Journal of Psychological and
Educational Research
JPER - 2023, 31 (2), November, 138-152
e-ISSN: 2821-4099

DEPRESSION RATING SCALES - BENEFITS AND LIMITATIONS. A LITERATURE REVIEW

Rita Ioana Platona
"Victor Babeş" University of Medicine and Pharmacy, Romania

Florica Voiță-Mekereș *
University of Oradea, Romania

Virgil Radu Enătescu
"Victor Babeş" University of Medicine and Pharmacy, Romania

Abstract
Today's era hosts a significant number of depression assessment scales that have been trailed in experimental studies and the current practice of psychiatrists. Assessment tools were developed as primary measures of efficacy for clinical depression and as all scales, there are pros and cons, benefits and disadvantages, some being more successful than others and some even becoming gold standards for clinical depression research. It is becoming increasingly important to select effective instruments that are reliable, valid, and well aligned with the objectives of clinical trials on depression. This study will review the main considerations for psychiatrists when choosing an instrument for the assessment of major depressive disorder (MDD). Further discussion of the methodological aspects of using these scales, are currently needed as researchers continue to struggle exposing antidepressant drug efficacy signals.

Keywords: depression; rating scales; questionnaires; mood; psychiatry

Introduction

Depression in its various clinical manifestation forms represents a major public health problem with increased prevalence, recurrence degree, the disabilities it involves as well as the increased costs of the socioeconomic terms it entails (Irwin et al., 2022; Lee & Singh, 2021; Kandula et al., 2023).

Depressive episodes are distinguished through the following symptomatology: depressive moods with negative hyperthymia, anhedonia (decreased interest and pleasure), micromanic depressive ideation with feelings of uselessness, incapacity, guilt and autolytic ideation; attention and concentration disorders, ambivalence, selective hyperprosexia towards negative accusations, sleep disorders (insomnia or hypersomnia), lack of interest for daily activities, fatigue, apathy, adynamia, loss of energy, restlessness or psychomotor agitation.

Correspondence concerning this paper should be addressed to:

* Ph.D., University of Oradea, Faculty of Medicine and Pharmacy, Department of Morphological Disciplines, Oradea, Romania. Address: St. Piata1 Decembrie, No. 10, Oradea, 410087, Romania. E-mail: *voita-mekeres.f@uoradea.ro*

As a consequence of the symptoms involved, the person is highly susceptible to personal suffering and incapacity for familiar, professional and social relationships.

Another approach to depressive symptoms would be to group them according to the predominance of symptoms secondary to brain neurotransmitters deficiency. Symptoms determined by serotonin deficiency are highlighted through feelings of guilt, fear of loneliness, anxiety, micromanic ideation, sleep disorders, eating disorders, irritability and psychomotor restlessness.

The noradrenergic imbalance is manifested by apathy, adynamia, fatigue, concentration and attention disorders and vegetative and somatic disorders (headaches, muscular, gastric, joint, cenestopathies, etc.).

The symptoms of dopaminergic imbalances can cause disorders in the sphere of cognition, will and anhedonia. Most often, in clinical practice, a symptom of a neurochemical imbalance or a combination of symptoms may predominate in a patient, however, the same patient could experience a complete change of symptoms during other episode with other neurochemical imbalances predominating (Cole et al., 2022).

Scales, questionnaires, interviews and other tools are used in medical practice to standardize the information collected from patients and sometimes from family members. These tools help psychiatrists in the diagnosis and monitoring of patients during treatment and overall care (Blacker, 2005; Siserman et al., 2019).

Evaluation scales used in psychiatric pathology facilitate links to the empirical literature and systematize the information obtained from patients, encouraging their role in diagnosis, treatment and follow-up care plans. These assessment tools cover the full range of psychiatric disorders, are based on scoring points and are available for use in clinical practice and research, in print or online versions. According to Baer and Blais (2010), scales used for the clinical assessment of psychiatric disorders and considered to be invaluable resources for psychiatrists, psychiatric nurses, clinical psychologists, family physicians or social workers, providing the adequate support.

Consequences of depression

One of the highest risks depression can cause is suicide. Assessment of patients with suicidal ideation usually requires protective admission to a psychiatric facility where they can be safely observed and cared for (Dadfa, 2022). In psychiatric practice highlighting the suicidal risk by corroborating the complete psychiatric history with demographic and individual factors plays an important role in providing appropriate and rapid diagnosis, treatment and ensurance that mental health support is available (Cochrane-Brink, Lofchy, & Sakinofsky, 2000).

Objectives

The aim of this review is to identify and briefly analyze a set of depression rating scales that may be useful in the work of psychiatrists.

