International Journal of Education and Psychology in the Community
IJEPC
2013, 3(1), January, 7-21

THE ROMANIAN CES-D SCALE: A PROMISING INSTRUMENT FOR CLINICAL AND NON-CLINICAL USE

Michael J. Stevens [*]
Illinois State University, USA

Petru-Madalin Constantinescu [**]
University of Bucharest, Romania

Lavinia Uscătescu [***]
Babeş-Bolyai University, Romania

Bogdan Cezar Ion [****]
University of Bucharest, Romania

Andreea Butucescu [*****]
Ovidius University, Romania

Cristina Gabriela Sandu [******]
University of Bucharest, Romania

Abstract
Since its inception, the Center of Epidemiologic Depression Scale (CES-D; Radloff, 1977) has been a widely used instrument for screening depressive symptoms in the general population, as well as in clinical settings. The CES-D has also been the focus of empirical investigation, translation, and adaptation across the globe, and was shown to have good psychometric properties. Until now, there has been no empirical attempt to translate and adapt the instrument in Romania. In two studies, the CES-D was translated into Romanian using the 'translation-back-translation' method (Brislin,

Correspondence concerning this paper should be addressed to:

[*] Ph.D., DHC, Illinois State University; Address for correspondence: Michael J. Stevens, Department of Psychology, Illinois State University, Campus Box 4620, Normal, IL 61790-4620, USA. E-mail: *mjsteven@ilstu.edu*

[**] M.A., University of Bucharest, Faculty of Psychology and Educational Sciences; Address: sos. Panduri, no. 90, Bucharest, Romania. E-mail: *petrumadalin@gmail.com*

[***] M.A., Babeş-Bolyai University, Faculty of Psychology and Educational Sciences, Department of Psychology; Address: St. Republicii, no. 37, Cluj-Napoca, CJ 400015, Romania. E-mail: *lavinia.carmen.u@gmail.com*

[****] Ph.D., University of Bucharest, Bucharest, Romania. E-mail: *egoniq@yahoo.com*

[*****] M.A., Ovidius University of Constanţa, Educational and Psychological Counseling Center; Address: Bd. Mamaia, no. 124, Constanţa, Romania. E-mail: *butucescu_andreea@yahoo.com*

[******] M.A., University of Bucharest, Faculty of Psychology and Educational Sciences; Address: sos. Panduri, nr. 90, Bucharest, Romania. E-mail: *cristina.gabriela.sandu@gmail.com*

1970). The equivalence of the translated version was tested using Butcher and Gur's (1974) bilingual test-retest technique as per International Test Commision requirements (Hambleton & Patsula, 1999). Additionally, test-retest and internal consistency reliabilities were calculated. The results established a suitable translation and good reliability for the instrument. In the second study, we provide evidence of the concurrent and convergent validity of the Romanian CES-D.

Keywords: CES-D, test adaptation, clinical assessment

Development of the CES-D

The Center for Epidemiologic Studies Depression Scale (CES-D) is a 20-item, self-report scale designed to measure depressive symptomatology in the general population. The scale was especially created for use in studies regarding the relationships between depression and other variables across population subgroups (Radloff, 1977).

CES-D items are mostly concerned with the affective component of depression, that is, depressed mood. They were selected from a pool of items belonging to previously validated depression scales (e.g., Beck, Ward, Mendelson, Mock, & Erbaugh, 1961; Raskin, Schulterbrandt, Reatig, & McKeon, 1969; Zung, 1965). The clinical literature and factor-analytic studies were also reviewed in order to make a selection based on the major components of depressive symptomatology.

Each response is scored from 0 to 3 according to how frequently the symptoms occur. The range of scores varies from 0 to 60, with higher scores indicating more frequent symptoms. The usual cut-off score for clinically depressive symptoms is 16 (Radloff, 1977).

