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Eating disorders and related factors of individuals who applied to the diet outpatient clinic of Turgut Ozal Medical Center

Nurgul Kilic[1], Erkan Pehlivan[2]

[1]Inonu University, Turgut Ozal Medical Center, Dietician, Malatya, Turkey
[2]Inonu University, Faculty of Medicine Department of Public Health, Malatya, Turkey

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Abstract

The aim of this study is to investigate the nutritional habits, eating attitudes and behaviors of adults admitted to the Nutrition and Diet Polyclinic of Turgut Özal Medical Center, and the influencing factors using the eating attitude test scale. It is a cross-sectional study. The data of this research were collected in Malatya Turgut Özal Medical Center between June 1, 2019 - October 1, 2019. Possible eating disorder frequency was determined with the Eating Attitude Test (YTT-40). Descriptive statistics percentage, mean, chi-square test and post hoc bonferroni corrected chi-square test were used to evaluate the data. 71.6% of the individuals participating in the study are women and 28.4% are men. 52.2% of the individuals are obese, 24.8% are overweight and their BMI average is 31.5 ± 8.7. 42.6% of individuals skip meals. The eating disorder rate of the individuals participating in the study is 25.2%. A significant relationship was found between gender, BMI, body image and eating attitudes ($p<0.05$).

Keywords: Nutrition, diet, eating attitude and behavior.

Introduction

Healthy eating; It is the adequate and balanced intake of nutrients necessary for the body, taking into account the age, gender and physiological condition of the person. Malnutrition negatively affects physical growth and intelligence development. Obesity is considered to be a complex disease that can cause death that adversely affects human health [1]. Eating disorders are psychological illnesses related to overeating, false efforts to control weight, and perceived body image. Aneroxia Nervosa, Bulimia Nervosa, binge eating disorder and night eating syndrome are some of these eating disorders [2]. It has been determined that the incidence of eating disorders has increased since 1980. Many studies conducted in developed countries show that the incidence of Anorexia and Bulumia Nervosa, where eating disorders are common in society, is increasing gradually. Such diseases, which can be seen at a high rate in adolescents and young adults, can cause mental and physical problems [1].

***Corresponding Author:** Erkan Pehlivan, Inonu University Faculty of Medicine Department of Public Health, Malatya, Turkey
E-mail: erkan.pehlivan@inonu.edu.tr

The aims of this study, which was planned on patients who applied to the Turgut Ozal Medical Center Diet Polyclinic, are as follows:

• To determine the eating habits and frequency of eating disorders in patients who applied to the diet outpatient clinic.

• To determine the eating attitude behavior scores of the applicants

• To determine whether there is a relationship between eating attitudes and behaviors and obesity, eating habits, age, gender, marital status, education and economic status.

Materials and Methods

Type of study and sample

This study, which was approved by the Inonu University Health Sciences Non-Interventional Clinical Research Ethics Committee and the Chief Physician of Turgut Ozal Medical Center, is a cross-sectional study. The population of the study consisted of those who applied to the Turgut Ozal Medical Center Nutrition and Diet Polyclinic. The sample size was calculated considering the pattern effect and the research data were obtained from individuals over the age of 18 between 1 June and 1 October 2019.

While calculating the sample size, the formula used in the groups

whose population is unknown was used. $(n=t^2\times p\times q)/d^2$ (t:1,96 d:0.05).

A questionnaire was applied to 310 people, 26% more than the sample size.

Data collection and analysis

Questionnaire Form: The questionnaire form prepared and administered by the researcher includes sociodemographic characteristics, eating habits and affecting factors, anthropometric measurements and an eating attitude test to determine the rate of eating disorders.

Eating Attitude Test Scale (EAT): Developed by Garner and Garfinkel in 1979, the first Turkish translation of the EAT scale was applied by Doğan, and the second translation was applied by Erol and Savaşır in 1989. The EAT consists of 40 items and high scores indicate an eating behavior disorder. According to a six-point Likert scale, the answers are always, very often, often, sometimes, rarely, never. For items 1, 18, 19, 23, 27 and 39, sometimes 1 point, rarely 2 points, never 3 points and other answers 0 points. In other items of the scale, on the other hand, it is always 3 points, very often 1 point and other answers 0 points. For the EAT scale with a minimum score of 0 and a maximum score of 120, the discrimination value was accepted as 30 points. Those who score 30 and above have been reported to have an eating behavior disorder [3].

