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The Relationship Between Obesity and Self-Esteem

Okan İmre[1*], Şükrü Salih Toprak[2]

[1]Karamanoglu Mehmetbey University Faculty of Medicine, Department of Psychiatry, Karaman, Turkey
[2]Karamanoglu Mehmetbey University Faculty of Medicine, Department of General Surgery, Karaman, Turkey

ABSTRACT

Obesity has recently emerged as a major public health concern around the world. Obesity's psychological causes and implications must be well studied before an effective treatment strategy can be developed. The purpose of this study was to look at self-esteem in obese people.

The study comprised 71 morbidly obese adults who applied to the general surgery clinic for bariatric surgery between August 2021 and July 2022. The subjects were given the Rosenberg Self-Esteem Scale. Morbidly obese respondents' self-esteem and other subscale ratings were compared to those of a healthy, normal-weight control group.

Compared to the healthy controls, the morbidly obese group had poorer self-esteem ($z = -3.585$; $p = 0.001$). The obese group had higher levels of daydreaming ($z = -2.010$; $p = 0.044$), sad affect ($z = -2.237$; $p = 0.025$), and psychosomatic symptoms ($z = -2.497$; $p = 0.013$). Depressive affect ($r = 0.435$ $p = 0.001$)and psychosomatic symptoms ($r = 0.322$ $p = 0.006$) decreased in obese patients as self-esteem increased.

In our study, self-esteem was found to be low in obese patients. Low self-esteem was associated with other psychiatric problems. Our results indicate that while establishing an obesity treatment approach, interventions for psychological issues including low self-esteem and depression should be taken into account in addition to physical issues. Therefore, morbidly obese patients who are referred to the psychiatry clinic for bariatric surgery should undergo a thorough psychological examination in addition to being assessed for their appropriateness for surgery.

Keywords: Obesity, bariatric surgery, self-esteem, depression

Introduction

Obesity is defined by the World Health Organization as an abnormal buildup of fat that raises health risks (1). An increase in body fat mass relative to lean mass is another way to describe it. Obesity, which affects 23.7% of adults, has been related to a variety of health problems, including dyslipidemia, diabetes, fatty liver, cerebrovascular diseases, hypertension, obstructive sleep apnea, cardiovascular disease, and early death (2).

Obesity affects the quality of life by restricting activities. As a result, obesity therapy is critical. When designing a treatment plan, the medical and physical aspects of obesity are frequently prioritized, but the underlying psychosocial difficulties are typically overlooked. Obesity may be both a cause and a result of these issues based on psychosocial considerations (3, 4, 5).

Self-esteem research and early intervention are critical because low self-esteem is at the root of many mental health problems. Most of the self-esteem studies of obese people in the literature are on children and adolescents. Self-esteem is defined as one's feelings and thoughts about one's own values and abilities. It expresses how valuable a person sees himself or herself. It deals with the individual's negative or positive self-evaluation and the resulting emotions (6,7). There has been little research on self-esteem in obese adults. Because low self-esteem is known to be connected with a variety of psychiatric issues, it is critical to understand self-esteem in morbidly obese individuals. The primary aim of this study is to compare the self-esteem of morbidly obese and normal-weight individuals, and the secondary aim is to examine the relationship between the self-esteem of morbidly obese individuals and other mental problems. We believe that the findings of our study will help develop a multifaceted approach to obesity treatment.

Materials and Methods

The study used a descriptive and cross-sectional design. Permission to conduct the study was obtained from the Non-Invasive Ethics Committee of the Karamanoglu Mehmetbey University Faculty of Medicine in the form of a letter dated 23/06/2021 and numbered 04-2021/10. The research was carried out in accordance with the rules of the Helsinki Declaration. This study was conducted in collaboration with a Karamanoglu Mehmetbey

