Axis I and II Disorders and Quality of Life in Bariatric Surgery Candidates

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Objective: This study examined the prevalence of Axis I and II psychopathology and its relationship with quality of life in candidates for bariatric surgery.

Method: Consecutive obese subjects (N = 282) with a body mass index (BMI) of 30 kg/m^2 or more received a thorough psychiatric assessment including the Structured Clinical Interviews for DSM-IV Axis I and II Disorders; the Hamilton Rating Scale for Depression; the Bulimic Investigatory Test, Edinburgh; and the short-form Quality of Life Enjoyment and Satisfaction Questionnaire. Subjects were recruited between November 2001 and March 2006.

Results: The overall prevalence of lifetime Axis I disorders in the sample was 37.6%. Mood disorders were the most common diagnoses (22.0%). Anxiety disorders and eating disorders were found in 18.1% and 12.8% of the sample, respectively. Alcohol or substance use disorders were uncommon. The percentage of subjects meeting criteria for at least 1 lifetime Axis I disorder did not vary by BMI class or gender. The prevalence of current Axis I disorders was 20.9% (N = 59). Fifty-five subjects (19.5%) met criteria for at least 1 Axis II disorder. Cluster C disorders, including avoidant, dependent, and obsessive-compulsive personality disorders, comprised virtually all the disorders in the sample (N = 53, 18.8%). Quality of life was poor, unrelated with gender or BMI, and significantly more impaired in individuals with comorbid Axis I and II disorders compared with those without disorders (p = .035).

Conclusion: About one fifth of the sample presented with a current Axis I disorder, and the same percentage had a personality disorder. Although obesity surgery is not contraindicated based on psychiatric disorders, adequate preoperative treatment should be provided to individuals in need of psychiatric support to improve the postoperative outcome and reduce the risk of complications.

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Obesity is a chronic condition with an increasing prevalence in Italy and Europe that mirrors the trend observed in the United States over the last decades.[1] The World Health Organization (WHO) estimates that more than 1 billion people are overweight and, of these, 300 million can be considered obese. It is estimated that these figures will double in 20 years.[2] Obesity, defined by a body mass index (BMI) ≥ 30 kg/m^2, is an important risk factor for physical comorbidities, including diabetes mellitus, hypertension, obstructive sleep apnea, many cancers, dyslipidemia, cardiovascular disease, and overall mortality.[3,4]

With some exceptions, the feed-forward cycle of weight gain in the morbidly obese (BMI ≥ 40 kg/m^2) can be interrupted only by physically restricting oral intake. Bariatric surgery is not a cure for obesity; however, surgical interventions can offer the potential for long-term weight loss success for individuals who are obese[5] and enhanced patient safety.[6,7] Psychiatric disorders, mainly affective and personality disorders, are often considered as contraindications for bariatric surgery. Patients with psychiatric disorders are thought to have greater risk for somatic and psychological complications after bariatric surgery. However, evidence is mixed in the literature, and many authors do not contraindicate obesity surgery based on psychiatric disorders, provided that there is adequate preoperative and postoperative psychiatric support.[8,9]

Studies based on structured interviews indicate that, in bariatric surgery candidates, the lifetime prevalence of DSM-IV mood and anxiety disorders is 22.4% and 15.5%, respectively.[10] The prevalence of personality disorders

was investigated in obese subjects, with a special attention to binge eating,[11–14] but generally in small-size or selected samples.

Moreover, although health-related quality of life in bariatric surgery candidates was studied extensively and found to be poorer among those subjects than among normative samples,[15,16] to our knowledge, no study has analyzed satisfaction with quality of life in relation to Axis I and II pathology, BMI, and gender.

This study aimed to examine the prevalence of Axis I and II psychopathology and its relationship with satisfaction with quality of life in a large sample of bariatric surgery candidates.