Results

58.7% of the participants within the scope of the research consume three main meals a day, 41.3% consume two main meals a day. When the meal skipping status of the participants included in the research is examined, it is seen that 42.6% of them skip meals. 16.1% of the participants who were found to skip meals stated that they skipped the morning meal and 24.2% of them stated that they skipped lunch (Table 1).

It was determined that 25.2% of the participants included in the research had an EAT score of 30 and above and had eating disorder symptoms. When the distribution of eating behavior disorders according to the gender of the participants included in the research was examined, it was determined that 30.6% of women and 11.4% of men had eating behavior disorders, and the difference between the groups was significant ($p<0.05$). Eating behavior disorders were detected in 24.8% of those with a monthly income of less than 2100 TL, in 25.7% of those with a monthly income of 2100-4999 TL, and in 15.4% of those with a monthly income of 5000 TL or more, and the difference between the groups was not significant (Table 1; $p>0.05$).

When the EAT scores of the participants included in the research were examined according to BMI, eating disorders were found in 16.9% of overweight, 24.6% of first-degree obese, 29.2% of second-degree obese, and 42.1% of morbidly obese. The difference between the groups was significant ($p<0.05$). The group that makes the difference is the morbidly obese (Table 2).

Table 1. Distribution of EAT scores according to the socio-demographic characteristics of the participants within the scope of the research

	EAT<30		EAT≥30		Total		χ2	p
	n	%(*)	n	%(*)	n	%(**)		
Gender								
Female	154	69.4	68	30.6	222	71.6	12.423	0.001
Male	78	88.6	10	11.4	88	28.4		
Age								
18-29	84	70.6	35	29.4	119	38.4		
30-39	50	74.6	17	25.4	67	21.6	2.302	0.512
40-49	45	78.9	12	21.1	57	18.4		
50 ve üstü	53	79.1	14	20.9	67	21.6		
Marital status								
Married	151	75.9	48	24.1	199	64.2	0.320	0.572
Single	81	73.0	30	27.0	111	35.8		
Primary school and lower	72	80.9	17	19.1	89	28.7		
Middle school-primary education	31	62.0	19	38.0	50	16.1	6.261	0.100
High school	76	74.5	26	25.5	102	22.3		
University	53	76.8	16	23.2	69	22.3		
Economical situation								
2100 TL lower	82	75.2	27	24.8	109	35.2		
2100-4999 TL	128	73.1	47	25.7	175	56.5	1.596	0.450
5000 TL and above	22	84.6	4	15.4	14	8.4		
Total	232	74.8	78	25.2	310	100.0		

(*) row percentage (**) column percentage

When the distribution of EAT scores of the participants included in the research is examined according to their body perception, satisfaction with their current weight and their emotional state affecting their nutrition; Eating behavior disorder was found in 36.4% of those who felt obese and 23% of those who felt slightly obese. Eating behavior disorder was observed in 29.8% of the participants who were not satisfied with their current weight, and in 29.7% of the participants who said that their emotional state affects nutrition. The difference between the groups was significant ($p<0.05$). The group that makes the difference is the participants who perceive themselves as normal and obese (Table 3).

Table 2. Distribution of EAT scores of the participants in the study according to BMI

	EAT<30		EAT≥30		Total		χ2	p
	n	%(*)	n	%(*)	n	%(**)		
BMI								
<18.5(Underweight)	17	85.0	3	15.0	20	6.5		
18.5-24.99 (Normal)	41	80.4	10	19.6	51	16.5		
25-29.99 (Overweight)	64	83.1	13	16.9	77	24.8	13.845	0.017
30-34.99(1st degree obese)	43	75.4	14	24.6	57	18.4		
35-39.99(2nd degree obese)	34	70.8	14	29.2	48	15.5		
40 ve üstü(Morbidly obese)	33	57.9	24	42.1	57	18.4[a]		
Total	232	74.8	78	25.2	310	100.0		

(*) row percentage (**) column percentage
a Groups that make the difference (found with the Post Hoc Chi-Square Test with Bonferroni correction)

Table 3. Distribution of EAT scores according to body image, satisfaction with current weight, and affect of emotional state on nutrition of the participants within the scope of the research.

