International Journal of Community Medicine and Public Health
Rajachandrasekar B et al. Int J Community Med Public Health. 2023 Nov;10(11):4502-4511
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20233502

Review Article

Rating scales in psychiatric disorders - why?

Bhuvaneswari Rajachandrasekar[1]*, Sakthivel Vaiyapuri[2]

[1]Department of Psychiatry, National Homoeopathy Research Institute in Mental Health, Kottayam, Kerala, India
[2]National Homoeopathy Research Institute in Mental Health, Kottayam, Kerala, India

Received: 16 August 2023
Revised: 15 October 2023
Accepted: 17 October 2023

***Correspondence:**
Dr. Bhuvaneswari Rajachandrasekar,
E-mail: dr.bhuvaneswarir@gmail.com

ABSTRACT

Clinical and research instruments are available for assessing patients with psychiatric illness along specific dimensions of symptoms, comorbidities, and other health outcomes. Rating scales in clinical practice and research standardize diagnosis and assessment. Here, we focus on rating scales for common psychiatric disorders like schizophrenia, obsessive-compulsive disorder, depression, anxiety disorder, and stress-related disorders. Structured observation is most commonly used with this tool. Here are a few tools with basic characteristics, such as clarity, relevance, variety, objectives, and uniqueness. Rating scales will be discussed in clinical and research settings and future directions in their use. People using scales for commercial purposes should check for access and availability since some scales are copyrighted. The more standardization can be achieved, the easier it will be to compare individuals or groups of individuals. We will be able to assess care quality and outcomes across settings.

Keywords: Rating scales, Clinical research, Psychiatry, Outcome assessment

INTRODUCTION

A mental disorder is a syndrome characterized by a clinically significant disturbance in an individual's thinking, emotion regulation, or behaviour that reflects a dysfunction of the psychological, biological, or developmental processes underlying mental functioning and impairment in social, occupational, or other day-to-day activities.[1] Psychiatrists and mental health professionals use a wide variety of questionnaires, interviews, checklists, outcome assessments, and other tools to assess the plan of treatment, aid in the diagnosis, identify comorbidities and assess the level of functioning. It is challenging in the field of psychiatry, to classify the various mental disorder to assess the severity and quality of life, over the change of time. Rating is a term used to express an opinion or judgment regarding the performance of a person, object, situation, or character.

The rating scale can also serve as a basis for monitoring the progression of the disease over time or in response to specific interventions.[2] It could be three, five, or seven points. The most commonly used psychiatric rating scales fall into one or more of the following categories: making a diagnosis, measuring the severity and monitoring changes in specific symptoms, general functioning, quality of life, or overall outcome, and screening for diseases that may or may not be present. Rating scales are available in several formats. Some are checklists or observation guides that help clinicians achieve standardized assessments. Others were self-administered questionnaires or tests. Others are formal interviews, which can be fully structured (i.e., specifying the exact wording of the questions to be asked) or semi-structured (i.e., providing only specific wording and suggestions for further questions or analysis).

Typically, information is acquired from the patient, who knows the most about their own condition. For some instruments, some or all information may be obtained from an experienced informant. Other informants may be better if the construct involves limited understanding (e.g., cognitive impairment or mania) or significant social

desirability (e.g., antisocial personality or substance abuse). Informants can also be helpful if the subject has a limited ability to remember or report symptoms (e.g., delirium, dementia, or any disorder in young children). Some rating scales also allow or require the inclusion of medical records or patient-monitoring information.

The rating scale helps the researcher quantify abstract concepts objectively, (such as attitudes, feelings, and). The measurement of scales is merely a way of approximating quantification/ranking. It is generally developed to make quantitative judgments regarding qualitative attributes. Here, we focused on rating scales for common psychiatric disorders like schizophrenia, obsessive-compulsive disorder, depression, anxiety disorder, and stress-related disorders. This is the most commonly used tool for conducting structured observations. Some of the tools that have basic characteristics, such as clarity, relevance, variety, objectives, and uniqueness, are briefly discussed. It will cover the use of rating scales in clinical and research settings and future directions in the application of standardized rating scales. It should be noted that some scales are copyrighted instruments, and individuals using scales, especially for commercial purposes, should check for access and availability.

ASSESSMENT OF RATING SCALES

In clinical trials, rating scales are mandatory to ensure interpretable and potentially generalizable results, and are selected based on coverage of relevant constructs, cost (based on the nature of ratters, possible purchase price, and required training), duration, and time: management, comprehensibility for the target group, and the quality of the assessments given. In clinical practice, these factors are considered, as well as whether the scale provides more or better information than is available in standard clinical practice or whether it would facilitate the efficiency of obtaining information. Quality assessment is based on psychometric properties that measure the mind in both cases.

RELIABILITY

Reliability refers to the consistency or replicability of a rating, and is largely empirical. An instrument is likely to be more reliable if the instructions and questions are clearly and simply worded and the format is easy to understand and rate. There are three standard methods for assessing reliability: internal consistency, inter-tests, and test-retest.

Inter-rater and test-retest reliability

Inter-rater reliability (also called inter-rater or aggregation) is the agreement between two or more observers who rate items based on the same information. The estimates may vary depending on the assessment conditions. For example, inter-rater reliability estimates based on videotaped interviews tended to be higher than those based on single-rater interviews. Test-retest ratings measure reliability only to the extent that the true state of an item remains stable over time.