Method

Research strategy

Research for relevant scientific studies on depression measurement scales was implemented using keywords in international databases: PsycINFO, MedLine, Scopus, Web of Science, ProQuest, Ebsco, SpringerLink, Science Direct, Emerald eBooks, and others - less significant. For the purpose of this study, the above mentioned databases were strongly considered and studied, with highlights falling on articles published from 1950 to 2023, all of which contain depression assessment scales or depression scale validation studies. Greater attention was paid to the study selection criteria for the inclusion or exclusion of studies identified in the specialized literature. The inclusion criteria for studies that presented depression measurement scales, as well as scale validation in different geographic areas, were the following: experimental studies, quantitative and qualitative meta-analyses, validation studies in different countries and English written studies published in international journals. The following criteria were highlighted for exclusions: case studies, qualitative studies and studies that presented uncertain data such as absence of comparison groups.

The preliminary analysis in the previously presented databases identified 74528 articles of which 54509 were eliminated in the screening phase. Subsequent analyzes followed the previous criteria, but also the hypothetical relevance for psychiatrists. In the later stages, the analysis of the studies followed the qualitative assessment of the studies regarding the extent to which the identified scales can be useful in the therapeutic practice of both psychiatrists and psychologists.

Results and discussion

Standardized clinical assessment scales can be an effective adjunct to the evaluation of psychiatric emergencies as well as making the evaluations more efficient, but they cannot accurately predict the occurrence of suicide due to their countless contributing factors. However, they can provide an estimated "suicidal risk" to alert medical personnel at the time of triage or in some cases may indicate psychiatric consultation.

The ability of psychometric instruments to detect treatment-related changes is a concept that has been frequently discussed in the current literature. Depression rating scales should be able to capture changes over time, especially in those symptoms that characterize major depressive disorders (MDD). Some scales presented in Table 1 may contain items that are relatively insensitive to change, and therefore, the effect of a treatment will be underestimated. The BDI (Beck & Beamesderfer, 1974) measures attitudes and cognitions that are fairly stable over time in depressed individuals and thus may underestimate the degree of improvement during pharmacological treatment. Additionally, a scale might have items that accurately measure mild depression, but be less sensitive to moderate or severe depression, resulting in low sensitivity to detect improvement in patients with more severe depression at baseline (Hollon & Kendall, 1980; Beckham,

Leber, Watkins, Boyer, & Cook, 1986; Robins et al., 1994). Scales actually used in clinical trials are generally considered to have relatively good sensitivity to change, with the exception of the Zung scale (Zung, 1965; Jokelainen et al., 2019) which is considered more sensitive to differences between patient subgroups than to change over time.

Table 1. Psychometric scales used in the diagnosis of depression

Scale	When to use	Advantage	Limitation	References
Automatic Thoughts Questionnaire (ATQ)	- cognitive self-statements of depression; - 30 items (personal maladjustment and desire for change; negative self-concept, low self-esteem, helplessness).	- assess automatic negative statements of self; - role in development and maintenance of depression; - measure change in cognition due to therapy; - excellent internal consistency; - good concurrent validity.	- No information for test-retest reliability.	Hollon, 1980
Brief depression rating scale (BDRS)	-Depression by clinical observations; - 8- items.	- brevity; - sensitivity in depression changes; - detects the differences of the effect of 2 treatments; - ease to use; - easily scored; -excellent inter-observer reliability; - excellent concurrent validity; - significantly distinguishing the depressed in- and outpatients; - sensitive to small differences between treatments.	- not a self-report measure; - no demographic information.	Torbey et al., 2015 Chae et al., 2021 Davis et al., 2021
Brief screen for depression (BSD)	-screen for depression; - 4-items.	- detect clinical level of depression; - fair internal consistency; - good stability; - very good concurrent validity.	- use only for screening depression.	Hakstian & McLean, 1989 Lipps & Lowe, 2006 Szcześniak et al., 2022 Hughes et al., 2022
Center for epidemiologic studies-depressed mood scale (CES-D)	-depressive symptomatology; - 20 items scale.	- measure depression for epidemiological research; - easy to use by clinical and general populations; - measure the level of affective component; - very good internal consistency; - fair stability with test-retest correlations; - excellent concurrent validity; - discriminating well between psychiatric patients and general population; - sensitive in change for psychiatric patients after treatment.	-moderately discriminating of severity of depression; - small associations with social desirability response.	Radloff, 1987 Roane et al., 2013 Jomy & Hapidou, 2020 Li & Hapidou, 2021

