Barcelona Bipolar Eating Disorder Scale (BEDS): a self-administered scale for eating disturbances in bipolar patients

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Una escala autoaplicada para las alteraciones de la conducta alimentaria en el trastorno bipolar:* Bipolar Eating Disorder Scale *(BEDS) de Barcelona

Summary

Introduction. *The presence of eating disorders in bipolar population is not rare, with rates over 10 %, according to the few available epidemiologic studies, however the literature on this issue is still scarce. An even higher percentage of bipolar individuals suffer from serious problems related to eating behavior without fulfilling criteria for DSM-IV eating disorder.*

Methods. *The Bipolar Eating Disorders Sale (BEDS) was designed on the basis of the existing eating scales, adjusted to the characteristics of bipolar disorders from the complaints of our sample of patients (n = 350). Subsequently, a group of experts made the selection of the most representative and independent items in order to obtain a short, 10-item scale, aimed at assessing the intensity and frequency of eating dysfunctions in the bipolar population and not at diagnosis. We administered the scale to a healthy control group (n = 55) to evaluate feasibility and to determine the cut-off score.*

Results. *The BEDS is a 10-item simple, self-administered scale. Average time of completing this scale is about 1.13 minutes (1 minute, 21 seconds) ± 26 seconds. Median score was 6 and the mean score was 6.6 with a standard deviation of 3.7, this being the reason why the cut-off point was found to be around 13 points. Patients receiving scores over 13 may require an individualized intervention to evaluate which were the main difficulties and to propose treatment.*

Conclusions. *The BEDS scale allows for a rapid and effective evaluation of both the intensity and the frequency of eating dysfunctions in bipolar patients in order to perform an adequate intervention for the specific needs of each one of the patients.*

Key words: *Bipolar disorder. Self-administed scale. Eating behavior.*

Resumen

Introducción. *Los estudios realizados sobre patología alimentaria y trastorno bipolar son más bien escasos, a pesar de la frecuente comorbilidad entre trastorno alimentario y trastorno bipolar que los pocos estudios epidemiológicos realizados han confirmado, con cifras por encima del 10 %. Sin embargo, un porcentaje todavía mayor de pacientes bipolares padece problemas en el área de la alimentación que por sus características y gravedad no alcanzan a cumplir criterios para un trastorno específico de la conducta alimentaria.*

Métodos. *Se presenta la escala autoaplicada para las alteraciones de la conducta alimentaria en el trastorno bipolar (BEDS). El diseño de esta escala se ha realizado en base a ítems de otras escalas ya existentes que valoran la conducta alimentaria y a una lista exhaustiva de quejas referidas por una muestra amplia de pacientes bipolares (n = 350) respecto a sus problemas con la alimentación. Posteriormente, un grupo de expertos seleccionó los ítems más representativos e independientes hasta construir una escala cuantitativa breve, destinada a la cuantificación, que no al diagnóstico, de las disfunciones alimentarias en pacientes bipolares. Se ha pasado la escala a un grupo de controles sanos (n = 55) para evaluar su factibilidad y determinar un punto de corte.*

Resultados. *La BEDS es un cuestionario sencillo, autoaplicado y factible, ya que consta de tan sólo 10 ítems. El tiempo de ejecución fue de 1,13 min (1 min, 21 s) ± 26 s. La puntuación mediana en controles fue de 6 y la puntuación media de 6,6 con una desviación típica de 3,7, por lo que el punto de corte se presituó sobre los 13 puntos. Pacientes con puntuaciones superiores a los 13 puntos requerirán una intervención individualizada para valorar cuáles son sus mayores dificultades y proponer un tratamiento.*

Conclusiones. *La BEDS permite evaluar de una manera rápida y sencilla tanto la intensidad como la frecuencia de las diferentes alteraciones alimentarias en los pacientes bipolares con el fin de poder realizar una intervención adecuada a las necesidades específicas de cada uno de los pacientes.*

Palabras clave: *Trastorno bipolar. Escala autoaplicada. Conducta alimentaria.*

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INTRODUCTION

Comorbidity with other psychiatric diseases is frequent in bipolar disorders[1], especially with substance abuse and dependence disorders and anxious spectrum

disorders that could affect up to 20 % of the bipolar patients[2]. However, some authors double this value[3]. Eating behavior disorders are frequent among bipolar patients[4] but, in spite of this, the publications on the subject are scarce. The prevalence-life of bipolar disorder among patients affected by anorexia or bulimia ranges from 4% to 6%, although some authors place this value above 10%[5]. The few epidemiological studies performed[6,7] verify the morbid association between bipolar and eating disorders, and, especially, between bulimia and type II bipolar disorder[8]. However, most of the eating behavior problems present in bipolar patients do not comply with the criteria for a specific eating behavior disorder due to their characteristics and seriousness.