Issues in interpreting reliable data

When interpreting reliability data, it is important to remember that the reliability estimates published in the literature may not be generalizable to other objects. The factors to consider include the nature of the sample, training, and experience of the raters, and testing conditions. Questions related to the sample are critical. In particular, reliability tends to be higher in samples with high variability where individuals are easier to separate.

VALIDITY

Validity refers to conformity to the truth or a gold standard that can represent the truth. In a categorical context, this refers to whether an instrument can make correct classifications. In a continuous context, it refers to the accuracy or whether a given score can be said to represent the true state of nature. While reliability is an empirical issue, validity is partly theoretical; there is no absolute truth for many constructs measured in psychiatry. However, some metrics provide more useful and meaningful information than others do. Validity assessment is usually divided into face, content, criterion, and construct validity.

Face and content validity

Facial validity refers to whether subjects appear to value the construct in question. Although a rating scale may be intended to measure a construct of interest, an examination of the items may reveal that it embodies a very different concept. For example, an understanding scale may define understanding, either psychoanalytically or neurologically. However, items with a transparent relationship to the construct may be at a disadvantage when measuring socially undesirable characteristics such as drug addiction or abuse. Content validity is similar to face validity but describes whether a measure provides balanced coverage of a construct and focuses less on whether items convey the impression of validity. Content validity is often assessed using formal methods such as expert consensus or factor analysis.

Criterion validity

Criterion validity (sometimes called predictive or concurrent validity) refers to whether a measure is consistent with a gold standard or an accuracy criterion. Appropriate gold standards include the long form of an established instrument for a new, shorter version; a clinician-rated measure for a self-report form; and blood or urine tests for measuring substance abuse. The generally accepted gold standard for diagnostic interviews is the Longitudinal, Expert, All Data (LEAD) standard, which

includes expert clinical judgment, longitudinal data, patient data, family history, and other data sources.

Construct validity

When an adequate gold standard is not available—often in the case of psychiatry—or when more standard data are desired, construct validity must be assessed. To achieve this, the measure can be compared with external validators, attributes that have a well-characterized relationship with the construct being studied, but are not directly measured by the instrument. External validators were used to validate psychiatric diagnostic criteria, and diagnostic tools designed to use them included the course of illness, family history, and response to therapy.

RATING SCALES IN SCHIZOPHRENIA

Schizophrenia and related psychotic disorders are considered severe, persistent brain diseases with high heterogeneity, and are characterized by changes during an individual's lifetime. However, progress has been made in our understanding of the aetiology of schizophrenia.[3] Scales that measure positive and negative symptoms of schizophrenia are still the primary way doctors and researchers assess and diagnose schizophrenia. The scale is mainly used to monitor the severity of positive and negative symptoms and the response to treatment in patients with schizophrenia (Table 1).

BROAD-SPECTRUM SYMPTOM SEVERITY

These ratings typically cover a wide range of symptoms, allowing clinicians to obtain an overall severity index. These measures are broadly applicable and allow the assessment of treatment efficacy over time within subjects, provide comparative descriptions of symptom profiles, and serve many other purposes.

DOMAIN-SPECIFIC SCALES

Unlike general measures, these tools focus on a specific dimension of a given disorder, such as depression, negative symptoms, functional impairment, and quality of life. These procedures are usually used to screen for specific patient subtypes to help test or monitor the development of a complex pathology or area of dysfunction.

GLOBAL ASSESSMENT OF ILLNESS

These tools are either part of or modelled after the clinical global impression scale and are easy to use to describe clinical improvement or deterioration.

SIDE-EFFECT RATING SCALES

These measures were used to assess one or more side effects that may occur as a result of antipsychotic treatment. These include the measurement of motor and non-motor side effects, with a focus on extrapyramidal symptoms (Table 1).

RATING SCALES FOR DEPRESSION

Depression is a common mental disorder characterized by a depressed mood, loss of interest or pleasure, decreased energy, guilt, low self-esteem, sleep or appetite disturbances, and poor concentration. Symptoms of anxiety often accompany depression. If these problems persist for a long time, they can disrupt daily activities and social life. There are many rating scales for assessing depressive symptoms and screening for depressive syndromes. As with most psychiatric rating scales, their forms vary and include both self- and observer-rated instruments. Shorter scales are easier to control under normal practical conditions but may be less accurate. People with comorbid conditions can have depressive symptoms (such as apathy) without depression, although it is common for people with this condition to have both depression and significant illnesses. As with any rating scale, it is important to remember that standardized rating scales can never replace a thorough clinical interview (Table 2).[16]

Rating scales for anxiety disorders

Generalized anxiety disorder is characterized by constant, excessive, and unrealistic worries about everyday things. First, people go to the doctor not for anxiety but for sleep disorders, muscle tension, dyspepsia, restlessness, exhaustion, and irritability. Primary cognitive dysfunction, combined with secondary somatic anxiety, impairs work performance, interpersonal relationships, and leisure activities. GAD also increases the risk of subsequent depressive episodes, alcohol self-medication, and complications associated with comorbid somatic illnesses (Table 3).[35,36]

RATING SCALES IN BIPOLAR DISORDER

Mood can be defined as a pervasive and continuous feeling or emotional tone that affects a person’s behaviour and colours their perception of being in the world. Mood disorders, sometimes called mood disorders, form an important category of psychiatric disorders that consists of major depressive disorder and bipolar disorder. Scales can be used to screen for bipolar disorder and measure the severity of symptoms. Bipolar disorder is always accompanied by manic and depressive symptoms and can also include problems with anxiety, sleep, and substance use. In particular, there are fewer rating scales for bipolar disorder than for other common psychiatric illnesses, such as depression, and bipolar patients are typically rated using a bipolar-specific instrument and a depressive symptom scale originally developed for patients with unipolar depression (Table 4).[45-47]

Table 1: Rating scales of schizophrenia.