METHOD

In the framework of an ongoing collaboration between the Department of Psychiatry, Neurobiology, Pharmacology, and Biotechnology and the Department of Endocrinology and Metabolic Diseases of the University of Pisa, obese candidates for bariatric surgery were consecutively recruited between November 2001 and March 2006 and received a careful psychopathologic assessment to determine their eligibility for the intervention.

The ethics committee of the Azienda Ospedaliera-Universitaria Pisana approved the study protocol and the assessment procedures. All subjects provided written informed consent to participate in the study.

Inclusion criteria for the present study were age between 18 and 65 years and a BMI of 30 kg/m^2 or more. Exclusion criteria were life-threatening physical illness, mental retardation, and illiteracy or poor knowledge of the Italian language.

Patients were scheduled to receive a 2- to 3-hour diagnostic assessment and were then asked to fill out and return on the subsequent visit a battery of self-report instruments measuring quality of life, the severity of current and lifetime psychiatric symptoms, personality features, and eating behavior.

The diagnostic assessment was conducted using the Structured Clinical Interviews for DSM-IV Axis I and II Disorders[17,18] (SCID-I and SCID-II, respectively) by 5 psychiatrists (A.C., A.R., S.R., A.A., M.P.) trained and certified in the use of the interviews when high levels (> 0.90) of interrater reliability of their diagnoses with the first author (M.M.) were achieved. The interviewers had long-standing experience in making these assessments. These psychiatrists also rated the severity of depression using the Hamilton Rating Scale for Depression (HAM-D).[19] The severity of binge eating was assessed using a self-report questionnaire, the Bulimic Investigatory Test, Edinburgh (BITE).[20] On the basis of the score on 30 symptoms, subjects were divided into 2 groups: high scorers (total score ≥ 20) and low scorers (total score < 20). The frequency of binges was assessed using a 6-point item of the BITE (1 = hardly ever, 2 = once a month, 3 = once a week, 4 = 2–3 times a week, 5 = daily, and 6 = 2–3 times a day). The short-form Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q), originally developed by Endicott et al.[21] and validated in Italian,[22] was also administered to measure the degree of enjoyment and satisfaction experienced by subjects in the last week in the areas of physical health/activities, feelings, work, household duties, school/course work, leisure time activities, social relations, vision, and general activities. The overall score ranges from 1 (very dissatisfied) to 5 (very satisfied) and is obtained as the average of the 16 items.

Three BMI obesity classes were defined using the WHO criteria[23]: class I, "moderately obese" (BMI = 30–34.9 kg/m^2); class II, "severely obese" (BMI = 35–39.9 kg/m^2); and class III, "very severely obese" (BMI ≥ 40 kg/m^2).

Statistical Analyses

Dichotomous variables (Axis I and II diagnoses) were compared between genders and among BMI classes using the χ^2 test or the Fisher exact test when appropriate. These analyses were conducted using SPSS, version 14.0 (SPSS Inc., Chicago, Ill.). Odds ratios (ORs) and exact confidence intervals were calculated using STATA, version 8.0 (StataCorp, College Station, Tex.).

Sample

The study sample consisted of 282 subjects. Participants were predominantly female (N = 225, 79.8%), married (69.5%), and employed (59.8%); 44.9% had a high school diploma or a university degree. The mean (SD) age of the sample was 42.1 (11.4) years, and the mean (SD) BMI was 43.5 (7.0). According to the WHO classification of obesity by severity classes, 9.5% were moderately obese, 24.5% were severely obese, and 66.0% were very severely obese.

RESULTS

Prevalence and Severity of Axis I Disorders

The overall prevalence of lifetime Axis I disorders in the sample was 37.6%. Mood disorders, particularly major depressive disorder, were the most common diagnoses (22.0%). Anxiety disorders were found in 18.1% of the sample, and eating disorders, in 12.8%. These eating disorders included bulimia nervosa (N = 5, 1.8%) and binge-eating disorder (N = 31, 10.6%). Alcohol or substance use disorders were diagnosed in just 3 subjects.

