'T BOTHER ME.	0	1	2	3	--
2. I DID NOT FEEL LIKE EATING; MY APPETITE WAS POOR.	0	1	2	3	--
3. I FELT THAT I COULD NOT SHAKE OFF THE BLUES EVEN WITH HELP FROM MY FAMILY AND FRIENDS.	0	1	2	3	--
4. I FELT THAT I WAS JUST AS GOOD AS OTHER PEOPLE.	0	1	2	3	--
5. I HAD TROUBLE KEEPING MY MIND ON WHAT I WAS DOING.	0	1	2	3	--
6. I FELT DEPRESSED.	0	1	2	3	--
7. I FELT THAT EVERYTHING I DID WAS AN EFFORT.	0	1	2	3	--
8. I FELT HOPEFUL ABOUT THE FUTURE.	0	1	2	3	--
9. I THOUGHT MY LIFE HAD BEEN A FAILURE.	0	1	2	3	--
10. I FELT FEARFUL.	0	1	2	3	--
11. MY SLEEP WAS RESTLESS.	0	1	2	3	--
12. I WAS HAPPY.	0	1	2	3	--
13. I TALKED LESS THAN USUAL.	0	1	2	3	--
14. I FELT LONELY.	0	1	2	3	--
15. PEOPLE WERE UNFRIENDLY.	0	1	2	3	--
16. I ENJOYED LIFE.	0	1	2	3	--
17. I HAD CRYING SPELLS.	0	1	2	3	--
18. I FELT SAD.	0	1	2	3	--
19. I FELT PEOPLE DISLIKED ME.	0	1	2	3	--
20. I COULD NOT GET GOING.	0	1	2	3	--