Table 1. Psychometric scales used in the diagnosis of depression - *continued*

Scale	When to use	Advantage	Limitation	References
Chinese depressive symptom scale (CDS)	-depression among chinese; - adapted the CES-D; - 22 items.	- useful in cross-cultural studies; - useful for Chinese patients; - very good internal consistence; - excellent predictive validity.	-unknown with chinese living outside of China; - no stability data.	Lin, 1989 Pan et al., 2008
Cognitive triad inventory (CTI)	-cognitive triad in depressed patients (view of self, world and future); - 30 items tool.	- role of cognitive triad in treatment of depression; -usefulness of cognitive therapy; - excellent internal consistency; - good concurrent validity.	- no stability data.	Beckham et al., 1986 Erarslan & Işikli, 2019 Śliwerski et al., 2023
Costello-Comrey Depression and Anxiety Scales (CCDAS)	-depression and anxiety; 14 items depression + 9 item anxiety.	-can be administered together or separately. - tendency to experince a depression mood; - predisposition to develop anxious state.	- is not sensitive to change. - small associations with social desirability response.	Costello & Comrey, 1967 Sullivan et al., 2020 Mamataz et al., 2022
Death depression scale (DDS)	- death depression; - 17 items scale.	- depression and anxiety about death; - measure bereavement, terminal illness or life events; - fair internal consistency; - excellent concurrent validity.	- actual norms are not reported; -no stability information.	Templer et al., 1990 Dadfar & Lester, 2017 Rajabi et al., 2015 Dadfar & Lester, 2020 Gundogan & Arpaci, 2022
Depression anxiety and stress scales (DASS)	- depression, anxiety and stress; - 42 items scale; -severity of symptoms in the past week.	- clinically reliable, sensitive and valid instrument; - permission to reproduce; - excellent external consistency; - good test-retest reliability.	- the examination time is long.	Lovibond & Lovibond, 1995 Shayan et al., 2021
Hamilton Depression Rating Scale (HAM-D)	-measures the severity of depressive symptoms, agitation observed clinically during the interview, or how mood affects the patient's work or activities; - two common versions with 17 or 21 items.	- widely used to measure the effectiveness of antidepressant drugs in clinical trials; - 40 years, it was considered to be the "gold standard"; - assess the severity of depression.	- in the 1990s, its use began to be questioned.	Hamilton, 1960, 1986 Sharp, 2015 Timmerby et al., 2017
Beck Depression Inventory (BDI)	- assesses the severity of depression; -self-report questionnaire with 21 items; -relied on the theory of negative cognitive distortions as central to depression.	- revisions in 1978: BDI-IA and 1996 and BDI-II. - translated into several languages; - the shorter version of the questionnaire (BDI-FS), is available for use in primary care; - used in clinical studies and in the clinic.	- highly dependent on group characteristics; - total score may be artificially inflated due to the type of environment and symptoms of the underlying illness, rather than the depression itself.	Beck, 1974, 1988, 1996, 2006. de Sá Junior et al., 2018

Table 1. Psychometric scales used in the diagnosis of depression - *continued*

Scale	When to use	Advantage	Limitation	References
Depression-happiness scale (DHS)	-assesses the depression and happiness; - 25 items (cognitive, affective, bodily experiences).	-easily scored; - very good internal consistency.	- no data on stability.	Joseph & Lewis, 1998. Yildirim & Balahmar, 2022 Martínez et al., 2018
Hopelessness Depression Symptom Questionnaire (HDSQ)	-measure the symptoms of hopelessness depression; -eight subscales: motivational deficit; interpersonal dependency; psychomotor retardation; lack of energy; apathy / anhedonia; insomnia; concentration difficulty, and suicidality; - 32 items.	-easily scored; - used in clinical studies and in the clinic. - very good internal consistency.	- The current version does not assess two of the proposed symptoms of hopelessness depression-sadness and mood-exacerbated negative cognitions (Metalsky & Joiner, 1997).	Metalsky & Joiner, 1997 Marian, 2012
Generalized contentment scale (GCS)	-non-psychotic depression; - evaluate the therapy with single clients; - 25 items.	- high reliability; - good discriminant and construct validity; - use in repeated administrations with one client; - excellent internal consistency; - excellent short-term stability; - good concurrent validity; - good construct validity; - excellent known-groups validity.	-not recommended < 12 years; - multiple calculations.	Hudson & Proctor, 1977 Harkness & Hensley, 1991 Harper et al., 2009
Geriatric depression scale (GDS)	- depression in the elderly; -30 items - GDS-long form (GDS-LF) and 15 items - GDS short form (GDS - SF).	-oral or written form; - translated into several languages; - simple to administer; - excellent internal consistency; - excellent stability; - excellent concurrent validity; - distinguished between depressed and non-depressed elderly.	-no demographic data.	Lesher & Berryhill, 1994 Krishnamoorthy et al., 2020 Brañez-Condorena et al., 2021 Yasunobe et al., 2023
Harder personal feeling questionnaire (PFQ)	-assess shame and guilt in depression; - 22 items.	-relate depression in particular and changes of guilt and shame after clinical interventions; - easily scored; - good internal consistency; - good concurrent validity.	- few clinical studies used this questionnaire.	Di Sarno et al., 2019 Harder & Zalma, 1990 Rice et al., 2018
Self-rating depression scale (SDS)	-measure symptoms of depression; - 20 items (pervasive affect, physiological and psychological concomitants).	-test booklet available; - fair internal consistency; - good known-groups validity; - good concurrent validity; - sensitive to clinical changes.	- no data on stability.	Zung, 1965 Jokelainen et al., 2019