Psychometric Properties of the CES-D

The CES-D has been translated into several languages and its psychometric properties have been tested in African-American, Asian-American, French, Greek, Hispanic, Japanese, and Yugoslavian populations (Naughton & Wiklund, 1993)

Reliability

Radloff (1977) reported high reliability for the CES-D. International consistency and test-retest reliabilities were determined. The design involved a normal sample whose correlations where compared with those of seriously depressed persons. Radloff expected considerable heterogeneity in the normal sample, with many participants experiencing a few depressives symptoms and a few experiencing many. This fact may have resulted in low inter-item and item-scale correlations. Radloff expected higher international consistency reliability in the depressed sample, which was confirmed. Additionally, alpha and Spearman-Brown coefficients where higher in the patient sample (about .90). The English and the Spanish versions of the measure also attained higher reliability, with Cronbach alphas of .91 and .92 (Leykin, Torres, Aguilera, & Muñoz, 2010). Some researchers indicated an internal consistence slightly lower. For example, Williams et al. (2007) found r=.74 in a sample of Africa-American women.

Regarding the test-retest method, which was calculated on time intervals ranging from 3 to 12 months, Radloff (1977) reported that shorter test-retest intervals produced higher correlations than did longer intervals. All of these findings favor use of the CES-D in the epidemiological study of depression.

Validity

After its publication, the CES-D was shown to have a good specificity and sensitivity for identifying depressive disorders both in community samples (Boyd, Weissman, & Thompson, 1982) and other populations, especially primary-care patients and general inpatients (Caracciolo & Giaquinto, 2002; Schroevers, Sanderman, van Sonderen, & Ranchor, 2000; Weissman, Schlomskas, Pottenger, Prusoff, & Locke, 1977). Moreover, the CES-D shows high convergent validity with both the Beck Depression Inventory (BDI) (r=.81) and the Zung measure of depression (r=.90), and is highly accurate in detecting depression among acute depressives, alcoholics, and schizophrenics (Weissman et al., 1977). For a comprehensive review of the studies conducted before the year 2000 on the psychometric properties of the CES-D, see Radloff and Locke (2000).

The CES-D is used often when screening for depression, and continues to prove its psychometric soundness. When used for clinical purposes, the

criterion validity of the CES-D revealed a specificity of 57% in orthopedic patients and 36% in neurological patients and a sensitivity of 100% for major depressive disorder in both groups; its positive predictive value was 24% in orthopedic patients and 31% in neurological patients (Caracciolo & Giaquinto, 2002).

In a validation study on the Colombian general population (Arias, Martinez, Jaimes, Afanador, & Hernandez, 2007), a cut-off score of 30 identified most accurately persons with major depressive episode. With this cut-off score, the sensitivity was .55, specificity was .95, positive predictive value was .69, negative predictive value was .91, and Cohen`s Kappa was .54.

The optimal cut-off score of the CES-D varies with different populations. A study that included a group of Japanese workers showed that a cut-off score of 19 reduced false positives with a minimum loss of sensitivity (sensitivity = 92,7%, specificity = 91,8%, positive predictive value = 17,6%, negative predictive value = 99,9%). The optimal cut-off score for first-visit psychiatric patients in Japan whose prevalence rate of depression was 38.9% was 26 if greater emphasis is placed on sensitivity, 31 if equal weight is placed on sensitivity and specificity, and 34 if specificity is considered more important (Furukawa, Hirai, Kitamura, & Takahashi, 1997). The optimal cut-off score for older Chinese was 22 (sensitivity = .75, specificity = .51) using the diagnosis made by a physician as the gold standard (Cheng & Chan, 2005).

Another study (Haringsma, Engels, Beekman, & Spinhoven, 2004) included a group of elderly Dutch community residents who were self-referred to a prevention program for depression. The study assessed the criterion validity of the CES-D with the Mini International Neuropsychiatric Interview (MINI), a clinical diagnostic interview based on the DSM-IV. For major depressive disorder, the optimal cut-off score was 25, (sensitivity = 85%, specificity = 64%, positive predicted value = 63%). For clinically relevant depression, the optimal cut-off was 22 (sensitivity = 84%, specificity = 60%, positive predicted value = 77%).