S. no.	Scale name, acronym and key features
1	**Broad spectrum symptom severity:** **Brief psychiatric rating scale (BPRS)[4]** The 18-item version covers a broad range of areas, including thought disturbance, emotional withdrawal, retardation, anxiety, depression, hostility, and suspiciousness, and each symptom was rated on a severity scale of 1–7
2	**The positive and negative syndrome scale (PANSS)[5]** The PANSS includes 30 items on three subscales: seven items covering positive symptoms (e.g., delusions and hallucinations), seven items covering negative symptoms (e.g., social withdrawal, flat affect, lack of motivation), and 16 items covering general psychopathology (e.g., anxiety and depression). The PANSS was conceived as an operationalized instrument that provides a balanced representation of positive and negative symptoms as well as mood and anxiety symptoms. Each item was scored on a 7-point Likert scale ranging from 1 to 7. Therefore, the positive and negative subscales ranged from 7 to 49 and the general psychopathology subscale ranged from 16 to 112
3	**The psychotic symptom rating scales (PSYRATS)[6]** The PSYRATS, a brief 17-item, semi-structured, clinician-administered scale. The PSYRATS consists of two subscales: auditory hallucinations (AHS), 11 items, and delusions (DS), 6 items. These dimensions were evaluated on a 5-point Likert scale ranging from 0 to 4
4	**Clinical global impression schizophrenia (CGI-SCH)[7]** The CGI-SCH scale assesses the positive, negative, depressive, cognitive symptoms, and overall severity of schizophrenia
5	**Scale for the assessment of positive symptoms (SAPS)[8]** SAPS it is a tool that effectively measures the positive symptoms of schizophrenia. The SAPS measures positive symptoms on a 34-item, 6-point scale. Items are listed under hallucinations, delusions, bizarre behaviour, and positive formal thought disorders
6	**Scale for the assessment of negative symptoms (SANS)[9]** The SANS measures negative symptoms on a 25-item, 6-point scale. The items are listed under the five domains of affective blunting, alogia, avolition/apathy, anhedonia/asociality, and attention
7	**The schizophrenia cognition rating scale (SCoRS)[10]** It is well established that cognitive impairment is significantly correlated with poorer real-life functioning in patients with schizophrenia. The SCoRS is an 18-item interview-based assessment of cognitive deficits and the degree to which they affect daily functions. Each item is rated on a 4-point scale. Higher ratings reflected a greater degree of impairment. Each item has anchor points for all levels of the 4-point scale
8	**Clinical assessment interview for negative symptoms (CAINS) and brief negative symptom scale (BNSS)[11]** The CAINS and BNSS are two scales that explore psychometric domains, including negative symptoms, different aspects of anhedonia, and an interest in social relationships with others. Both scales used 13 items to assess negative symptoms
9	**Negative symptom assessment-16 (NSA-16)[12]** The NSA-16 examines the presence, severity, and range of negative symptoms associated with schizophrenia. It is a brief and easy-to-use instrument with strong psychometric properties in terms of validity, reliability, sensitivity to change, and decent clinical utility. It is a semi-structured interview containing 16 items that comprehensively assesses the negative symptoms of schizophrenia and includes the following factors: communication, emotion/affect, social involvement, motivation, and retardation
10	**Global assessments of illness**
	The quality of life scale (QLS)[13] It component of a standard clinical interview, and assesses four domains: interpersonal relations, instrumental role functioning, intra-psychic foundations (or cognitive-emotional functioning), and common objects and activities (extent of involvement with routine daily activities). The items are each rated on a 7-point Likert scale, with the following cut-off scores: 0–1 indicating "severe impairment" in the particular domain, 2–4 a range of "moderate to mild impairment," and 5–6 "adequate, normal, or unimpaired functioning
11	**Drug attitude inventory (DAI)[14]** This 30-item self-report true–false questionnaire was specifically designed for use in schizophrenia patients. A factor analysis of this measure yielded seven attitudinal factors including: subjective positive, subjective negative experience, model of health and illness and locus of control/physician's, prevention, and concern about harm
12	**Abnormal involuntary movement scale (AIMS)[15]** The AIMS has 12 items, each of which is rated on a five-point severity scale ranging from 0 to 4. Ten items assess abnormal movement in specific body regions (orofacial area, extremities, and trunk) as well as global severity; two items concerned dental conditions that can complicate the diagnosis of dyskinesia

Table 2: Rating scales of depression.