Table 1. Psychometric scales used in the diagnosis of depression - *continued*

Scale	When to use	Advantage	Limitation	References
Reasons for living inventory (RFL)	-adaptive characteristic in suicide; - 48 items (suicidal and coping belief, responsibility in family, child-related concerns, fear for suicide, fear of social disapproval and moral objections).	- value in guiding intervention; - high internal consistency.	-long time for the examination; - no data on stability.	Osman et al., 1993
Positive and negative suicide ideation inventory (PANSI)	- positive and negative thoughts about suicide; - 14 items.	-ideation about suicide; - use with young adults; - very good reliability; - good validity.	- no data on stability.	Osman, 2003, Aloba et al., 2018
Personal style inventory (PSI)	-autonomy and sociotropy in depression; - 60 items.	- excellent internal consistency; - very good stability.	-long examination time.	Robins et al., 1994 Dadfar, 2022 Mohamadzadeh, et al.2016
Inventory to diagnose depression (IDD)	-assess major depression disorders; - 22 items.	- decide absence or presence of a symptom; - assess the symptom duration; - quantify the depression severity; - excellent internal consistency; - excellent stability;	- few clinical studies used this questionnaire.	Zimmerman & Coryell, 1987
Montgomery-Åsberg Depression Rating Scale (MADRS)	- assess treatment efficacy.	- world-wide most extensively used scale in clinical and psychopharmacological depression; - assess severity of depression; - excellent inter-rater reliability.	- originally published without suggested questions for clinicians.	Montgomery & Åsberg, 1979 Svanborg & Åsberg, 2004

When considering somatic symptoms, the convention is often that these symptoms should be taken at face value without attempting to distinguish between side effects and symptoms. This approach may affect all measures of depression severity, as sleep and appetite disturbances may be side effects and/or symptoms of MDD. However, on the HAM-D (Hamiliton, 1960, 1986), psychological and somatic symptoms/side effects such as anxiety/agitation, sexual dysfunction, dry mouth, and diarrhoea may affect the score to a greater extent than other scales. The BDI, MADRS, SDS, and IDD are considered relatively insensitive to this well-known scoring error of the HAM-D.

Efficacy of depression rating scales to measure symptoms for subtypes of depression

Because MDD is not a homogenous clinical entity, a valid scale must measure symptoms across subtypes, allowing clinicians to compare treatment effectiveness in different depressed populations (Metalsky & Joiner, 1997). In fact, it has been hypothesized that inaccurate ratings across subtypes may be one of the culprits for the high failure rate of many MDD clinical trials (Hollon, 1980; Beckham et al., 1986; Beck, Steer, Ball, & Ranieri, 1996; Robins et al., 1994;

Metalsky & Joiner, 1997; Marian, 2012; Di Sarno, Di Pierro, & Madeddu, 2019). Because of differences in the historical context and reasoning behind each rating scale, most of the scales reported in Table 1 have different levels as well as a relative ability to reflect the heterogeneity of MDD and to capture symptoms characteristic of subtypes of depression. HAM-D (Hamilton, 1960), BDI (Beck & Beamesderfer, 1974), BDRS (Torbey, Pachana, & Dissanayaka, 2015), BSD (Hakstian & McLean, 1989), CES-D (Radloff, 1987), DDS (Templer et al., 1990), the HDSQ (Metalsky & Joiner, 1997), the GCS (Hudson & Proctor, 1977), the GDS (Lesher & Berryhill, 1994), and the IDD (Zimmerman & Coryell, 1987) cover both atypical depressive symptoms and melancholic depression, while atypical symptoms are much less relevant in the BDI and the Zung scale, representing only 5% of the total score; in MADRS, these symptoms are not included at all.