Factor Structure

Even though Radloff (1977) originally recommended that a total score be used with the CES-D in epidemiological studies, a number of factors emerged in the original research. These factors are: depressed affect, positive affect, somatic and retarded activity, interpersonal (Radloff, 1977). Other

research identified alternative factor structures for the CES-D (e.g., Makambi, Williams, Taylor, Rosenberg, & Adams-Campbell, 2009). Research also showed the factors depended on the meaning of depressive symptoms assigned in different cultures (Leykin et al., 2010), and that the relationship between factors vary according to different socioeconomic levels (Williams et al., 2007). However, the four-factor model originally developed seems to offer the best fit for the factor structure of the CES-D (e.g., Nguyen, Kitner-Triolo, Evans, & Zonderman, 2004).

Usefulness of the CES-D

Even though the CES-D was originally designed to measure depression in the general population (Radloff, 1977), other research has revealed its usefulness in detecting depression in people with other disorders, including patients with multiple sclerosis (Pandya, Metz, & Patten, 2005), epilepsy (Naserbakht, Shabani, Teimoori, Gholami, & Asl, 2008), cancer (Schroevers et al., 2000), dementia (Cheng & Chan, 2008), diabetes (Sultan & Fisher, 2010), and medical-surgical patients (Goldberg, 1985), as well as screening out non-depressed patients (Li & Hicks, 2010). In fact, studies have found that the CES-D has predictive value with respect mental health concerns besides depression (Patten, Lavorato, & Metz, 2005). Most studies, however emphasize the fact that the CES-D can be used as a screening tool, although one study found that the CES-D performed better than the BDI in discriminating depressives and assessing depressive severity (Santor, Zuroff, Ramsay, Cervantes, & Palacios, 1995). Recent studies have also found that the CES-D can be useful for screening for major depression (Yang, Soong, Kuo, Chang, & Chen, 2004). Eight cross-cultural comparison studies have been conducted using the CES-D (Bracke, Levecque, & Velde, 2008), identifying depressive symptoms in different nations and demonstrating that this scale can be used in cross-cultural research. Regarding treatment, some studies have shown that the CES-D can be useful in monitoring the progress in psychotherapy with goal of reducing depression (Cinciripini et al., 2010). Wood, Taylor, and Joseph (2010) asserted that the CES-D can serve as a measure of well-being since the scale taps the continuum between depression and happiness. Other studies have revealed that the CES-D can measure depression as trait as well as a state (Spielberger,

Ritterband, Reheiser, & Brunner, 2003), adding futher value to the scale as an index of depression.

At present, there has been no empirical attempt to translate or validate the CES-D in Romania, notwithstanding a strong need for measures of depression for use with the general and clinical populations. Additionally, the CES-D, with its emphasis on positive as well as negative affect, could be a valuable screening instrument in assessing the multidimensional aspects of depression. The purpose of our first study below was to translate the CES-D into Romanian, determine the equivalence of the Romanian version to the original English CES-D, and provide evidence of the reliability of the translated instrument.

Study 1

Method

Participants

For the linguistic validation of the CES-D, we recruited 25 volunteers, all of whom were bilingual speakers (10 males, 15 females), between 21 and 30 years old. 88% of participants were students, of whom 82% studied linguistics. Participants' monthly income varied as follows: 58% reported earning no more than 500 RON (117 EUR), 32% between 501 and 1000 RON (117-235 EUR), 8% between 1001-1500 RON (117-352 EUR), 4% between 2001-2500 RON (352-587 EUR), and 8% between 2500-3000 RON (587-705 EUR) (the exchange rate was calculated as 1 EUR = 4.258 RON). Regarding participants`ethnicity, 88% were Romanian and 12% were Hungarian. 80% of participants were Orthodox and 20% were Protestant. As for their marital status, 92% had never been married or engaged and only 8% were married or engaged at the time. None of the participants had children.