S. no.	Scale name, acronym and key features
1	**Hamilton rating scale for depression (HAM-D or HRSD)**[17,18] The 17-item version of the HAM-D has become the standard for clinical trials and, over the years, is the most widely used scale for controlled clinical trials of depression. The total score is obtained by summing the score of each item: 0–4 (symptom is absent, mild, moderate, or severe) or 0–2 (absent, slight, or trivial, clearly present). For the 17-item version, scores ranged from 0 to 54. Most clinicians accept that scores between 0 and 6 do not indicate the presence of depression; scores between 7 and 17 indicate mild depression; scores between 18 and 24 indicate moderate depression; and scores > 24 indicate severe depression. For most raters, a total HAM-D score of 7 or less after treatment is a typical indicator of remission.
2	**Beck depression inventory (BDI)**[19,20] The gold standard self-rating scale is the Beck Depression Inventory (BDI), which was initially developed to assess the efficacy of psychoanalytically oriented psychotherapy in depressed subjects. This scale was designed to measure the severity of depressive symptoms that the test taker is experiencing "at that moment." The original BDI includes 21 items concerning different symptom domains, with four possible answers describing symptoms of increasing severity associated with a score from 0 to 3.
3	**Inventory of depressive symptomatology**[21,22] The original IDS had 28 items, and two additional items (lead paralysis and interpersonal rejection sensitivity) were added later to better capture atypical MDD features. For all the versions, add the scores of the items to obtain the total score, except for items 11–12 (increased or decreased appetite) and 13–14 (increased or decreased weight), for which the highest of the two had to be included.
4	**Montgomery–Asberg depression rating scale**[23,24] It is commonly used in clinical studies and clinical practice, and is administered weekly. A 10-item scale was designed to assess sensitivity to the effects of antidepressant medications. A score greater than 30 or 35 on the MADRS indicates severe depression, whereas a score of 10 or below indicates remission.
5	**Zung self-report depression scale**[25,26] It is a 20-item self-report index that covers, to varying degrees, a broader spectrum of symptoms than BDI, including psychological, affective, cognitive, behavioural, and somatic aspects of depression. Respondents are instructed to rate each item on a scale ranging from 0 to 4 in terms of "how frequently" they have experienced each symptom, instead of "how severe." The time frame was originally "at the present," but in the subsequent version, the time frame was extended to one week, therefore recommending weekly administration. The total score was derived by summing the individual item scores (1–4) and ranged from 20 to 80. Most people have depression scores between 50 and 69, while a score of 70 or above indicates severe depression. No revision of the scale was made after the original publication, and it is currently used less in clinical practice.
6	**Patient health questionnaire-9 (PHQ-9)**[27,28] The PHQ-9 is a self-rated version of the Primary Care Evaluation of Mental Disorders (PRIME-MD) instrument which broadly evaluates common mental disorders. The PHQ-9 is based on the Diagnostic and Statistical Manual (DSM) criteria and is often used in primary care and general medical settings to screen for depression. Each item of the PHQ is scored on a 0-3 continuum (higher scores indicate greater severity). The total PHQ-9 scores of 5, 10, 15, and 20 represent mild, moderate, moderately severe, and severe depression, respectively. A 2-item version of the scale, the PHQ-2 is often used as a "pre-screen" for depression, in which individuals who score positively on either of the two items of the PHQ-2 would then be administered the full PHQ-9.
7	**Hospital anxiety and depression (HADS)**[29,30] The HADS is designed to screen for anxiety and depression in hospital settings, although it is often used with outpatient or community-dwelling samples. Of the 14 items, seven pertain to anxiety and seven pertain to depression. Each item was scored on a scale of 0-3. The threshold scores were 8, 11, and 15 for mild, moderate, and severe depression, respectively.
8	**The depression anxiety stress scale (DASS)**[31] The DASS is a 42-item, self-administered questionnaire designed to measure the magnitude of three negative emotional states: depression, anxiety, and stress. DASS Depression focuses on reports of low mood, motivation, and self-esteem; DASS-anxiety on physiological arousal, perceived panic, and fear; and DASS-stress on tension and irritability. 4-point scale: the extent to which each of the 42 statements was applied over the past week.
9	**Center for epidemiologic studies depression scale (CES-D)**[32,33] The CES-D, a frequently used scale in medical literature, measures depression in community-dwelling populations. It consists of 20 items rated by the patient on a scale of 0-4. Although higher scores suggest an increased severity of depression, a score of 16 is often used to categorize the threshold for depression.
10	**Penn state worry questionnaire (PSWQ)**[34] It is a widely used self-report measure of intensity and excessiveness of worries that contains 16 items rated on a scale from 1 (not at all typical) to 5 (very typical).

Table 3: Rating scales of anxiety.

S. no.	Scale name, acronym and key features
1	**Beck anxiety inventory (BAI)**[37,38] The BAI is the gold-standard self-report measure of general anxiety symptoms. The BAI is a 21-item self-report measure of anxiety that was designed to assess anxiety severity in adults while being able to discriminate between comorbid conditions such as depressive symptoms. It is often used as a weekly measure of anxiety. Scores of 0–7 reflect minimal anxiety, 8–15 mild anxiety, 16–25 moderate anxiety, and scores above 26 represent severe anxiety
2	**The Hamilton rating scale for anxiety (HAM-A)**[39,40] HAM-A is the most widely used outcome measure in therapeutic trials for GAD. It has 14 items, each measuring specific anxiety symptom clusters (e.g., tension, insomnia, respiratory) rated by the interviewer on a scale from 0 (not present) to 4 (very severe/incapacitating). A total score above 16 on the HAM-A is generally considered indicative of symptomatic GAD.
3	**The anxiety sensitivity index (ASI)**[41,42] The ASI is a widely used self-report measure that assesses an individual's tendency to be distressed in response to anxiety-related symptoms.
4	**Liebowitz social anxiety scale (LSAS)**[43] The LSAS is a widely used clinician-administered. The 24-item interview assessed fear and avoidance of specific social situations for people who suffer from social phobia. The LSAS contains two subscales: (1) Fear of Social Interaction (11 items) and (2) Performance (13 items). Fear was rated on a four-point scale from 0 (none) to 3 (severe), and avoidance was rated on a four-point scale ranging from 0 (never) to 3 (usually 67–100%) to rate symptom severity in the past week.
5	**State-trait anxiety inventory (STAI)**[44] The STAI is a 40-item questionnaire designed to measure two aspects of anxiety: the temporary and episodic forms of anxiety fluctuate across situations and circumstances, and stable personality traits predispose individuals to anxiety in general. For the state section, respondents used a four-point Likert-type scale to indicate how accurately statements regarding tension and anxiety applied to them at that moment. The scale ranges from 1 ("not at all") to 4 ("very much so"). The trait section offers a similar four-point scale but instead focuses on how respondents generally feel. The scale for this section ranges from 1("almost never") to 4 ("almost always").