The percentage of subjects meeting criteria for at least 1 lifetime Axis I disorder did not vary by BMI class or gender (Table 1). When the prevalence of individual diagnoses was compared between genders, lifetime major depressive disorder was twice as common in women as in men,

Table 1. Prevalence of Lifetime Axis I Disorders by Body Mass Index (BMI) Class and Gender Among Bariatric Surgery Candidates[a]

		BMI Class					Gender		
Lifetime Axis I Disorder	All Subjects (N = 282)	Class I, Moderate (N = 27)	Class II, Severe (N = 69)	Class III, Very Severe (N = 186)	χ^2 or Fisher Exact Test	p	Male (N = 57)	Female (N = 225)	χ^2 or Fisher Exact Test	p
Any mood disorder	62 (22.0)	6 (22.2)	16 (23.2)	40 (21.5)	0.084	.959	8 (14.0)	54 (24.0)	2.633	.105
Bipolar I	3 (1.1)	…	1 (1.4)	2 (1.1)	0.388	.824	1 (1.8)	2 (0.9)	…	.493
Bipolar II	3 (1.1)	…	…	3 (1.6)	1.57	.455	1 (1.8)	2 (0.9)	…	.493
Major depressive disorder	54 (19.1)	6 (22.2)	15 (21.7)	33 (17.7)	0.702	.704	6 (10.5)	48 (21.3)	3.4	.064
Dysthymia	3 (1.1)	…	…	3 (1.6)	1.57	.457	…	3 (1.3)	…	1.0
Substance-induced mood disorder	2 (0.7)	…	…	2 (1.1)	1.04	.595	…	2 (0.9)	…	1.0
Any anxiety disorder	51 (18.1)	5 (18.5)	9 (13.0)	37 (19.9)	1.60	.450	10 (17.5)	41 (18.2)	0.014	.905
Panic disorder	24 (8.5)	2 (7.4)	6 (8.7)	16 (8.6)	0.047	.977	6 (10.5)	18 (8.0)	0.373	.541
Agoraphobia	6 (2.1)	1 (3.7)	2 (2.9)	3 (1.6)	0.756	.685	…	6 (2.7)	…	.604
Social phobia	9 (3.2)	2 (7.4)	1 (1.4)	6 (3.2)	2.23	.328	1 (1.8)	8 (3.6)	…	.692
Specific phobia	15 (5.3)	…	4 (5.8)	11 (5.9)	1.68	.432	2 (3.5)	13 (5.8)	…	.743
Obsessive-compulsive disorder	8 (2.8)	1 (3.7)	2 (2.9)	5 (2.7)	0.089	.956	1 (1.8)	7 (3.1)	…	1.0
Posttraumatic stress disorder	5 (1.8)	1 (3.7)	…	4 (2.2)	1.98	.372	1 (1.8)	4 (1.8)	…	1.0
Generalized anxiety disorder	3 (1.1)	…	…	3 (1.6)	1.56	.457	…	3 (1.3)	…	1.0
Anxiety disorder not otherwise specified	1 (0.4)	…	…	1 (0.5)	0.515	.773	…	1 (0.4)	…	1.0
Any substance use disorder	3 (1.1)	…	…	3 (1.6)	1.56	.457	2 (3.5)	1 (0.4)	…	.105
Alcohol	2 (0.7)	…	…	2 (1.1)	1.04	.595	1 (1.8)	1 (0.4)	…	.364
Opioid	1 (0.4)	…	…	1 (0.5)	0.518	.772	1 (1.8)	…	…	.202
Any eating disorder	36 (12.8)	2 (7.4)	7 (10.3)	27 (14.5)	1.63	.442	7 (12.3)	29 (12.9)	0.015	.902
Bulimia nervosa	5 (1.8)	…	…	5 (2.7)	2.61	.271	…	5 (2.2)	…	.587
Binge-eating disorder	31 (11.0)	2 (7.4)	7 (10.3)	22 (11.9)	0.536	.765	7 (12.3)	24 (10.7)	0.106	.744
Any Axis I disorder	106 (37.6)	9 (33.3)	23 (33.3)	74 (39.8)	1.12	.570	17 (29.8)	89 (39.6)	1.836	.175

[a]Values are given as N (%).
Symbol: … = no data.

with a difference reaching borderline significance (21.3% vs. 10.5%, $\chi^2 = 3.4$, p = .064).