Self-administered versus clinician-administered depression rating scales

In general, the concordance rates between self-ratings and observer ratings are acceptable. In many studies significantly discordant ratings were obtained, showing that doctors and patients rate depressive symptoms differently. Doctors are thought to measure depressive severity more accurately. On the other hand, self-report scales may be more sensitive in detecting change than clinician-administered scales in milder forms of depression.

In clinical practice, different clinicians choose which tool to administer based on their comfort level and available time. Some choose to present self-rating scales (the most commonly used are the BDI, HAM-D, or MADRS) to patients in the waiting room and ask them to complete questionnaires. Other clinicians prefer to ask patients directly about symptoms and self-administer the scale during the visit (HAM-D, MADRS, or PANSI), especially for complicated patients or patients with comorbidities for whom physical symptom responses may require clarifications. The clinician should be aware of the strengths and limitations of at least some of the most commonly used scales and should be able to select the most appropriate instrument for the patient.

Assessment of depression and medical comorbidities

Medically, evaluating depression is complicated since emotional, behavioural or cognitive symptoms may be caused by the underlying medical illness and/or medications used to treat various health problems. Ideally, assessments of depression should be limited to variables and items that avoid confusion with other medical illness. Two instruments have been designed to assess depression for medical patients, excluding somatic items: the HADS (Hartung et al., 2017) and the Beck Depression Inventory for Primary Care (BDI-PC; Beck, Guth, Steer, & Ball, 1997); however, most depression scales developed for medical patients have not been adequately tested in depression studies.

Conclusions

Since the introduction of antidepressants into psychopharmacology in the 1960s, the HAM-D and BDI have been the most commonly used depression rating scales. Many of the scales presented, when used as tools for predicting the outcome of antidepressant treatment, revealed that the scores obtained have limited relevance for the diagnosis of MDD.

Most research has been devoted to the use of classical scales from the second half of the last century to discriminate between placebo and active drugs or to show the dose-response relationship in patients with major depression. However, an improvement in the total score on a scale during an experimental drug trial cannot, by itself, qualify the drug as an antidepressant because the total score is not statistically sufficient. This implies that the improvement may be found in non-specific factors such as sleep, anxiety or deranged appetite habits.

As a conclusion, the study highlighted issues related to statistic relevancy more that the clinic aspect when analysing self-reported scales versus those controlled by a psychiatrist.

Ethics statement
Not applicable.
Conflicts of interest
The author declare no conflict of interest.
Authors contribution
Not Applicable.
Funding
This research received no external funding.

References

Aloba, O., Adefemi, S., & Aloba, T. (2018). Positive and Negative Suicide Ideation (PANSI) Inventory: initial psychometric properties as a suicide risk screening tool among Nigerian university students. *Clinical Medicine Insights: Psychiatry*, *9*, 1179557317751910.

Baer, L., & Blais, M. A. (2010). *Handbook of clinical rating scales and assessment in psychiatry and mental health* (pp. 7-35). New York: Humana Press.

Beck, A. T., & Beamesderfer, A. (1974). *Assessment of depression: the depression inventory*. S. Karger.

Beck, A. T., Guth, D., Steer, R. A., & Ball, R. (1997). Screening for major depression disorders in medical inpatients with the Beck Depression Inventory for Primary Care. *Behaviour research and therapy*, *35*(8), 785-791.

Beck, A. T., Steer, R. A., & Carbin, M. G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical psychology review*, *8*(1), 77-100.

Beck, A. T., Steer, R. A., Ball, R., & Ranieri, W. F. (1996). Comparison of Beck Depression Inventories-IA and-II in psychiatric outpatients. *Journal of personality assessment*, *67*(3), 588-597.

Beck, A. T., Steer, R. A., Brown, G. K., & Ghisi, M. (2006). *BDI-2: Beck depression inventory-2.: manuale*. OS, Organizzazioni speciali.

Beckham, E. E., Leber, W. R., Watkins, J. T., Boyer, J. L., & Cook, J. B. (1986). Development of an instrument to measure Beck's cognitive triad: the Cognitive Triad Inventory. *Journal of consulting and clinical psychology*, *54*(4), 566.

Blacker, D. (2005). Psychiatric rating scales. *Comprehensive textbook of psychiatry*, *7*, 755-83.

Brañez-Condorena, A., Soriano-Moreno, D. R., Navarro-Flores, A., Solis-Chimoy, B., Diaz-Barrera, M. E., & Taype-Rondan, A. (2021). Accuracy of the Geriatric Depression Scale (GDS)-4 and GDS-5 for the screening of depression among older adults: A systematic review and meta-analysis. *PLoS One*, *16*(7), e0253899.

Chae, S., Shin, J., Ji, D., Choi, J. W., Lee, J. Y., Hong, M., ... & Kim, J. W. (2021). A brief depression and anxiety rating scale for sexual violence victims. *Psychiatry investigation*, *18*(2), 172.