Table 4: Rating scales of bipolar disorder.

S. no.	Scale name, acronym and key features
1	**Young mania rating scale (YMRS)**[48] This 11-item scale was developed to monitor manic symptoms on inpatient units; most items are scored 0–4, while items assessing behaviour, thought content, speech, and irritability are scored 0–8, yielding a total score between 0 and 60 Because some items assess symptoms that may be present to a modest degree among euthymic patients (increase in energy or libido, for example), a "normal" score is not necessarily 0.
2	**Mania rating scale (MRS)** [49] The MRS been used in bipolar clinical trials. It consists of 11 items with 2 subscales (the manic syndrome subscale and the behaviour and ideation subscale) and 1 question addressing insight impairment. A score ≥39 indicates severe mania.
3	**Bipolar depression rating scale (BDRS).**[50,51] The BDRS measures bipolar depressive symptoms, with particular attention to atypical and mixed symptoms of depression. It is administered by clinicians and consists of 20 items rated on a scale of 0-3.
4	**Mood disorder questionnaire (MDQ)** [52] The MDQ was designed to screen for past symptoms of mania and hypomania. It consists of 13 "yes or no" items derived from the DSM-IV criteria for bipolar disorder. More specifically, one question details the clustering of symptoms and another question details the severity of symptoms. While scores may range from 0 to 13, a score of 7 or higher with evidence of symptom clustering and at least mild symptom severity suggests bipolar disorder.
5	**Bipolar inventory of symptoms scale (BISS)**[53,54] The BISS was intended to cover full spectrum of symptoms observed in bipolar disorder. Of the 44 items, 22 pertained to depression and 22 to mania. The BDRS consists of semi-structured interview questions detailing symptoms over the past week. Ratings for each question are on a scale of 0–4 and may be based on reports from patient, family members, and clinicians. An advantage of the BISS is that a single instrument rather than two separate scales (one for depressive symptoms and one for manic symptoms) is used to assess symptom severity.

Continued.

S. no.	Scale name, acronym and key features
6	**Bipolar spectrum diagnostic scale**[55] The final version was composed of two parts. The first part is a paragraph containing 19 positively valenced sentences describing many of the symptoms of bipolar disorder. For instance, one sentence reads: ‘‘Some individuals, during these ‘high’ periods, take on too many activities at once. The second part of the BSDS is a simple multiple-choice question that asks subjects to rate how well the story describes them overall. There are four possible answers from which to choose: “This story fits me very well, or almost perfectly’’ (6 points), ‘‘this story fits me fairly well’’ (4 points), ‘‘This story fits me to some degree’’ (2 points), and ‘‘This story does not really describe me at all’’ (0 points). Thus, the total score on the BSDS can range from 0 to 25.

OBSESSIVE COMPULSIVE DISORDER

Obsessive-compulsive disorder (OCD) is characterized by repeated intrusive impulses, thoughts or images that cause anxiety. "Compulsions" are defined as intrusive, repetitive, and disturbing thoughts, images, or impulses that a person tries to suppress or ignore. "Compulsions" are repetitive behaviours or mental rituals that an individual performs in an attempt to minimize the stress caused by obsessions.

YALE-BROWN OBSESSIVE COMPULSIVE SCALE

Clinicians should begin the assessment of OCD using the YBOCS symptom checklist interview, a 64-item clinician-administered checklist that examines current and past obsessions and compulsions. The checklist helps clinicians to identify 36 different obsessions and 23 types of compulsions, covering the following types of symptoms: damage, contamination/washing, sexual, hoarding/saving, religious, symmetry/accuracy, somatic, and mixed. In addition, some symptoms of OC spectrum disorders (e.g., trichotillomania and hypochondriasis) are also present. Next, clinicians typically use a 10-point clinician-administered semi-structured severity scale to rate the severity of obsessions and compulsions.

This 10-point scale assesses the severity of obsessions and compulsions on a five-point scale from 0 (no symptoms) to 4 (very severe symptoms) in relation to the total scores of time spent, distraction, stress, resistance, and control between 0 and 40.

An YBOCS score equal to or greater than 16 is a cut-off score often used in therapeutic trials to identify a clinically symptomatic level of OCD. Additionally, scores of 0–7 represent subclinical OCD symptoms, 8–15 mild, 16–23 moderate, 24–31 severe, and 32–40 extreme symptoms. The YBOCS has become the gold standard in recent pharmacological and behavioural therapy studies because it can be used to measure severity, regardless of the type of obsession and compulsion.[56-58]

SOCIAL ANXIETY DISORDER (SOCIAL PHOBIA)

Social anxiety disorder (also called social phobia) involves fear of social situations, including situations that involve scrutiny or contact with strangers.

The term social anxiety reflects a clear distinction between social anxiety disorder and a specific phobia, which is an intense and persistent fear of an object or situation.