***Corresponding Author:** Asst. Prof. Okan İmre, Department of Psychiatry, Karamanoğlu Mehmetbey University, Faculty of Medicine Karaman, Turkey
E-mail: okanimre65@gmail.com, Tel: +90 (555) 596 02 71
ORCID ID: Okan İmre: 0000-0002-2142-4916, **Şükrü Salih Toprak:** 0000-0002-9695-1841
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University hospital's General Surgery Clinic and Psychiatry Clinic. Our study included morbidly obese people who applied to the General Surgery Clinic for bariatric surgery between August 2021 and July 2022. The study included volunteers between the ages of 18 and 65 with a BMI of 40 kg/m2. The control group was drawn at random from the patients' relatives aged 18–65 with a BMI of 18–25. Before the study, both groups provided written informed consent, indicating that they had volunteered and agreed to participate. Exclusion criteria for both groups included having any diagnosed psychiatric disorder, pregnancy, mental retardation, a physical disability, and illiteracy. The working conditions were met by 71 morbidly obese people and 69 normal-weight people. The patients' height and weight measurements were taken in our hospital's diet outpatient clinic using a height meter and digital scale.

Sociodemographic data form; Age, gender, marital status, education, socioeconomic status, family structure, and parental union were all asked about in the sociodemographic data form created by the researchers.

Rosenberg Self-Esteem Scale**;** The Rosenberg Self-Esteem Scale, developed by Rosenberg and adapted to our country by Cuhadarolu, has 12 subtests and 63 items (8,9,10). The Rosenberg self-esteem scale assesses depressive affect, trust in people, feeling threatened in interpersonal relationships, self-concept continuity, sensitivity to criticism, psychic isolation, daydreaming, psychosomatic symptoms, participation in discussions, parental interest, and relationship with father, in addition to self-esteem. The scale's validity and reliability coefficients were found to be 71 and 75, respectively (11).

The statistical analysis; All data were analyzed on a computer using the SPSS 25.0 package program. The variables were summarized as follows: frequency "n," percent "%," arithmetic mean "X," standard deviation "Sd," median (min-max), and interquartile range (IQR) (difference between quartiles). Chi-Square and Fisher's exact tests were used to compare categorical data, and the Bonferroni correction was used to identify the source of difference in multi-well tables. The q-q plot, skewness, and kurtosis were used to assess the conformity of continuous data to the normal distribution. Whitney Mann The U test was used to distinguish between groups of continuous variables that did not have a normal distribution.

In cases where normality conditions were not met, the Spearman correlation test was used to determine the relationship between continuous variables. Interpretation of correlation coefficients (weak =0.01-0.49; medium =0.50-0.69; high =0.70-1.00) (12). Cases with a p0.05 level of statistical significance in the significance tests were accepted in the study.

Results

To compare the sociodemographic characteristics of the patient and control groups, a series of chi-square tests and Fisher's exact tests were used(Table 1). A series of Mann-Whitney U tests were used to compare the patient and control groups' ages and Rosenberg self-esteem inventory subscale scores. Compared to the control group, the patient group has lower self-esteem ($z = -3.585$; $p = 0.001$), higher depressive affect ($z = -2.237$; $p = 0.025$), higher daydreaming ($z = -2.010$; $p = 0.044$), higher psychosomatic symptoms ($z = -2.497$; $p = 0.013$), and a worse relationship with the father ($z = -1.992$; $p = 0.046$) (Table 2).

A series of Spearman correlation tests were used to compare the self-esteem score from the Rosenberg self-esteem scale to the patient group's other subscale scores. As self-esteem rises, so does self-continuity ($r = 0.328$ $p = 0.005$), decreased sensitivity to criticism ($r = 0.400$ $p = 0.001$), decreased depressive affect ($r = 0.435$ $p = 0.001$), decreased dreaminess ($r = 0.313$ $p = 0.001$), decreased psychosomatic symptoms ($r = 0.322$ $p = 0.006$), and decreased feeling of threat in interpersonal relationships (Table 3).

Discussion

The majority of obese people admitted for treatment in our study (81.7%) were women. This finding is consistent with the data in the literature. Obesity is more common in women than in men, according to the literature (13). It has been suggested that women are more prone to perceived stress and stress-related eating, which leads to obesity (14). The fact that the death or separation of the mother and/or father is more common in obese individuals and their relationship with the father is worse is explained by the finding that current stressful situations may have caused obesity in a similar way.

In our study, we discovered that morbidly obese people have lower self-esteem than normal-weight people. There are very few studies in the literature that look directly at the relationship between morbid obesity and adult self-esteem. The majority of the studies were conducted on children and adolescents. Self-esteem increased significantly with weight loss after bariatric surgery, according to a study on the sexual quality of life and self-esteem of morbidly obese women (15).