The influence of the seasonal pattern of affective disorders and especially in bipolar disorders[9] has been more than demonstrated[10]. Winter depressions - characteristic above all of type II bipolar ones - generally include increase of intake and more specifically craving for carbohydrates - present above all among women, in a ratio of 4:1, among their symptoms[11]. Craving for carbohydrates has been associated with a serotonergic deficit[12] and there are data on a subjective improvement of thymic tone once the carving episode has ended[13]. Eating behavior disorders in atypical depressions present a certain degree of phenomenological similarity with bulimic symptoms, especially due to the existence of loss of control on eating behavior.

Another one of the eating behavior disorders that can be observed in bipolar patients is binge eating disorder. One of the first studies associating both entities offered a high prevalence of Binge Eating among bipolar patients, much greater than the rest of the population[14]. The clinical picture of this disorder is characterized by recurrent episodes of eating binges with subject sensation and behavioral manifestations of lack of control on them. The manifestations of this loss of control are eating very quickly until noticing an unpleasant sensation of fullness, intake of large amounts of food without feeling the sensation of hunger, and profound malaise that follows each binge. According to the DSM-IV, to establish the binge eating disorder diagnosis, the binges must cause clinically significant malaise, lack of satisfaction during and after the episodes and concern for its long-term effects on weight and body image. In regards to frequency, the binges should normally occur at least two days per week for a minimum period of 6 months. We often observe a variation within the same picture that is the nighttime binge or «night eating syndrome» that is characterized by episodes during which the patient eats at night and presents anorexia and eating restriction during the day. In this type of picture, it is probably the daytime eating restriction that which precipitates the following cycle of overeating at night. In bipolar patients, the binges generally occur more frequently during the depressive phases, but this pattern persists during euthymia in many cases.

In these recent years, several studies aimed at determining the prevalence of overweight and obesity among bipolar patients have been performed[15-18], finding very elevated values of obesity prevalence in bipolar disorder. Thus, the need to design specific strategies and programs for the control of weight in bipolar patients is clear. Some of the potentially involved factors in overweightness in bipolar patients are: comorbidity with binge disorder, alteration of basic eating habits, subclinical hypothyroidism in relationship with lithium carbonate treatment, inactivity and sedentary life style, etc., and, among these, the induction of overweight produced by some drugs stands out. Antipsychotics, both typical as well as atypical (especially olanzapine and clozapine) are the drugs that are most frequently associated with weight and appetite increase[19-21]. Overweightness is also frequently associated to valproate[22] and lithium, especially during the first 2 years of treatment[23]. On the other hand, mouth dryness that often accompanies the use of these drugs or anticholinergics that are associated to some neuroleptics, stimulate liquid intake, that often have high caloric content, which is the case of most refreshments, contributing to the increase of total caloric intake. Only one drug that is sometimes used in bipolar disorder, topiramate, has been shown to reduce weight and appetite in these patients[24].

It is well known that obesity includes a series of complications that are both physical (increase of cardiovascular disorders, hypertension, etc.) as well as psychological (deterioration of self-image and self-esteem, etc.). All this makes it necessary to pose the possibility of optimizing treatment and designing ad hoc intervention programs to regulate the weight of our patients.

Consequently, instruments that help to detect and quantify the intake pathology in bipolar patients must be designed. Since most of the patients present non-specific complaints, or atypical or incomplete forms of eating disorder, this instrument should include a wide range of problems specifically related with those reported by bipolar patients and should be simple and feasible. To do this, the BEDS was designed. It is short and self-applicable, provides a measurement of the intensity of eating problems of bipolar patients, in the same way that a scale for anxiety makes it possible to assess this syndrome in patients with a primary diagnosis other than anxiety disorder. Thus, the BEDS should allow for the quantification of eating pathology in bipolar patients, and screening through an empirically established cut-off for the application of specific interviews of eating disorder diagnosis. Up to now, there has been no instrument with these characteristics.

SUBJECTS AND METHODS

The BEDS has been constructed based on two sources: *1)* items from other scales on already existing eating disorders, adapting them to the concerns posed by our patients in this regards, in the daily clinical practice, and the characteristics themselves of bipolar disease, and *2)* a list of symptoms reported by a large sample of bipolar

patients (n = 350), who were questioned on the difficulties in their eating habits. Based on this, a selection of the items was performed, eliminating the least mentioned and redundant ones and an experts' committee in bipolar disorder and eating disorder chose the 10 most significant. After, a larger group of experts performed some changes in the writing of the items and scale format and gave their approval. The result is the design of this simple scale, that involves very little performance time, is made up of only 10 items and is self-applicable. The cut-off has been estimated from the median of a healthy control sample (n = 55) plus two standard deviations.