Measures

The Center for Epidemiological Studies Depression Scale (CES-D) (Radloff, 1977) is a self-report measure of depressive symptoms. The 20 items of the CES-D measure affective and somatic dimensions of depression as

reflected in depressed mood, feelings of guilt and worthlessness, helplessness, psychomotor retardation, loss of appetite, and sleep disturbance. Scores on the CES-D differentiate between psychiatric and non-psychiatric samples. A score greater than 16 indicates depressive symptoms.

Procedure

The translation of the instrument into the Romanian language was as follows: the translation was made by the second author and back-translation by the third author who did not see the original English version of the CES-D. Both authors reviewed the translation and found seven items that did not correspond. These items were then re-translated and modified by the entire research team (Brislin, 1970).

The test-retest method (Butcher & Gur, 1974) involved recruiting bilingual students and administering the English and Romanian versions of the CES-D in counterbalanced order. Before completing the measures, participants were informed that their scores would remain confidential and that they would have access to their scores with an interpretation if they wished. The elapsed time between the two administrations was 2 weeks. Participants completed both versions of the CES-D anonymously (each participant was asked to provide a code that would allow only them to identify their completed scores).

Results

To evaluate the stability of the translated CES-D, we performed a *t*-test for correlated groups on English and Romanian scale scores produced by the sample. The results did not yield a statistically significant difference between English and Romanian scale-score means. Acceptance of the null hypothesis supports the equivalence of the Romanian translation to the parent instrument, and indicates a good translation. There was no significant difference in the English version score (m=16,92, SD=8,18) and the Romanian version (m=16,76, SD=7,83) $t(24)$= - .144, p> .05.

The next analysis was to determine the temporal stability of the translated CES-D by correlating scores obtained from separate administrations of the English and Romanian versions of the CES-D. A Pearson product-

moment correlation of these scores was highly significant, and confirms strong test-retest reliability $r(23)=.76$, $p<.001$.

Internal consistency of the English and Romanian versions of the CES-D was tested by calculating Cronbach alphas. Both alpha coefficients were quite high, and showed good internal consistency reliability: CES-D English (20 items; $\alpha=.81$) CES-D Romanian (20 items; $\alpha=.84$).

Discussion

The purpose of this study was to translate the CES-D into Romanian and establish the initial psychometric properties of the scale with a sample of Romanians, in keeping with ITC guidelines (Hambleton & Patsula, 1999). After translating and back-translating the CES-D into the Romanian language (Brislin, 1970), the equivalence of the translated version to the parent instrument was evaluated using the bilingual retest technique (Butcher & Gur, 1974). The results showed equivalence of the Romanian translation of the CES-D to the original English CES-D. The stability and internal consistency reliabilities of the Romanian CES-D are good.

In the second study below, we investigated the concurrent and convergent validity of the Romanian CES-D by comparing it with other well-known instruments that have been translated into Romanian and which tap constructs that are theoretically related to depression.

Study 2

Method

Participants

A total of 73 participants (12 males, 61 females) volunteered to take part in the study. Their age was between 19 and 50 years (m=28,70, SD=7,94). The majority was Romanian (85%), Orthodox (84%), had graduated from a university (53%), and had never been married or engaged (51%). 46% of participants had no children. Their median income was the equivalent of 200-300 EURO.

Measures

The Center for Epidemiological Studies Depression Scale (CES-D) (Radloff, 1977) is a self-report measure of depressive symptoms. Scores on the CES-D differentiate between psychiatric and non-psychiatric samples. A score greater than 16 indicates depressive symptoms. The 20 items of the CES-D measure affective and somatic dimensions of depression as reflected in depressed mood, feelings of guilt and worthlessness, helplessness, psychomotor retardation, loss of appetite, and sleep disturbance. We selected and administered four instruments that we considered to be psychometrically sound adequate to determine the concurrent and convergent validity of the Romanian CES-D: the State Self-Esteem Scale - Current Thoughts (SGC), the Hospital and Anxiety Scale (HAS), the Hospital Depression Scale (HAD), and the Satisfaction With Life Scale (SWLS).

The SGC is an index of self-esteem that has a positive correlation of 0.82 with the Rosenberg Self-Esteem Scale. It was developed by Marian (2009), who granted permission to use the SGC in this research.