Table 1. Comparison of the Sociodemographic Characteristics of The Patient and Control Groups

		Morbid Obesity(MO)		Healty control(HC)			
		n	%	n	%	χ2(df)	p
Gender	Male	13	18,3%	27	39,1%	7,433(1)	0,006€
	Female	58	81,7%	42	60,9%		
Education	1-5 years	12a	16,9%	5a	7,2%	9,324(3)	0,025€
	6-8 years	9a	12,7%	4a	5,8%		
	9-11 years	14a	19,7%	8a	11,6%		
	12 years or more	36a	50,7%	52b	75,4%		
Marital Status	Single	15	21,1%	27	39,1%	5,419(2)	0,067*
	Married	51	71,8%	38	55,1%		
	Divorced-Separate	5	7,1%	4	5,8%		
Socio-economic Situation	Very poor	17	23,9%	9	13,0%	5,066(3)	0,167€
	poor	13	18,3%	10	14,5%		
	Medium	18	25,4%	16	23,2%		
	Medium	23	32,4%	34	49,3%		
Family Structure	Nuclear family	52	73,2%	49	72,1%	4,524(2)	0,104€
	Extended Family	17	23,9%	12	20,7%		
	Lives alone	2	2,9%	8	11,6%		
	Together	40a	56,2%	55b	79,7%		
Parents	Divorced	6a	8,5%	5a	7,2%	9,938(3)	0,017*
	Living Separated	7a	9,9%	2a	2,9%		
	Mother and/or Father Deceased	18a	25,4%	7b	10,1%		

€ Chi-Square Test
*Fisher's Exact Test

According to studies conducted on children, low self-esteem can lead to obesity, and obesity can lead to low self-esteem (16,17,18,19). A meta-analysis of studies evaluating self-esteem in children and adolescent obese individuals found a link between obesity and low self-esteem (20). Another meta-analysis, which included studies on obesity and stigma, discovered that obese people are afraid of stigma and have low self-esteem (21). It is well understood that stigma in society leads to social isolation, low self-esteem, and hopelessness (22).

In our study, it was observed that as self-esteem increased in the morbidly obese group, sensitivity to criticism, depressive affect, dreaminess, psychosomatic symptoms, sense of threat ininterpersonal relationships, and psychic isolation decreased, while parental interest and self-continuity increased. According to one study, low self-esteem has been linked to depression, while high self-esteem has been linked to a reduction in depressive symptoms(23). Early self-esteem interventions are critical because low self-esteem is at the root of many psychopathologies. According to this hypothesis, it has been reported in the literature that early interventions to boost self-esteem can help prevent potential psychiatric problems (24). Given the negative health consequences of low self-esteem, obese individuals should be screened for psychiatric problems, including low self-esteem, and effective treatments should be implemented. According to research, there is a bidirectional relationship between obesity and mental health issues (25). In other words, obesity can develop as a result of mental health issues. Because of the stigma attached to obese people, mental health issues may arise. Obese people may devalue themselves as a result of the overweight stigma (21,26).

In our study, morbidly obese people had higher levels of depressive affect. This finding is consistent with previous research. According to current clinical evidence, there is a bidirectional relationship between depression and obesity. In other words, the presence of one condition increases the likelihood of the presence of the other (27). It has been reported that people who have comorbid obesity and depression have more psychosocial problems and find it more

Table 2. Comparison of age, Rosenberg Self-Esteem İnventory Subscale Scores of The Patient and Control Groups