Cochrane-Brink, K. A., Lofchy, J. S., & Sakinofsky, I. (2000). Clinical rating scales in suicide risk assessment. *General hospital psychiatry*, *22*(6), 445-451.

Cole, E. J., Phillips, A. L., Bentzley, B. S., Stimpson, K. H., Nejad, R., Barmak, F., ... & Williams, N. R. (2022). Stanford neuromodulation therapy (SNT): a double-blind randomized controlled trial. *American Journal of Psychiatry*, *179*(2), 132-141.

Costello, C. G., & Comrey, A. L. (1967). Scales for measuring depression and anxiety. *The Journal of psychology*, *66*(2), 303-313.

Dadfar, D. L. M. (2022). Sociotropy, autonomy, depression and suicidality. *Suicide*, *3*(4), 2-10.

Dadfar, M., & Lester, D. (2017). Cronbach's α reliability, concurrent validity, and factorial structure of the Death Depression Scale in an Iranian hospital staff sample. *International Journal of Nursing Sciences*, *4*(2), 135-141.

Dadfar, M., & Lester, D. (2020). The effectiveness of 8A model death education on the reduction of death depression: A preliminary study. *Nursing open*, *7*(1), 294-298.

Davis, A. K., Barrett, F. S., May, D. G., Cosimano, M. P., Sepeda, N. D., Johnson, M. W., ... & Griffiths, R. R. (2021). Effects of psilocybin-assisted therapy on major depressive disorder: a randomized clinical trial. *JAMA psychiatry*, *78*(5), 481-489.

de Sá Junior, A. R., de Andrade, A. G., Andrade, L. H., Gorenstein, C., & Wang, Y. P. (2018). Response pattern of depressive symptoms among college students: What lies behind items of the Beck Depression Inventory-II?. *Journal of affective disorders*, *234*, 124-130.

Di Sarno, M., Di Pierro, R., & Madeddu, F. (2019). Shame-and guilt-proneness in an italian sample: Latent structure and gender invariance of the personal feelings questionnaire-2 (PFQ-2). *Current Psychology*, 1-13.

Erarslan, Ö., & Işikli, S. (2019). Adaptation of the cognitive triad inventory into Turkish: a validity and reliability study. *Archives of Neuropsychiatry*, *56*(1), 32.

Gundogan, S., & Arpaci, I. (2022). Depression as a mediator between fear of COVID-19 and death anxiety. *Current Psychology*, 1-8.

Hakstian, A. R., & McLean, P. D. (1989). Brief screen for depression. *Psychological Assessment: A Journal of Consulting and Clinical Psychology*, *1*(2), 139.

Hamilton, M. (1960). A rating scale for depression. *Journal of neurology, neurosurgery, and psychiatry*, *23*(1), 56.

Hamilton, M. (1986). The Hamilton rating scale for depression. In *Assessment of depression* (pp. 143-152). Berlin, Heidelberg: Springer Berlin Heidelberg.

Harder, D. H., & Zalma, A. (1990). Two promising shame and guilt scales: A construct validity comparison. *Journal of personality assessment*, *55*(3-4), 729-745.

Harkness, D., & Hensley, H. (1991). Changing the focus of social work supervision: Effects on client satisfaction and generalized contentment. *Social work*, *36*(6), 506-512.

Harper, K., Richter, N. L., & Gorey, K. M. (2009). Group work with female survivors of childhood sexual abuse: Evidence of poorer outcomes among those with eating disorders. *Eating Behaviors*, *10*(1), 45-48.

Hartung, T. J., Friedrich, M., Johansen, C., Wittchen, H. U., Faller, H., Koch, U., ... & Mehnert, A. (2017). The Hospital Anxiety and Depression Scale (HADS) and the 9-item Patient Health Questionnaire (PHQ-9) as screening

instruments for depression in patients with cancer. *Cancer*, *123*(21), 4236-4243.

Hollon, S. D., & Kendall, P. C. (1980). Cognitive self-statements in depression: Development of an automatic thoughts questionnaire. *Cognitive therapy and research*, *4*, 383-395.

Hudson, W. W., & Proctor, E. K. (1977). Assessment of depressive affect in clinical practice. *Journal of Consulting and Clinical Psychology*, *45*(6), 1206.

Hughes, A. K., Rostant, O. S., & Pelon, S. (2015). Sexual problems among older women by age and race. *Journal of Women's Health*, *24*(8), 663-669.