The prevalence of current Axis I disorders was 20.9% (N = 59). Binge-eating disorder (N = 19, 6.7%), specific phobias (N = 14, 5.0%), panic disorder (N = 13, 4.6%), and major depressive disorder (N = 13, 4.6%) were the most frequent current diagnoses. The percentage of subjects with any current diagnosis did not vary by gender or BMI class (Table 2). Moreover, no difference was found between males and females and between BMI classes on the prevalence of individual diagnoses.

In subjects with major depressive disorder, the mean (SD) total HAM-D score was 13.9 (7.0). The median frequency of binges in subjects with eating disorders assessed using the BITE was 4, corresponding to 2 to 3 binges per week, and the mean (SD) number of symptoms was 17.4 (6.9). About one half (N = 11, 52.8%) of these subjects exceeded the threshold of 20 on the BITE symptom severity scale and can be considered high scorers.

Prevalence of Axis II Disorders

Fifty-five subjects (19.5%) met criteria for at least 1 Axis II disorder. Cluster C disorders, including avoidant, dependent, and obsessive-compulsive personality disorders, comprised virtually all the disorders in the sample (N = 53, 18.8%) with the exception of 5 subjects with borderline personality disorder (1.8%), 2 with a paranoid personality disorder (0.7%), and 1 with narcissistic personality disorder (0.4%). Cluster C disorders were more frequent, but not significantly, in females and in the severe/very severe BMI classes (Table 3).

Association of Eating Disorders With Axis I and II Disorders

Thirty-six subjects met criteria for lifetime binge-eating disorder (N = 31) or bulimia nervosa (N = 5). These 36 subjects were more likely to have a lifetime Axis I comorbidity than subjects without eating disorders (OR = 2.25, 95% CI = 1.03 to 4.85). When we examined the association of eating disorders with any anxiety and any mood disorders, we found that the ORs were increased (anxiety, OR = 2.27, 95% CI = 0.93 to 5.23; mood, OR = 1.68, 95% CI = 0.70 to 3.82). Still, the confidence interval of the OR included the unity, denoting the absence of a clear-cut relationship.

Subjects with eating disorders were more likely, but not significantly, to have any

Table 2. Prevalence of Current Axis I Disorders by Body Mass Index (BMI) Class and Gender Among Bariatric Surgery Candidates[a,b]