		n	Mean±Std. Deviation	Median(1stQuarter-3rd Quarter)	Z	p*
Age	MO	71	33,34±9,73	32,0(25,0-42,0)	-0,425	0,670
	HC	69	32,57±9,10	31,0(26,0-40,0)		
Self-Esteem	MO	71	1,42±0,84	1,25(0,83-2,0)	-3,585	<0,001
	HC	69	1,0±0,86	0,75(0,50-1,42)		
Continuity of Self	MO	71	3,34±1,13	3,0(3,0-4,0)	-0,638	0,523
	HC	69	3,16±1,29	3,0(2,0-4,0)		
Trusting People	MO	71	1,51±0,86	1,0(1,0-2,0)	-1,077	0,281
	HC	69	1,67±0,82	2,0(1,0-2,0)		
Sensitivity to Criticism	MO	71	2,27±0,88	3,0(1,0-3,0)	-1,771	0,077
	HC	69	1,97±1,0	2,0(1,0-3,0)		
Depressive Affect	MO	71	2,37±1,31	3,0(1,0-3,0)	-2,237	0,025
	HC	69	1,86±1,36	2,0(1,0-3,0)		
Imagination	MO	71	1,15±1,27	1,0(0,0-2,0)	-2,010	0,044
	HC	69	0,84±1,30	0,0(0,0-1,0)		
Psychosomatic Symptoms	MO	71	3,96±2,86	3,0(2,0-6,0)	-2,497	0,013
	HC	69	2,83±2,64	2,0(1,0-4,50)		
Feeling threatened in Interpersonal Relationships	MO	71	1,45±1,0	2,0(1,0-2,0)	-1,078	0,281
	HC	69	1,26±1,04	1,0(0,0-2,0)		
Participating in the Discussion	MO	71	0,68±0,82	0,0(0,0-1,0)	-0,459	0,646
	HC	69	0,61±0,79	0,0(0,0-1,0)		
Involvement of Parents	MO	71	2,03±2,16	1,0(0,0-4,0)	-0,398	0,690
	HC	69	1,93±2,22	1,0(0,0-4,0)		
Relationship with Father	MO	71	1,27±1,13	1,0(1,0-2,0)	-1,992	0,046
	HC	69	0,93±1,05	1,0(0,0-1,5)		
Psychic Isolation	MO	71	0,69±0,80	0,0(0,0-1,0)	-0,179	0,858
	HC	69	0,67±0,80	0,0(0,0-1,0)		

*Mann-Whitney U Test; MO: Morbid Obesity; HC: Healty Control

Table 3. Comparison of the Patient Group's Self-Esteem Score Obtained From The Rosenberg Self-Esteem Scale and Other Subscale Scores

MO(n=71)		**Continuity of Self**	**Trusting People**	**Sensitivity to Criticism**	**Depressive Affect**	**Imagination**	**Psychosomatic Symptoms**	**threatened in Interpersonal**	**Participating in the Discussion**	**Involvement of Parents**	**Relationship with Father**	**Psychic Isolation**
Self Esteem	r	,328	0,163	,400	,435	,313	,322	,398	-0,098	,387	-0,171	,345
	p*	0,005	0,175	<0,001	<0,001	0,008	0,006	<0,001	0,414	<0,001	0,153	0,003

difficult to care for themselves. Comorbid obesity and depression are associated with higher morbidity, lower treatment compliance, and lower quality of life than either condition alone (28). As a result, it is critical to investigate whether obese people have comorbid depressive problems and to intervene early.

Obesity is now treated using behavioral, dietary, medical, and surgical methods, and the need for psychosocial support is frequently overlooked. While the operation is planned for morbidly obese individuals, who comprise our study's sample and are candidates for bariatric surgery, the decision is made

by the health board, which includes a psychiatrist. When morbidly obese people are evaluated for psychiatric suitability, situations such as active substance addiction, psychotic disorder, mental retardation, neurocognitive disorder, and so on are raised, psychosocial issues caused by obesity are ignored, and existing psychiatric supports are underutilized. When treating obesity, our findings highlight the necessity of therapies for psychosocial disorders such as poor self-esteem and depression as well as its physical side.

Our research has some limitations. Our study included morbidly obese people who applied only for bariatric surgery and were referred to psychiatry for compliance with the procedure. Large-sample studies that include all obese people may produce clearer results. Furthermore, prospective studies in which the same patients' self-esteem was re-evaluated after treatment, i.e., after the weight loss procedure, may provide more accurate information about the hypothesis of our research. Because there are few studies evaluating self-esteem in adult obese individuals in the literature, our study is important in terms of keeping new research on the horizon.

Obesity has been linked to a variety of psychosocial issues, including low self-esteem, depression, psychosomatic complaints, and psychic isolation, according to the findings of our study. Psychosocial problems decreased as self-esteem increased. Our findings suggest that, in addition to physical problems, psychological interventions are required in treatment morbidly obese patients who present to the psychiatry clinic for bariatric surgery should be evaluated not only for surgical suitability but also for the psychological approach to multimodal treatment.

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