Irwin, M. R., Carrillo, C., Sadeghi, N., Bjurstrom, M. F., Breen, E. C., & Olmstead, R. (2022). Prevention of incident and recurrent major depression in older adults with insomnia: a randomized clinical trial. *JAMA psychiatry*, *79*(1), 33-41.

Jokelainen, J., Timonen, M., Keinänen-Kiukaanniemi, S., Härkönen, P., Jurvelin, H., & Suija, K. (2019). Validation of the Zung self-rating depression scale (SDS) in older adults. *Scandinavian journal of primary health care*, *37*(3), 353-357.

Jomy, J., & Hapidou, E. G. (2020). Pain management program outcomes in veterans with chronic pain and comparison with nonveterans. *Canadian Journal of Pain*, *4*(1), 149-161.

Joseph, S., & Lewis, C. A. (1998). The Depression-Happiness Scale: Reliability and validity of a bipolar self-report scale. *Journal of clinical psychology*, *54*(4), 537-544.

Kandula, S., Martinez-Alés, G., Rutherford, C., Gimbrone, C., Olfson, M., Gould, M. S., ... & Shaman, J. (2023). County-level estimates of suicide mortality in the USA: a modelling study. *The Lancet Public Health*, *8*(3), e184-e193.

Krishnamoorthy, Y., Rajaa, S., & Rehman, T. (2020). Diagnostic accuracy of various forms of geriatric depression scale for screening of depression among older adults: Systematic review and meta-analysis. *Archives of Gerontology and Geriatrics*, *87*, 104002.

Lee, H., & Singh, G. K. (2021). Monthly trends in self-reported health status and depression by race/ethnicity and socioeconomic status during the COVID-19 Pandemic, United States, April 2020–May 2021. *Annals of Epidemiology*, *63*, 52-62.

Lesher, E. L., & Berryhill, J. S. (1994). Validation of the geriatric depression scale-short form among inpatients. *Journal of clinical psychology*, *50*(2), 256-260.

Li, Y., & Hapidou, E. G. (2021). Patient Satisfaction With Chronic Pain Management: Patient Perspectives of Improvement. *Journal of Patient Experience*, *8*, 23743735211007834.

Lin, N. (1989). Measuring depressive symptomatology in China. *The Journal of nervous and mental disease*, *177*(3), 121-131.

Lipps, G. E., & Lowe, G. G. (2006). Validation of the Brief Screen for Depression in a Jamaican cohort. *West Indian Med J*, *55*(6), 425-429.

Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour research and therapy*, *33*(3), 335-343.

Mamataz, T., Ghisi, G. L., Pakosh, M., & Grace, S. L. (2022). Outcomes and cost of women-focused cardiac rehabilitation: a systematic review and meta-analysis. *Maturitas*, *160*, 32-60.

Marian, M. (2012). Trial of hopelessness theory by the use of modelling. New psychometric data on the Hopelessness Depression Symptom Questionnaire. *Journal of Psychological and Educational Research*, *20*(1), 45-58.

Martínez, D. L., Muñoz, J. J. F., & Navarro-Pardo, E. (2018). Spanish version of the short depression-happiness scale (SDHS): A reliability and validity study in a simple of Spanish elderly people. *Acción Psicológica*, *15*(1), 17-24.

Metalsky, G. I., & Joiner, Jr., T. E. (1997). The Hopelessness Depression Symptom Questionnaire. *Cognitive Therapy and Research*, *21*(3), 359-384.

Mohamadzadeh, A., Neissi, A., Arshadi, N., Shehni Yailagh, M., & Mehrabizadeh Honarmand, M. (2016). Designing and testing a model of the casual relationships between personality traits of sociotropy/autonomy, perception of stressful events and depression symptoms in Shahid Chamran University students. *Psychological Achievements*, *23*(1), 43-73.

Montgomery, S. A., & Åsberg, M. A. R. I. E. (1979). A new depression scale designed to be sensitive to change. *The British journal of psychiatry*, *134*(4), 382-389.

Osman, A., Gifford, J., Jones, T., Lickiss, L., Osman, J., & Wenzel, R. (1993). Psychometric evaluation of the Reasons for Living Inventory. *Psychological Assessment*, *5*(2), 154.

Osman, A., Gutierrez, P. M., Jiandani, J., Kopper, B. A., Barrios, F. X., Linden, S. C., & Truelove, R. S. (2003). A preliminary validation of the Positive and Negative Suicide Ideation (PANSI) Inventory with normal adolescent samples. *Journal of clinical psychology*, *59*(4), 493-512.

Pan, A., Ye, X., Franco, O. H., Li, H., Yu, Z., Zou, S., ... & Lin, X. (2008). Insulin resistance and depressive symptoms in middle-aged and elderly Chinese: findings from the Nutrition and Health of Aging Population in China Study. *Journal of affective disorders*, *109*(1-2), 75-82.