RESULTS

The BEDS is a simple, self-applicable and feasible questionnaire since it only has 10 items. The scale allows us to assess the intensity and frequency of the different eating behavior disorders in appendix 1. We have wanted to select the items related with the most common problems expressed, based on a sample of 350 patients belonging to the bipolar disorders program in the Hospital Clínico of Barcelona. We can divide the items into different groups: those that refer to the regularity of habits (item 1, item 10), to the influence of the mood state (depressive episode, hypomanic-manic, mixed), in eating intake and appetite disorders (item 2, item 5, item 6), eating behavior disorders such as binges (item 3, item 7), fullness regulator mechanism (item 4), the fact of eating compulsively (item 9), and carbohydrate craving (item 8). Each one of the items presents 4 possible responses that go from «always» to «never», which are scored from 0 to 3 (0: never; 1: sometimes; 2: often; 3: always). The total score is obtained by adding the score of each item and it can range from 0 to 30. We could consider that patients with scores above 13 probably suffer relevant disorders in eating behavior and thus will require an individualized intervention to see which are their greatest difficulties and how these affect their quality of life.

The final composition of the scale is shown in appendix 1. Mean performance time was 1.13 minutes (1 minute, 21 seconds) ± 26 seconds. After its administration to a sample of healthy controls (n = 55), a median score of 6 points and mean score of 6.6 points with a standard deviation of 3.7 points was obtained, so that the cut-off was pre-located at about 13 points (6 + [3.7 × 2] = 13.4).

APPENDIX 1

Patient: Date:
Gender:
Age:
Diagnosis:

BARCELONA BIPOLAR EATING DISORDER SCALE				
	0	1	2	3
1. Do you it difficult to follow the schedules for the different meals regularly without missing any of them?	☐	☐	☐	☐
2. Do you believe that your mood state plays a role in having more or less appetite?	☐	☐	☐	☐
3. Have you ever needed to get up at night in order to eat?	☐	☐	☐	☐
4. Do you find it difficult to stop eating when you want to even though you are full?	☐	☐	☐	☐
5. Do you tend to eat more when you feel depressed?	☐	☐	☐	☐
6. If you are euphoric, does your appetite change?	☐	☐	☐	☐
7. Do you sometimes having eating binges, with the sensation of not being able to stop eating?	☐	☐	☐	☐
8. Would you say you tend to eat sweets?	☐	☐	☐	☐
9. Do you consider that you generally have too great an appetite and eat excessively?	☐	☐	☐	☐
10. Do you tend to eat between meals?	☐	☐	☐	☐
	Total			

0: never; 1: sometimes; 2: often; 3: always.

Scores from 0 to 13 are considered, in principle, normal, and above 13 (to 30) as pathological.

CONCLUSIONS

Medication is essential for the evolution of bipolar disorder, but it is also important to regulate sleep and eating habits, respect regular eating hours, without obviating any, trying to carry out a balanced diet, doing exercise regularly. However, in many of the cases, and according to the disease evolution, this routine is extremely difficult to follow for our patients, since the mood state causes alterations in appetite and eating intake both in excess as well as in restriction and the fluctuations in their mood state often causes them to suffer more or less intensive sedentary life styles and inactivity that make it difficult to regulate their eating habits and facilitate weight increase. Some pharmacological treatments have improved the profile of side effects of the oldest drugs regarding other health areas, but not exactly in regards to eating habits and weight increase. Up to date, there is no way of quantifying the specific disorders of eating behaviors that patients with bipolar disorder have, thus, the creation of some valid and reliable instrument that makes it possible to assess these disorders is of priority. The BEDS has the great advantage of its high feasibility and simple administration, which facilitates its use in the clinical practice with the minimum cost of time possible.

The objective of this scale is to assess both the intensity as well as frequency of the different previously mentioned problems in order to be able to perform an adequate intervention of the specific needs of each one of the patients (performance of individual diets, eating education, facilitating the patient basic knowledge on nutrition, adjusting drug treatment, etc.). This intervention should be conceived in a multidisciplinary way, including nutritional and psychological criteria, establishing dietary measures, adequate exercise habits, and psychotherapy intervention focused on cognitive-behavior techniques, in order to influence the improvement of quality of life and therapeutic compliance of our patients. By BEDS, and its administration before and after a specific treatment for eating dysfunction, it should be possible to detect the changes induced by the treatment.

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