LIEBOWITZ SOCIAL ANXIETY SCALE

The Liebowitz social anxiety scale (LSAS) is a widely used, clinician-administered 24-item interview that assesses fear and avoidance of certain social situations in individuals with social phobia. The LSAS contains two subscales: fear of social interaction (11 items) and efficacy (13 items). Symptom severity is rated on a four-point scale of fear from 0 (none) to 3 (severe) and avoidance on a four-point scale of 0 (never) to 3 (typically 67–100%) in last week.

THE SOCIAL PHOBIA AND ANXIETY INVENTORY

The social phobia and anxiety inventory (SPAI) is a 45-item self-report instrument that has been widely used to assess the cognitive, somatic, and behavioural dimensions of SAD.[59]

SOCIAL PHOBIA SCALE AND SOCIAL INTERACTION ANXIETY SCALE

The Social Phobia Scale (SPS) and Social Interaction Anxiety Scale (SIAS) are two other widely used self-report measures of social anxiety.

SIAS measures cognitive, behavioural, and affective reactions to interaction situations.[60]

POST-TRAUMATIC STRESS DISORDER

Post-traumatic stress disorder (PTSD) and acute stress disorder are characterized by increased stress and anxiety after exposure to a traumatic or stressful event.

Traumatic or stressful events may include witnessing or participating in a violent accident or crime, military combat or abuse, kidnapping, natural disaster, diagnosis of a life-threatening illness, or systematic physical or sexual abuse. A person reacts to the experience with fear and helplessness, constantly relives the event and tries to avoid remembering it. The event can be re-experienced in dreams and waking thoughts (flashbacks).[61]

CLINICIAN-ADMINISTERED PTSD SCALE

One of the gold standard measures for assessing and diagnosing PTSD is the clinician-administered PTSD scale (CAPS), a structured interview that assesses symptoms of PTSD. PTSD symptoms are typically rated over the past month using a five-point Likert scale to rate frequency and intensity (e.g., 0 means the symptom does not occur or causes no distress, 4 means the symptom occurs almost every day or causes extreme distress and discomfort).

Total CAPS severity scores (CAPS sum) are calculated by summing the frequency and intensity values for each symptom (range 0-136). In addition, a PTSD syndrome score can be calculated by summing the frequency and intensity values for each cluster. 60. Although CAPS is a well-established and reliable measure, it takes time (about an hour) to administer. Thus, CAPS is not commonly used as a clinical measure.

IMPLICATIONS OF RATING SCALES IN CLINICAL TRIALS AND RESEARCH

The use of rating scales in clinical trials differs from clinical practice in several important ways; In particular, the focus is not on the therapeutic improvement of an individual patient, but on the objective assessment of improvement, with the aim of evaluating an intervention or a new medication. Study physicians should use a non-therapeutic study report, especially in placebo-controlled studies. This approach aims to minimize expectation biases, conditioning, and other factors that can confound the result and favour the placebo response.

Multiple confounding factors, high statistical variance, and low inter-rater reliability in psychiatry and neurology are particularly problematic, especially in multicenter studies. Various techniques are routinely used to assess the integrity and reliability of research data. One of the most important steps in achieving regulatory and scientific goals is inter-rater reliability training. Standardized practices for training and certification have been implemented and are now required prior to study data collection in all planned clinical trials.

FUTURE DIRECTIONS

It will be easier to compare individuals or groups of individuals and evaluate the relative quality of care and results across care settings the more standardization that can be accomplished. Incorporation of Computer-based testing (CBT) in the clinical setting; to reduce human error and bias. Increasable accessibility of self-checking/self-report assessment for better awareness. To conduct high-quality research for the enhancement of the reliability and validity of existing tools and the development of new more sensitive tools. Given that many electronic health record systems allow individuals to check their records and track their clinical state or progress, future directions include a greater dependence on self-rated measures to empower healthcare consumers. The section on using rating scales in clinical trials makes mention of developing techniques for rater training that could lessen the placebo reaction and improve resource utilization. Another path for the future is the need to improve current rating scales or create new rating scales for the increasingly international context of clinical trials.

LIMITATIONS OF RATING SCALE

Lack of standardization, multi-culture, and multi-linguistic on clinical populations and sufficient training for interpreting and administering clinical scales. The training and Expertee required to select tools are the combinations of tools that most appropriately and taking capture psychopathology. The unavoidable confounding factor of practice effect when considering pre and post-assessment using the single tools. The lack of validity scales/ lie scales in many assessments reduced the overall reliability and validity of measure domains.

CONCLUSION

Outcome measurement and quality improvement in mental health care have lagged behind the rest of medicine but have recently gained attention from researchers and clinicians alike. Participating in outcome assessment is now in the interest of all psychiatrists and mental health therapists. Making the necessary changes to implement outcome assessment in clinical practice will certainly require significant effort and expense. However, being proactive and leading the way on these issues allows clinicians to help set measurement standards.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders (DSM-5). 5th ed. Arlington, VA: American Psychiatric Association Publishing. 2013.
2. Sadock BJ, Sadock VA, Ruiz P. Kaplan & Sadock's Synopsis of Psychiatry. Eleventh edition. Wolters Kluwer Private Limited New Delhi. 2018.
3. Opler MG, Perrin MC, Kleinhaus K, Malaspina D. Factors in the Etiology of Schizophrenia: Genes, Parental Age, and Environment. Primary psychiatry. 2008;15(6).
4. Flemenbaum A, Zimmermann RL. Inter-and intra-rater reliability of the Brief Psychiatric Rating Scale. Psychol Rep. 1973;33(3):783-92.
5. Kay SR, Fiszbein A, Opler LA. The positive and negative syndrome scale (PANSS) for schizophrenia. Schizophrenia bulletin. 1987;13(2):261-76.
6. Haddock G, McCarron J, Tarrier N, Faragher EB. Scales to measure dimensions of hallucinations and

