

THE ACCURACY OF THE EBA-O FOR DETECTING BINGE EATING DISORDER AMONG PATIENTS WITH OBESITY



UMG
Università Magna Graecia
Dipartimento di Scienze Mediche



E. A. CARSONE¹, M. RAMA², M. ALDI³, D. QUERINO⁴, R. DE PIIPPIS³, C. SERRA-BARCIA^{4*}

¹ Dept. Medical and Surgical Sciences, University Magna Graecia of Catanzaro, Italy

² Outpatient Unit of Clinical Research and Treatment of Eating Disorders, University Hospital Mater Domini, Catanzaro, Italy

³ Dept. Clinical and Experimental Medicine, University of Messina, Italy

⁴ Dept. Health Sciences, University Magna Graecia of Catanzaro, Italy

INTRODUCTION

Binge eating disorder (BED) is commonly associated with obesity but underrecognized, thus leading to a more severe psychopathological impairment¹.

Even if binge eating is needed for the diagnosis of BED, many high weight patients with and without BED can also suffer from other pathological eating behaviors (e.g., grazing, night eating, sweet eating, hyperphagia)².

The new eating behaviors Assessment for Obesity (EBA-O)³ was designed to detect pathological eating behaviors in obesity.

AIM

This study aims to investigate the discriminant ability of the five factors of EBA-O, namely night eating, food addiction, sweet eating, hyperphagia and binge eating behaviors to detect BED in a clinical sample of patients with obesity seeking weight loss treatment.

Our hypothesis is that the scales of the EBA-O will be able to correctly identify BED among patients with high weight.

RESULTS

Table 1. Sample Description	n	%
Sex		
Male	108	84.7%
Female	21	16.3%
Education		
Elementary school	1	0.8%
Middle school I	30	23.7%
High school I	54	42.3%
University degree	35	27.2%
Employment (total activity)		
Employed	5	3.9%
Unemployed	52	40.4%
Retired	49	38.3%
Unemployed	1	0.8%
Old total Single	46	36.2%
Married	37	28.9%
Divorced	1	0.8%
Widow	1	0.8%

Table 2. Logistic Regression	Model				
	Patients	Model Deviance	χ ²	Wald Statistic	p
Age (years)	1.046	0.000	4.278	0.039	0.046
High eating	0.648	0.000	1.408	0.235	0.624
Food addiction	0.610	0.016	1.004	0.316	0.574
Sweet eating	0.601	0.018	1.008	0.315	0.575
Hyperphagia	0.608	0.018	1.007	0.315	0.575
Intercept	0.000	0.000	1.000	0.000	0.000

UMG (University Magna Graecia)

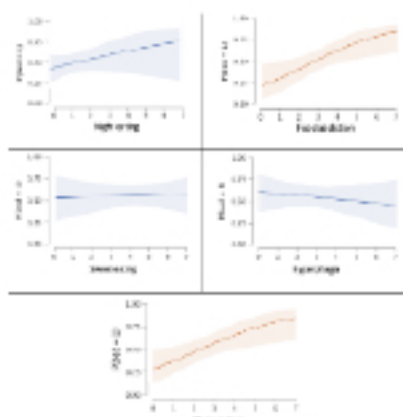


Fig. 2. Conditional estimates plots of logistic regression model

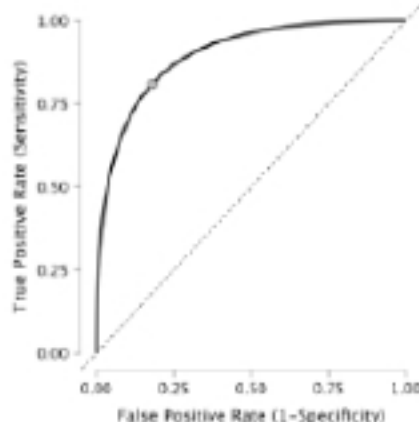


Fig. 3. ROC curve for the EBA-O for discriminating between patients with obesity with and without BED. The area under the curve (AUC) was 0.82

The final sample consisted of 129 patients (108 female and 21 male). The mean age was 37.6 ± 14.1 years and mean BMI was 35.6 ± 8.3 kg/m² (Table 1).

67 out of 129 participants received a clinical diagnosis of BED following the clinical interview and psychiatric evaluation.

Table 2 displays the results of the logistic regression: the Factor 1 "Food addiction" ($p = .034$) and Factor 3 "Binge eating" ($p = .013$) scores significantly predicted the diagnosis of BED. Conditional estimates plots are illustrated in Figure 1.

The EBA-O showed high accuracy (0.81) and precision (0.88) discriminating between patients with obesity with and without BED (AUC = .89) (see Figure 2). The sensitivity and specificity were 82% and 82%, respectively.

METHOD

Consecutively patients seeking weight loss treatment for obesity (BMI ≥ 30 kg/m²), age ≥ 18 years and < 60 were recruited. Participants underwent a medical visit and filled in the EBA-O. A trained psychiatrist interviewed all participants using the Eating Disorder Examination Questionnaire (EDE-Q) and the Structured Clinical Interview for the DSM-5 (SCID-5-CV) to ascertain the diagnosis of BED.

Multivariate Analysis of variance (MANOVA), a logistic regression analysis and a ROC curve analysis were run to determine the sensitivity and specificity of EBA-O.

CONCLUSIONS

EBA-O showed a good performance in identifying BED among patients with obesity. Although the EBA-O is not a substitute for extensive diagnostics, it seems useful for assessing not only altered eating behaviors but can also be considered a simple and easy-to-use tool to easily detect BED among patients with obesity looking for weight reduction programs.

REFERENCES

CONTACT INFORMATION

1. Agüero L et al. A review of binge eating disorder and obesity. *Neuropsychiatr* 2021; 55: 57-67

2. Carlucci M et al. A real world study on the genetic, cognitive and psychopathological differences of obese patients clustered according to eating behaviours. *European Psychiatry* 2018; 48: 58-64

3. Leggio-Gracia C et al. Development, validation and clinical use of the Eating Behavior Assessment for Obesity (EBA-O) for Weight. *Behav* 2022; 27:2143-2154

✉ ambulatorio.dca.psichiatria@umg.it

☎ 0961-712 408/326/363