The HAS and HAD have proved valuable in the assessment of both the incidence and severity of anxiety and depression, respectively, in psychiatric patients as well as in the general population. Both measures had been previously translated and validated by Maria Ladea (2007).

The Satisfaction With Life Scale (SWLS) is a 5-item self-report measure of the cognitive aspects of life satisfaction as experienced phenomenologically. Respondents indicate on a 7-point Likert scale how much they agree or disagree with each item. The SWLS is stable and reliable (Diener, Suh, & Oishi, 1997), and is correlated positively with several other measures of well-being (Diener, Scollon, & Lucas, 2003; Diener et al., 1997). The SWLS had been previously translated into the Romanian language and validated (Stevens, Constantinescu, & Lambru, 2006; Stevens, Constantinescu, Uscatescu, Ion, & Butucescu, 2011).

Procedure

After receiving permission to use the instruments described above, we transposed these measures into two online forms using Google docs. Links to these online documents were then disseminated to various psychology-related websites and online discussion groups. Interested individuals were invited to

complete the forms either by printing out a hard copy, filling in the blank spaces, and returning the completed form, or by electronically selecting and entering the most appropriate answer while online. Participants were encouraged to take their time and provide honest, thoughtful responses. Ten participants completed the measures in paper-and-pencil format. Each participant took approximately 30 minutes to complete all of the measures. Participants' answers were automatically transferred to an output data form, with the data then subjected to a series of statistical analyses

Results

Internal consistency of the Romanian version of the CES-D was again tested by calculating Cronbach alpha. The alpha coefficient was somewhat lower than before, but still showed acceptable internal consistency reliability for this translated measure (20 items; α=.72).

Also we determined the concurrent and convergent validity of the Romanian CES-D by correlating the CES-D with four theoretically related measures described above (i.e., SGC, HAS, HAD, SWLS). The Pearson correlations between CES-D scores and scores obtained from the sample on these other measures were $r(71)= - .46$, $p<0.01$ with SGC, $r(71)=.46$, $p<.01$ with HAS, $r(71)=.37$, $p<.01$ with HAD, $r(71)=- .54$, $p<.001$ with SWLS.

Discussion

The purpose of this second study was to further evaluate the reliability and validity of the Romanian CES-D. The Romanian CES-D has acceptable internal consistency reliability. The Romanian CES-D also demonstrated acceptable concurrent and convergent validity, as indicated by moderate positive correlations with the HAS and HAD, which measure respectively anxiety and depressive symptoms and disorders, as well as moderate negative correlations with the SGC and SWLS, which measure self-esteem and subjective well-being. It is worth noting that there was no strong correlation between CES-D and HAD. This could be interpreted either as a limitation of our study or as evidence that the two scales assess highly divergent constructs related only conceptually to depression. Similar evidence has been reported in

previous studies comparing the CES-D to the Hamilton Depression Rating Scale (HDRS) (Roberts et al., 1991).

The main limitation of the studies reported here are the size and representativeness of the sample. Therefore, the results should be interpretated and generalized with caution. It will be important to replicate our findings with a larger and more a more representative sample in future research. However, as previously mentioned, our results are in agreement with those obtained from other populations. In addition, future studies should include a factorial analysis of the CES-D in order to determine whether or not the four-factor structure that emerged in previous research (Radloff, 1977) holds true for the Romanian population. Finally, field work with the Romanian CES-D should attempt to establish optimal cut-off scores that maximize both sensitivity and specificity in the detection of different levels of depression among various groups who are likely to be screened for depression as part of their medical or psychological treatment (e.g., Bracke et al., 2008).

References

Arias, A. C., Martinez, L. A. D., Jaimez, G .E. R., Afanador, L. P. C., & Heernandez, N. L. (2007). Psychometric properties of the CES-D Scale among Colombian adults from the general population. *Revista Colombiana de Psiquiatria, 4,* 664-674.

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. (1982). Screening for depression in a community sample: Understanding the discrepancies between depression symptom and diagnostic scales. *Archives of General Psychiatry, 39,* 1195-1200.