delusions: the psychotic symptom rating scales (PSYRATS). Psychol Med. 1999;29(4):879-89.
7. Haro JM, Kamath SA, Ochoa SO, Novick D, Rele K, Fargas A, et al. The Clinical Global Impression–Schizophrenia scale: a simple instrument to measure the diversity of symptoms present in schizophrenia. Acta Psychiatrica Scandinavica. 2003;107:16-23.
8. Andreasen NC. Scale for the assessment of positive symptoms. Psychiatrie & Psychobiologie. 1984.
9. Andreasen NC. The Scale for the Assessment of Negative Symptoms (SANS): conceptual and theoretical foundations. Br J Psychiatry. 1989;155(S7):49-52.
10. Keefe RS, Poe M, Walker TM, Kang JW, Harvey PD. The Schizophrenia Cognition Rating Scale: an interview-based assessment and its relationship to cognition, real-world functioning, and functional capacity. Am J Psychiatry. 2006;163(3):426-32.
11. Kumari S, Malik M, Florival C, Manalai P, Sonje S. An assessment of five (PANSS, SAPS, SANS, NSA-16, CGI-SCH) commonly used symptoms rating scales in schizophrenia and comparison to newer scales (CAINS, BNSS). J Addiction Res Therapy. 2017;8(3).
12. Velligan DI, Alphs L, Lancaster S, Morlock R, Mintz J. Association between changes on the Negative Symptom Assessment scale (NSA-16) and measures of functional outcome in schizophrenia. Psychiatry Res. 2009;169(2):97-100.
13. Karow A, Naber D. Subjective well-being and quality of life under atypical antipsychotic treatment. Psychopharmacology. 2002;162:3-10.
14. Guy W, Ban TA, Wilson WH. The prevalence of abnormal involuntary movements among chronic schizophrenic. Int Clin Psychopharmacol. 1986;1(2):134-44.
15. Marcus M, Yasamy MT, van Ommeren MV, Chisholm D, Saxena S. Depression: A global public health concern. American Psychological Association. 2012.
16. Sajatovic M, Opler M, Junewicz A, Opler L. Rating Scales for Psychiatric Disorders. Med Basis Psychiatry. 2016;869-80.
17. Hamilton M. A rating scale for depression. J Neurol Neurosurg Psychiatry. 1960;23(1):56.
18. Frank E, Prien RF, Jarrett RB, Keller MB, Kupfer DJ, Lavori PW, et al. Conceptualization and rationale for consensus definitions of terms in major depressive disorder: remission, recovery, relapse, and recurrence. Arch Gen Psychiatry. 1991;48(9):851-5.
19. Beck AT, Ward C, Mendelson M, Mock J, Erbaugh JJ. Beck depression inventory (BDI). Arch Gen Psychiatry. 1961;4(6):561-71.
20. Beck AT, Steer RA, Brown GK. Beck depression inventory. New York: Harcourt Brace Jovanovich. 1987.
21. Rush AJ, Giles DE, Schlesser MA, Fulton CL, Weissenburger J, Burns C. The inventory for depressive symptomatology (IDS): preliminary findings. Psychiatry Res. 1986;18(1):65-87.
22. Rush AJ, Gullion CM, Basco MR, Jarrett RB, Trivedi MH. The inventory of depressive symptomatology (IDS): psychometric properties. Psychol Med. 1996;26(3):477-86.
23. Montgomery SA, Åsberg MA. A new depression scale designed to be sensitive to change. Br J Psychiatry. 1979;134(4):382-9.
24. Chamorro L, Luque A, Lobo A. Validation of the Spanish versions of the Montgomery-Asberg depression and Hamilton Anxiety rating scales. Medicina Clínica. 2002;118(13):493-9.
25. Zung WW. A self-rating depression scale. Arch Gen Psychiatry. 1965;12(1):63-70.
26. White J, White K, Razani J. Effects of endogenicity and severity on consistency of standard depression rating scales. J Clin Psychiatry. 1984;45(6):260-1.
27. NIMH. Major Depressive Disorder Among Adults. Available at: http://www.nimh.nih.gov/statistics/1mdd_adult.shtml. Accessed on 13 October 2023.
28. Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. J Gen Int Med. 2001;16(9):606-13.
29. Snaith RP. The hospital anxiety and depression scale. Health and quality of life outcomes. 2003;1(1):1-4.
30. Zigmond AS, Snaith RP. The hospital anxiety and depression scale. Acta Psychiatrica Scandinavica. 1983;67(6):361-70.
31. Parkitny L, McAuley J. The depression anxiety stress scale (DASS). J Physiotherapy. 2010;56(3):204.
32. Radloff LS. The CES-D scale: A self-report depression scale for research in the general population. Appl Psychol Measurement. 1977;1(3):385-401.
33. Weissman MM, Sholomskas D, Pottenger M, Prusoff BA, Locke BZ. Assessing depressive symptoms in five psychiatric populations: a validation study. Am J Epidemiol. 1977;106(3):203-14.
34. Meyer TJ, Miller ML, Metzger RL, Borkovec TD. Development and validation of the penn state worry questionnaire. Behav Res Therapy. 1990;28(6):487-95.
35. Stein DJ. Comorbidity in generalized anxiety disorder: impact and implications. J Clin Psychiatry. 2001;62:29-36.
36. Allgulander C. Generalized anxiety disorder: a review of recent findings. J Exp Clin Med. 2012;4(2):88-91.
37. Beck AT, Epstein N, Brown G, Steer RA. An inventory for measuring clinical anxiety: psychometric properties. J Consult Clin Psychol. 1988;56(6):893-7.
38. Steer RA, Rissmiller DJ, Beck AT. Use of the Beck Depression Inventory-II with depressed geriatric inpatients. Behav Res Therapy. 2000;38(3):311-8.
39. Hamilton M. Diagnosis and rating of anxiety. Br J Psychiatry. 1969;3:76-9.
40. Hamilton M. The assessment of anxiety states by rating. Br J Med Psychol. 1959;32:50-5.