Radloff, L. (1987). Centre for epidemiological studies-depressed mood scale. In *Measures for clinical practice*. Free Press New York.

Rajabi, G. R., Begdeli, Z., & Naderi, Z. (2015). Psychometric properties of the Persian version of Death Depression Scale among nurses. *Death studies*, *39*(6), 342-346.

Rice, S. M., Kealy, D., Treeby, M. S., Ferlatte, O., Oliffe, J. L., & Ogrodniczuk, J. S. (2018). Male guilt-and shame-proneness: the Personal Feelings Questionnaire (PFQ-2 Brief). *Archives of Psychiatry and Psychotherapy*, *2*(2), 46-54.

Roane, B. M., Seifer, R., Sharkey, K. M., Van Reen, E., Bond, T. L., Raffray, T., & Carskadon, M. A. (2013). Reliability of a scale assessing depressed mood in the context of sleep. *TPM. Testing, Psychometrics, Methodology in Applied Psychology*, *20*(1), 3.

Robins, C. J., Ladd, J., Welkowitz, J., Blaney, P. H., Diaz, R., & Kutcher, G. (1994). The Personal Style Inventory: Preliminary validation studies of new measures of sociotropy and autonomy. *Journal of Psychopathology and behavioral assessment*, *16*, 277-300.

Sharp, R. (2015). The Hamilton rating scale for depression. *Occupational Medicine*, *65*(4), 340-340.

Shayan, N., Niazi, A. U. R., Waseq, A., & ÖZCEBE, L. (2021). Depression, anxiety, and stress scales 42 (DASS-42) in Dari-language: validity and reliability study in adults, Herat, Afghanistan. *Bezmialem Science*, *9*(3).

Siserman, C., Delcea, C., Matei, H. V., & Vică, M. L. (2019). Major affective distress in testing forensic paternity. *Rom J Leg Med*, *27*(3), 292-296.

Śliwerski, A., Koszałkowska, K., Mrowicka, A., & Szafran, M. (2023). Differences in Cognitive Triad, Biased Information Processing, and Metacognitive Beliefs Between Women with Depression and Premenstrual Syndrome. *International Journal of Cognitive Therapy*, *16*(1), 26-39.

Sullivan, R., Green-Demers, I., & Lauzon, A. (2020). When do self-conscious emotions distress teenagers? Interrelations between dispositional shame and guilt, depressive and anxious symptoms, and life satisfaction. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, *52*(3), 210.

Svanborg, P., & Åsberg, M. (1994). A new self-rating scale for depression and anxiety states based on the Comprehensive Psychopathological Rating Scale. *Acta Psychiatrica Scandinavica*, *89*(1), 21-28.

Szcześniak, M., Falewicz, A., Strochalska, K., & Rybarski, R. (2022). Anxiety and depression in a non-clinical sample of young polish adults: presence of meaning in life as a mediator. *International journal of environmental research and public health*, *19*(10), 6065.

Templer, D. I., Lavoie, M., Chalgujian, H., & Thomas-Dobson, S. (1990). The measurement of death depression. *Journal of Clinical Psychology*, *46*(6), 834-839.

Timmerby, N., Andersen, J. H., Søndergaard, S., Østergaard, S. D., & Bech, P. (2017). A systematic review of the clinimetric properties of the 6-item version of the Hamilton Depression Rating Scale (HAM-D6). *Psychotherapy and psychosomatics*, *86*(3), 141-149.

Torbey, E., Pachana, N. A., & Dissanayaka, N. N. (2015). Depression rating scales in Parkinson's disease: a critical review updating recent literature. *Journal of affective disorders*, *184*, 216-224.

Yasunobe, Y., Akasaka, H., Yamamoto, K., Onishi, Y., Minami, T., Yoshida, S., & Rakugi, H. (2023). The relationship between changes in exercise habits and

psychosomatic activities in older hypertensive patients during the COVID-19 pandemic. *Hypertension Research*, *46*(1), 208-213.

Yildirim, M., & Balahmar, N. B. (2022). Adaptation and validation of the Arabic version of the short depression-happiness scale. *Current Psychology*, *41*(10), 7024-7031.

Zimmerman, M., & Coryell, W. (1987). The Inventory to Diagnose Depression (IDD): a self-report scale to diagnose major depressive disorder. *Journal of consulting and clinical psychology*, *55*(1), 55.

Zung, W. W. (1965). A self-rating depression scale. *Archives of general psychiatry*, *12*(1), 63-70.

Received November 29, 2022
Revision July 31, 2023
Accepted October 29, 2023