Bracke, P., Levecque, K., & Van de Velde, S. (2008, June). *The psychometric properties of the CES-D depression inventory and the estimation of cross-national differences in the true prevalence of depression.* Paper presented at the International Conference on Survey Methods in Multinational,

Multiregional, and Multicultural Contexts (3MC), Berlin-Brandenburg Academy of Sciences and Humanities, Berlin, Germany.

Brislin R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology, 1*, 185-216.

Butcher, J. N., & Gur, R. (1974). A Hebrew translation of the MMPI. An assessment of translation adequacy and preliminary validation. *Journal of Cross-Cultural Psychology*, *5*, 220-227.

Caracciolo, B., & Giaquinto, S. (2002). Criterion validity of the Center for Epidemiological Studies Depression (CES-D) Scale in a sample of rehabilitation inpatients. *Journal of Rehabilitation Medicine, 34,* 221-225.

Cheng, S-T., & Chan, A. C. (2005). The Center for Epidemiologic Studies Depression Scale in older Chinese: Thresholds for long and short forms. *International Journal of Geriatric Psychiatry, 20,* 465-470.

Cheng, S-T., & Chan, A. C. M. (2008). Detecting depression in Chinese adults with mild dementia: Findings with two versions of the Center for Epidemiologic Studies Depression Scale. *Psychiatry Research, 159,* 44-49.

Cinciripini, P. M., Blalock, J. A., Minnix, J. A., Robinson, J. D., Brown, V. L., Lam, C., ... Karam-Hage, M. (2010). Effects of an intensive depression-focused intervention for smoking cessation in pregnancy. *Journal of Consulting and Clinical Psychology, 78*, 44-54.

Diener, E., Scollon, C. N., & Lucas, R. E. (2003). The evolving concept of subjective well-being: The multifaceted nature of happiness. *Advances in Cell Aging and Gerontology*, *15*, 187-219.

Diener, E., Suh, E., & Oishi, S. (1997). Recent findings on subjective well-being. *Indian Journal of Clinical Psychology*, *24*, 25-41.

Furukawa, T., Hirai, T., Kitamura, T., & Takahashi, K. (1997). Application of the Center for Epidemiologic Studies Depression Scale among first-visit psychiatric patients: A new approach to improve its performance. *Journal of Affective Disorders*, *46*, 1-13.

Goldberg, D. *(*1985). Identifying psychiatric illness among general medical patients. *British Medical Journal, 291,* 161-162.

Hambleton, R. K., & Patsula, L. (1998). Adapting tests for use in multiple languages and cultures. *Social Indicators Research, 45*, 153-171.

Haringsma, R., Engels, G. I., Beekman, A. T. F., & Spinhoven, P. (2004). The criterion validity of the Center for Epidemiological Studies Depression

Scale (CES-D) in a sample of self-referred elders with depressive symptomatology. *International Journal of Geriatric Psychiatry, 19,* 558-563.

Ladea, M. (2005). Validarea scalei de anxietate şi depresie (HADS). *Revista Română de Psihiatrie, 3-4*(7), 104-109.

Leykin, A., Torres, L. D., Aguilera, A., & Muñoz, R. F. (2010). Factor structure of the CES-D in a sample of Spanish- and English-speaking smokers on the Internet. *Psychiatry Research, 185,* 269-274.

Li, Z., & Hicks, M. H. (2010). The CES-D in Chinese American women: Construct validity, diagnostic validity for major depression, and cultural response bias. *Psychiatry Research, 175,* 227-232.

Makambi, K. H., Williams, C. D., Taylor, T. R., Rosenberg, L., & Adams-Campbell, L. L. (2009). An assessment of the CES-D scale factor structure in black women: The Black Women's Health Study. *Psychiatry, 168,* 163-170.

Marian, M. (2009). Validation of a scale for measuring state self-esteem. *Revista de Psihologie Şcolară, 2*(4), 40-49.