41. Reiss S, Peterson RA, Gursky DM, McNally RJ. Anxiety sensitivity, anxiety frequency and the prediction of fearfulness. Behav Res Therapy. 1986;24(1):1-8.
42. Peterson RA, Reiss S. Anxiety sensitivity index revised test manual. IDS Publications. 1993.
43. Liebowitz MR. Social phobia. Mod Probl Pharmacopsychiatry. 1987;22:141-73.
44. Shahid A, Wilkinson K, Marcu S, Shapiro CM, editors. STOP, THAT and one hundred other sleep scales. Springer Science & Business Media. 2012.
45. Picardi A. Rating scales in bipolar disorder. Curr Opin Psychiatry. 2009;22(1):42-9.
46. Rush Jr AJ, First MB, Blacker D, editors. Handbook of psychiatric measures. American Psychiatric Pub. 2009.
47. Tohen M, Bowden C, Nierenberg AA, Geddes J, editors. Clinical trial design challenges in mood disorders. Academic Press. 2015.
48. Young RC, Biggs JT, Ziegler VE, Meyer DA. A rating scale for mania: reliability, validity and sensitivity. Br J Psychiatry. 1978;133(5):429-35.
49. Endicott J, Spitzer RL. A diagnostic interview: the schedule for affective disorders and schizophrenia. Arch Gen Psychiatry. 1978;35(7):837-44.
50. Berk M, Malhi GS, Cahill C, Carman AC, Hadzi-Pavlovic D, Hawkins MT, et al. The Bipolar Depression Rating Scale (BDRS): its development, validation and utility. Bipolar Disorders. 2007;9(6):571-9.
51. Berk M, Malhi GS, Mitchell PB, Cahill CM, Carman AC, Hadzi-Pavlovic D, et al. Scale matters: the need for a Bipolar Depression Rating Scale (BDRS). Acta Psychiatrica Scandinavica. 2004;110:39-45.
52. Hirschfeld RM. The Mood Disorder Questionnaire: A Simple, Patient-Rated Screening Instrument for Bipolar Disorder. Prim Care Companion J Clin Psychiatry. 2002;4(1):9-11.
53. Gonzalez JM, Bowden CL, Katz MM, Thompson P, Singh V, Prihoda TJ, et al. Development of the Bipolar Inventory of Symptoms Scale: concurrent validity, discriminant validity and retest reliability. Int J Methods Psychiatric Res. 2008;17(4):198-209.
54. Thompson PM, Gonzalez JM, Singh V, Schoolfield JD, Katz MM, Bowden CL. Principal domains of behavioral psychopathology identified by the Bipolar Inventory of Signs and Symptoms Scale (BISS). Psychiatry Res. 2010;175(3):221-6.
55. Ghaemi SN, Miller CJ, Berv DA, Klugman J, Rosenquist KJ, Pies RW. Sensitivity and specificity of a new bipolar spectrum diagnostic scale. J Affective Disord. 2005;84(2-3):273-7.
56. Goodman WK, Price LH, Rasmussen SA, Mazure C, Delgado P, Heninger GR, et al. The Yale-Brown Obsessive Compulsive Scale. II. Validity. Arch Gen Psychiatry. 1989;46(11):1012-6.
57. Goodman WK, Price LH, Rasmussen SA, Mazure C, Fleischmann RL, Hill CL, et al. The Yale-Brown obsessive compulsive scale: I. Development, use, and reliability. Arch Gen Psychiatry. 1989;46(11):1006-11.
58. Tolin DF, Abramowitz JS, Diefenbach GJ. Defining response in clinical trials for obsessive-compulsive disorder: a signal detection analysis of the Yale-Brown obsessive compulsive scale. J Clin Psychiatry. 2005;66(12):1549-57.
59. Turner SM, Beidel DC, Dancu CV, Stanley MA. An empirically derived inventory to measure social fears and anxiety: the Social Phobia and Anxiety Inventory. Psychol Assessment J Consult Clin Psychol. 1989;1(1):35.
60. Mattick RP, Clarke JC. Development and validation of measures of social phobia scrutiny fear and social interaction anxiety. Behav Res Therapy. 1998;36(4):455-70.
61. Blake DD, Weathers FW, Nagy LM, Kaloupek DG, Gusman FD, Charney DS, et al. The development of a Clinician-Administered PTSD Scale. J Trauma Stress. 1995;8(1):75-90.

Cite this article as: Rajachandrasekar R, Vaiyapuri S. Rating scales in psychiatric disorders - why?. Int J Community Med Public Health 2023;10:4502-11.