Current Axis I Disorder	All Subjects (N = 282)	BMI Class					Gender			
		Class I, Moderate (N = 27)	Class II, Severe (N = 69)	Class III, Very Severe (N = 186)	χ^2 or Fisher Exact Test	p	Male (N = 57)	Female (N = 225)	χ^2 or Fisher Exact Test	p
Any mood disorder	18 (6.4)	1 (3.7)	3 (4.3)	14 (7.5)	1.210	.546	4 (7.0)	14 (6.2)	…	.767
Bipolar I	1 (0.4)	…	1 (1.4)	…	3.098	.212	…	1 (0.4)	…	1.0
Bipolar II	2 (0.7)	…	…	2 (1.1)	1.04	.5945	1 (1.8)	1 (0.4)	…	.364
Major depressive disorder	13 (4.6)	1 (3.7)	2 (2.9)	10 (5.4)	0.758	.684	3 (5.3)	10 (4.4)	…	.730
Dysthymia	3 (1.1)	…	…	3 (1.6)	1.565	.457	…	3 (1.3)	…	1.0
Any anxiety disorder	35 (12.4)	2 (7.4)	4 (5.8)	29 (15.6)	5.129	.077	7 (12.3)	28 (12.4)	0.001	.973
Panic disorder	13 (4.6)	1 (3.7)	1 (1.4)	11 (5.9)	2.337	.311	4 (7.0)	9 (4.0)	…	.305
Social phobia	8 (2.8)	2 (7.4)	…	6 (3.2)	4.163	.125	1 (1.8)	7 (3.1)	…	1.0
Specific phobia	14 (5.0)	…	3 (4.3)	11 (5.9)	1.821	.402	2 (3.5)	12 (5.3)	…	.743
Obsessive-compulsive disorder	6 (2.1)	1 (3.7)	1 (1.4)	4 (2.2)	0.475	.789	1 (1.8)	5 (2.2)	…	1.0
Posttraumatic stress disorder	3 (1.1)	…	…	3 (1.6)	1.565	.457	…	3 (1.3)	…	1.0
Generalized anxiety disorder	3 (1.1)	…	…	3 (1.6)	1.565	.457	…	3 (1.3)	…	1.0
Any eating disorder	20 (7.1)	2 (7.4)	3 (4.3)	15 (8.1)	1.06	.589	5 (8.8)	15 (6.7)	0.306	.580
Bulimia nervosa	1 (0.4)	…	…	1 (0.5)	0.518	.772	…	1 (0.4)	…	1.0
Binge-eating disorder	19 (6.7)	2 (7.4)	3 (4.3)	14 (7.5)	0.831	.66	5 (8.8)	14 (6.2)	0.471	.493
Any Axis I disorder	59 (20.9)	3 (11.1)	10 (14.5)	46 (24.7)	4.926	.085	12 (21.1)	47 (20.9)	0.001	.978

[a]Values are given as N (%).
[b]No subjects were currently diagnosed with substance-induced mood disorder, agoraphobia, anxiety disorder not otherwise specified, or alcohol, opioid, or substance use disorders.
Symbol: … = no data.

Table 3. Prevalence of Current Axis II Disorders by Body Mass Index (BMI) Class and Gender Among Bariatric Surgery Candidates[a]

Current Axis II Disorder	All Subjects (N = 282)	BMI Class					Gender			
		Class I, Moderate (N = 27)	Class II, Severe (N = 69)	Class III, Very Severe (N = 186)	χ^2 or Fisher Exact Test	p	Male (N = 57)	Female (N = 225)	χ^2 or Fisher Exact Test	p
Cluster A	2 (0.7)	…	1 (1.5)	1 (0.5)	0.825	.661	…	2 (0.9)	…	1.0
Paranoid	2 (0.7)	…	1 (1.5)	1 (0.5)	0.825	.661	…	2 (0.9)	…	1.0
Cluster B	5 (1.8)	2 (7.4)	1 (1.5)	2 (1.1)	8.46	.076	1 (1.8)	4 (1.8)	…	1.0
Borderline	5 (1.8)	2 (7.4)	1 (1.5)	2 (1.1)	5.46	.065	1 (1.8)	4 (1.8)	…	1.0
Narcissistic	1 (0.4)	…	…	1 (0.4)	0.513	.774	…	1 (0.4)	…	1.0
Cluster C	53 (18.8)	7 (25.9)	10 (14.4)	36 (19.3)	4.98	.289	8 (14.0)	45 (20.0)	1.060	.303
Avoidant	19 (6.8)	3 (11.1)	3 (4.4)	13 (7.0)	1.41	.491	2 (3.5)	17 (7.6)	…	.382
Dependent	1 (0.4)	…	1 (1.5)	…	3.14	.208	…	1 (0.4)	…	1.0
Obsessive-compulsive	39 (13.9)	6 (22.2)	7 (10.3)	26 (14.0)	2.31	.316	8 (14.0)	31 (13.8)	…	1.0
Any Axis II disorder	55 (19.5)	7 (25.9)	11 (15.9)	37 (19.9)	7.01	.312	9 (15.8)	46 (20.4)	0.628	.428

