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Assessment methods for eating disorders and body image disorders

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Abstract

The growing interest in the treatment and research of eating disorders has stimulated the development of assessment methods, and there are now many questionnaires for evaluating behavioral and attitudinal characteristics of eating pathology. The present article sets out to review the assessment tools that are widely used in clinical practice and research. In particular, it covers self-report measures with summaries of their psychometric properties. It also presents diagnostic questionnaires based on the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, diagnostic criteria. The instruments described include screening questionnaires, measurement tools for specific eating disorder symptoms, measurement of quality of life in eating disorders, and some tools for the measurement of body image disorder, a common feature of eating disorders. There is also a discussion of distorting factors that decrease the authenticity of assessment tools. These problems arise from the definition of some constructs and from the phenomena of denial and concealment, which are frequent among eating-disordered individuals. The frequent co-occurrence of other psychopathological features (e.g., multiimpulsive symptoms) shows that other psychological phenomena should also be evaluated in line with the assessment of eating disorders.

Keywords: Anorexia nervosa; Assessment methods; Binge eating disorder; Body image; Bulimia nervosa; Eating disorders

Introduction

Eating disorders came to the forefront of psychiatric/psychosomatic disorders in the last third of the 20th century. The reasons for this upsurge in interest include the serious outcome of anorexia nervosa (AN) and bulimia nervosa (BN) [1], the appearance of some newer forms [e.g., binge eating disorder (BED) [2,3]], and the increased incidence rate of AN during the past 50 years, particularly in females 10 to 24 years old [4].

The growing interest in eating disorders has resulted in the development of various assessment tools for screening and clinical evaluation. The first assessment of an eating-disordered patient requires a medical examination (possibly including laboratory tests) and an evaluation of the detailed history of the illness. Further assessment often involves questionnaires and interview methods, whose psychometric properties vary substantially. There are some very general problems to be faced in the assessment of eating disorders. The reluctance of patients to cooperate, poor compliance, denial of the illness, manipulative behavior, and hidden signs and symptoms generate obstacles in everyday practice [5,6]. Moreover, eating disorders can take on different characteristics during childhood. Some instruments have been developed specifically for the assessment of childhood eating disorders (for review, see reference [7]).

The major diagnostic categories that are addressed in most of the assessment methods are AN, BN, and BED. Binge eating disorder (i.e., binges without bulimic compensatory behaviors) is included in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (*DSM-IV*), as a provisional diagnosis and has become an important category with high prevalence [2]. Some methods of assessment address certain transdiagnostic psychopathological issues, which are common in various types of eating disorder. Low self-esteem, impairment of social functioning (e.g., interpersonal problems and isolation), multiimpulsive features (e.g., alcohol and drug abuse, kleptomania,

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suicidality, self-harm behavior), or other cognitive and behavioral components (e.g., preoccupation with weight and food and obsession) may occur in most of the diagnostic categories [8].

Eating and body image disorders show behavioral, attitudinal, cognitive, and perceptual characteristics. Some methods of assessment address only one of these dimensions, while others attempt to assess the disorders across a range of dimensions. In general, the behavioral signs and symptoms of a disorder may appear to be the simplest aspects to measure, but they are not always clearly evident in eating disorders. The definition of binges is problematic, because objective binges sometimes strongly differ from subjective binges; for example, the patient may believe she/he is binging but, actually, it cannot be supported objectively [9]. As for the cognitive factors, many distorted cognitions relating to eating and body shape are widespread in the general population (e.g., "people will like me more if I am thin"), and the boundaries between the healthy and pathological conditions are unclear. Moreover, perceptual, cognitive, and emotional factors play a role in the development of the body image. It is important to stress that the concept of body image cannot be solely limited to visual input. Some authors use the term *body experience*, reflecting the complexity of this concept [10].

Measurement methods for eating and body image disorders are usually administered by either interview or self-reporting. Structured clinical interviews are widely seen as gold standards in clinical practice and research. They are essential for the detection of physical signs and symptoms, medical complications, somatic and psychiatric comorbidity, and different subtypes and essential to clarify differential diagnostic issues [11]. The major measures with excellent psychometric properties include the Structured Clinical Interview for *DSM-IV* TR Axis I Disorders (SCID-I [12]), Eating Disorder Examination (EDE [13,14]), and the Structured Interview for Anorexic and Bulimic Disorders (SIAB-EX [15]). The SCID-I is a general psychiatric interview method based on the criteria of *DSM-IV* TR, including items for assessing eating disorders symptoms. The 12th version of EDE was published in 1993 and is the primary tool in treatment studies. Its 23 variables include diagnostic items and form four subscales: eating concern, shape concern, dietary restraint, and weight concern. Having gone through several revisions, the SIAB-EX provides valid diagnosis of AN and BN (including subtypes) consistent with both the *DSM-IV* and the *International Statistical Classification of Diseases, 10th Revision* (ICD-10), criteria [16]. All the structured clinical interviews should be administered after thorough training to ensure the validity of the diagnosis and assessment of symptoms. In clinical settings and in the definition of the complex constructs, such as binge and dieting, they can be useful and more precise than self-report measures. All clinical interviews, however, are time consuming and costly. Self-report methods are widely used in screening, research, and assessment of eating and body image pathology. Although the administration of self-report measures is easy and economic, a number of limitations arise from subjective interpretations of the phenomena particular to eating disorders, such as binges [17] and denial of the illness resulting in the concealment of symptoms, which might threaten the validity of these measures [18]. The effect of social desirability can also distort the interpretation of the results. The real occurrence of amenorrhea, binge, and purging behavior is often kept secret. Distress and shame often lie behind concealment [18]. These influences can cause underreporting of the severity of the symptoms, mostly in anorectics.

This review summarizes some of the best-known self-report assessment tools with good psychometric qualities. It is intended to provide a pool of options for both clinicians and researchers. There are also good manuals and reviews summarizing several useful methods [17,19–22].

General measures of eating disorder symptoms

Eating Disorders Inventory

The Eating Disorders Inventory (EDI [23]) was developed to measure behavioral and psychological traits in AN and BN. The items are based on extensive literature and research experience [24]. The EDI has 64 items comprising eight subscales: drive for thinness, bulimia, body dissatisfaction, ineffectiveness, perfectionism, interpersonal distrust, interoceptive awareness, and maturity fears. Three subscales assess the attitudes toward weight, body shape, and eating (drive for thinness, bulimia, and body dissatisfaction), and the remaining five subscales assess the psychological characteristics of individuals with eating disorders. The EDI was revised to EDI-2 by Garner [25], retaining eight subscales but adding 27 items that constituted three new subscales: asceticism, impulse regulation, and social insecurity. Recently, the EDI was revised to EDI-3 by Garner [26], retaining the same items from EDI-2. Some of the items show different item loadings compared with EDI-2 [27]. The three EDI-2 subscales assessing the core eating pathology symptoms are unchanged in the EDI-3 except for the addition of one item from the EDI-2 interoceptive awareness subscale to the bulimia scale and the body dissatisfaction scale. Low self-esteem, personal alienation, interpersonal insecurity, interpersonal alienation, interoceptive deficits, emotional dysregulation, perfectionism, asceticism, and maturity fears subscale make up the rest of the EDI-3.

The EDI, EDI-2, and EDI-3 are 6-point forced-choice self-report scales transformed into a 4-point scale; the three extreme responses related to disordered behaviors are scored, and the choice opposite to the most anorexic response gets a score of 0. The subscales scores can be used separately or summed to give a total score. For EDI-3, seven additional composite scores may be obtained by summing the T-scores