Naserbakht, M., Shabani, A., Teimoori, H., Gholami, M., & Asl, M. A. (2008). Short depression screening test for patients with epilepsy: CES-D with 10 items. *Iranian Journal of Psychiatry, 3,* 32-36.

Naughton, M. J., & Wiklund, I. (1993). A critical review of dimension-specific measures of health-related quality of life in cross-cultural research. *Qualitative Life Research, 2,* 397-432.

Nguyen, H., Kitner-Triolo, M., Evans, M., & Zonderman, A. (2004). Factorial invariance of the CES-D in low socioeconomic status African Americans compared with a nationally representative sample. *Psychiatry Research, 126,* 177-187.

Pandya, R., Metz, L., & Patten, S. B. (2005). Predictive value of the CES-D in detecting depression among candidates for disease-modifying multiple sclerosis treatment. *Psychosomatics, 46,* 131-134.

Patten, S. B., Lavorato, D. H., & Metz, L. M. (2005). Clinical correlates of CES-D depressive symptom ratings in an MS population. *General Hospital Psychiatry, 27,* 439-445.

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.

Radloff, L. S., & Locke, B. Z. (2000). *Handbook of psychiatric measures*. Washington, DC: American Psychiatric Association.

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.

Roberts, R. E., Lewinsohn, P. M., & Seeley, J. R. (1991). Screening for adolescent depression: A comparison of depression scales. *Journal of the American Academy of Child and Adolescent Psychiatry, 30*, 58-66.

Santor, D. A., Zuroff, D. C., Ramsay, J. O., Cervantes, P., & Palacios, J. (1995). Examining scalediscriminability in the BDI and CES-D as a function of depressive severity. *Psychological Assessment, 7*, 131-139.

Schroevers, M. J., Sanderman, R., Van Sonderen, E., & Ranchor, A. V. (2000). The evaluation of the Center for Epidemiologic Studies Depression (CES-D) scale: Depressed and positive affect in cancer patients and healthy reference subjects. *Quality of Life Research, 9,* 1015-1029.

Spielberger, C. D., Ritterband, L. M., Reheiser, E. C., & Brunner, T. M. (2003). The nature and measurement of depression. *International Journal of Clinical and Health Psychology, 3*, 209-234.

Stevens, M. J., Constantinescu, P-M., & Lambru, I. (2006, July). *Romanian translation of the Satisfaction With Life Scale.* Paper presented at the International Congress of Applied Psychology, Athens, Greece.

Stevens, M. J., Constantinescu, P-M., Uscatescu, L., Ion, B. C., & Butucescu, A. (2011, July). *The Romanian CES-D Scale: A promising instrument for clinical and non-clinical use.* Paper presented at the European Congress of Psychology, Istanbul, Turkey.

Sultan, S., & Fisher, L. (2010). Depression as a proxy of negative affect? A critical examination of the use of the CES-D in Type 2 diabetes. *European Review of Applied Psychology, 60*, 97-104.

Weissman, M. M., Schlomskas, D., Pottenger, M., Prussoff, B. A., & Locke, B. Z. (1977). Assessing depressive symptoms in five psychiatric populations: A validation study. *American Journal of Epidemiology, 106*, 203-214.

Williams, C. D., Taylor, T. R., Makambi, K. H., Harrel, J., Palmer, J. R., Rosenberg, L., Adams-Campbell, L. L. (2007). CES-D four-factor structure confirmed, but not invariant, in a large cohort of African-American women. *Psychiatry Research, 150,* 173-180.

Wood, A. M., Taylor, P. J., & Joseph, S. (2010). Does the CES-D measure a continuum from depression to happiness? Comparing substantive and artifactual models. *Psychiatry Research, 177,* 120-123.

Yang, H-J., Soong, W-T., Kuo, P-H., Chang, H-L., & Chen, W. J. (2004). Using the CES-D in a two-phase survey for depressive disorders among non-referred adolescents in Taipei: A stratum-specific likelihood ratio analysis. *Journal of Affective Disorders, 82,* 419-430.

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

Received December 19, 2012
Revision received January 05, 2013
Accepted January 25, 2013