[a]Values are given as N (%).
Symbol: … = no data.

personality disorder (OR = 2.36, 95% CI = 0.99 to 5.35). However, the OR for avoidant personality disorder was significant (OR = 3.57, 95% CI = 1.02 to 10.95), and the ORs for obsessive-compulsive personality disorder and borderline personality disorder were not significant (OR = 1.61, 95% CI = 0.55 to 4.16 and OR = 1.72, 95% CI = 0.03 to 18.01, respectively).

Quality of Life

The mean (SD) total quality of life score was 3.07 (0.76). This figure did not differ across the BMI severity classes (mean = 2.99, SD = 0.64 in class I; mean = 3.0, SD = 0.78 in class II; and mean = 3.1, SD = 0.76 in class III; ANOVA F = 0.70, p = .49) or between genders (males: mean = 3.2, SD = 0.8; females: mean = 3.0, SD = 0.7; t test = 1.3, p = .18).

Subjects were then classified according to the presence/absence of Axis I and II disorders. Of the 282 participants, 67.7% had no current Axis I or II disorders, 12.8% had only current Axis I disorders, 11.3% had only Axis II disorders, and 8.2% had both Axis I and II disorders.

The relationship between quality of life and the presence/absence of Axis I and II disorders was examined in a general linear model in which the Q-LES-Q total score was the dependent variable and the diagnostic group was the independent variable. Gender and age were included in the model to control for their potential confounding effect. Three constrasts were defined to compare each of 3 diagnostic groups with subjects without disorders. A higher age ($F = 7.53$, $p < .01$) and having both Axis I and II disorders ($p = .035$) were significantly associated with poorer quality of life. Neither gender ($F = 1.27$, $p = .26$) nor having only Axis I or II disorders ($p = .927$ and $p = .876$, respectively) predicted lower scores on quality of life.

DISCUSSION

Our results, based on a standardized diagnostic assessment conducted by experienced interviewers, indicate that the lifetime prevalence of Axis I and II disorders is 37.6% and 19.5%, respectively. The prevalence estimates for mood and anxiety disorders (22% and 18.1%, respectively) are strikingly similar to those found in the United States, both in bariatric surgery candidates[24] and in the epidemiologic sample of obese individuals (BMI ≥ 30) collected in the framework of the National Comorbidity Survey Replication.[25] Because these 2 studies used structured clinical interviews and DSM-IV criteria, our findings provide an empirical cross-national confirmation of these estimates. Of note, we did not find any significant difference between genders or between the 3 BMI obesity classes (moderate, severe, very severe) on the overall prevalence of current and lifetime Axis I and II disorders. Also, subjects with eating disorders were more likely to have lifetime comorbidity with Axis I but not with Axis II disorders.

In a very recent study conducted in Pittsburgh, Pa., with bariatric surgery candidates[26] and using the same standardized diagnostic assessments, the percentages of participants with at least 1 lifetime or current Axis I disorder were twice as high as those in the present study. Also, these authors found that Axis I psychopathology was related to increasing levels of BMI but not to gender. The significantly higher mean BMI in the Pittsburgh sample compared with our sample (52.2 vs. 43.5) and the wide discrepancy in the percentage of lifetime alcohol use disorders between the 2 sites (30.9 vs. 0.7) suggest a potential selection bias—subjects who accepted to participate in the Pittsburgh study were more severely obese compared with those contacted for potential participation—or a genuine difference between sites in the characteristics of subjects seeking bariatric surgery. Indeed, U.S. surveys have shown particularly strong associations between alcohol use disorder and mood and anxiety disorders.[27,28]

Comparison With Italian Epidemiologic Studies

Comparison with the prevalence estimates of Axis I disorders in the Italian general population derived from the recent European Study of the Epidemiology of Mental Disorders (ESEMeD) survey should be made with caution, keeping in mind that in this survey bipolar disorder and obsessive-compulsive disorder were not assessed.[29] Therefore, the overall prevalence of mood and anxiety disorders cannot be directly compared between the 2 studies. However, if we limit ourselves to considering individual diagnoses, our sample is characterized by a higher lifetime prevalence of depression and panic disorder and a higher current prevalence of major depressive disorder, panic disorder, social phobia, and specific phobia than the Italian general population.

The low prevalence of lifetime alcohol use disorder (0.7%) is within the range of the ESEMeD study (1.0%, 95% CI = 0.6 to 1.5).

Axis II Disorders

The overall prevalence of personality disorders in our sample (19.5%) is similar to that obtained from Yanovski et al.[30] by combining subjects with and without binge-eating disorder (29/128 = 22.6%) and lower than the value of 29% reported by Kalarchian et al.[26]

We found a predominance of cluster C personality disorders, mainly avoidant and obsessive-compulsive personality disorder. Our findings mirror those of previous studies[30–32] but indicate a higher prevalence of obsessive-compulsive personality disorder compared with the study by Kalarchian et al.[26] A recent study[11] suggests that avoidant and obsessive-compulsive personality disorder may result in a greater likelihood of engaging in

binge-eating behavior. This association was attributed to overreliance on food as a coping mechanism among individuals with social withdrawal,[33,34] or among those who fail to meet their own rigid and self-imposed standards of perfection.[35] In our study, we found a significant association only between avoidant personality disorder and eating disorders.

Five individuals in the sample (1.8%) met full criteria for borderline personality disorder. This figure is lower than that reported by Yanovski et al.[30] (7/128 [5.5%]). Also, although borderline personality disorder is one of the most frequent personality disorder diagnoses found among individuals with binge-eating disorder and obesity from clinical samples in the literature,[28,32,33] in our sample, just 1 of the 5 subjects with borderline personality disorder also met criteria for binge-eating disorder.

Quality of Life

Our results indicate that quality of life is not associated with BMI class, which differs from findings from another Italian study that used the SF-36[36] in a large sample of treatment-seeking obese patients and from results of Kalarchian et al.[26] One possible explanation is that the instrument we used (Q-LES-Q) places more emphasis on the subjective evaluation of participants (satisfaction with different aspects of daily life), while the SF-36 focuses on ability to fulfill daily tasks. Therefore, it is reasonable to expect that dissatisfaction is generalized and independent of BMI, while the physical abilities and related emotional impairment vary according to the severity of obesity. However, the burden of obesity on quality of life differed in our sample according to diagnostic status and was highest in subjects with both Axis I and II disorders.

Although Italian normative data on the Q-LES-Q are not available, we found that the mean Q-LES-Q score in our sample was significantly lower than the American community norm ($N = 67$, mean = 4.2, SD = 0.8, $t = 10.81$, $p < .001$) but better than that of patients with major depressive disorder ($N = 366$, mean = 2.5, SD = 0.8, $t = –7.02$, $p < .001$).[37] While the use of a general instrument such as the Q-LES-Q proved to be useful for comparing subjects with and without comorbid psychopathology, inclusion of obesity-specific quality-of-life measures that became available after the beginning of this study[38,39] is likely to identify in future studies aspects susceptible to change in the postoperative course.

LIMITATIONS

A study limitation was that no patient control group was used. Our conclusions are specific to individuals seeking bariatric surgery and cannot be generalized to obese individuals dealing with a medical condition.

CONCLUSIONS

About 1 in 5 subjects assessed for eligibility for bariatric surgery presented with an Axis I disorder, and the same percentage had a personality disorder. Although, as a principle, psychiatric disorders do not contraindicate bariatric surgery, adequate preoperative psychiatric and/or psychological treatment should be provided to improve the postoperative outcome and reduce the risk of complications.

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