	EAT<30		EAT≥30		Total		χ2	p
	n	%(*)	n	%(*)	n	%(**)		
Body image								
Underweight	34	82.9	7	17.1	41	13.2		
Normal	53	85.5	9	14.5	62	20.0[a]	12.643	0.005
Overweight	77	77.0	23	23.0	100	32.3		
Obese	68	63.6	39	36.4	107	34.5[a]		
Satisfaction with current weight								
Satisfied	60	92.3	5	7.7	65	21.0	13.329	0.001
Dissatisfied - Indecisive	172	70.2	73	29.8	245	79.0		
Affect of emotional state on nutrition								
Yes	123	70.3	52	29.7	175	56.5	4.424	0.035
No	109	80.7	26	19.3	135	43.5		
Total	232	74.8	78	25.2	310	100.0		

(*) row percentage (**) column percentage
a Groups that make the difference (found with the Post Hoc Chi-Square Test with Bonferroni correction)

Discussion

58.7% of the participants within the scope of the research consume three main meals a day, 41.3% consume two main meals a day. In a study, it was determined that 54.0% of the participants consumed 3 main meals a day and 46.0% consumed 2 main meals [4]. In the study conducted by Özçelik in 2000, it was stated that 62.25% of adult individuals ate three meals a day [5]. This study is similar to the studies in the literature.

When the meal skipping status of the participants within the scope of the research is examined, it is seen that 42.6% of them skip meals. 16.1% of individuals who were found to skip meals stated that they skipped the morning meal and 24.2% of them stated that they skipped lunch. In the study conducted by Özçelik on women in 2000, it was found that the most skipped meal of the individuals was breakfast, 36.8% of the individuals skipped a meal, 34.2% sometimes skipped a meal, and 29.1% never skipped a meal [5]. In this research, it was seen that the most skipped meal was lunch, followed by breakfast.

It was determined that 25.2% of the participants included in the research had an EAT score of 30 and above and had eating disorder symptoms. In a study conducted on university students in the literature, eating disorders were found in 11.7% of individuals [6].

In another study, the rate of eating disorders was 12.3% [7]. In this research, the rate of eating disorders was higher than the studies in the literature. We think that the fact that the study was conducted on patients who applied to the outpatient clinic was effective in this high rate. When the distribution of the incidence of eating behavior disorder according to the gender of the participants included in the research was evaluated, eating behavior disorder was detected in 30.6% of women and 11.4% of men, and the difference between the groups was significant ($p<0.05$). According to a study, it has been observed that women have more wrong eating attitudes than men [8].

In a study conducted in Taiwan using the eating attitude test on students, it was found that eating disorders were more common in women than in men [9]. In this research, as in the studies in the literature, the incidence of eating disorders is higher in women and it is similar to the studies in the literature.

When the participants within the scope of the research were evaluated according to their educational status, eating behavior disorders were found in 38.0% of primary school graduates, 25.5% of high school graduates and 23.2% of university graduates or higher. The difference between groups is not significant. ($p>0.05$). When the incidence of eating disorders was examined in a research, 54.5% of high school graduates and below, 25.4% of university graduates had eating behavior disorders. As the education level increased, the frequency of eating disorders decreased, and a statistically significant difference was observed between the groups [8]. The findings of this study are partially similar to the studies in the literature.

When the participants in the research were evaluated according to their monthly income, eating disorders were found in 24.8% of those with a monthly income of less than 2100 TL and in 25.7% of those with a monthly income of 2100-4999 TL. Eating disorders were detected in 15.4% of individuals with a monthly income of 5000 TL or more. The difference between groups is not significant (p. >0.05). In a study conducted on students, no significant relationship was found between economic status and the incidence of eating disorders (10). However, some studies report that eating behavior disorders are more common in individuals with higher socio-economic status [11, 12]. These differences in the literature may be due to differences in classification of income level. In this research, the rate of eating disorders was found to be higher in low and middle-income individuals.

When the EAT scores of the participants within the scope of the research were examined according to BMI, eating disorders were detected in 16.9% of overweight individuals and in 24.6% of 1st degree obese individuals. Eating disorders were observed in 29.2% of 2nd degree obese individuals and 42.1% of 3rd degree obese individuals. Significant difference was found between the groups ($p<0.05$). In a research, it was observed that the incidence of eating disorders increased statistically significantly as BMI increased [13].

In some studies conducted in foreign countries, it has been observed that there is a positive and significant relationship between eating behavior disorder and BMI [14, 15]. Accordingly, the data in this study support the studies in the literature. Being overweight poses a risk for eating disorders.

Participants included in the research were evaluated according to their body image, satisfaction with their current weight, and their emotional state affecting their nutrition. Eating behavior disorder was detected in 36.4% of those who felt obese and 23% of those who felt slightly obese, and the difference between the groups was significant ($p<0.05$). In a research, the difference between students' perception of body weight and eating disorders was found to be statistically significant. It has been observed that the incidence of eating behavior disorder is higher in students who perceive their body as obese compared to students who perceive their body as normal [16]. There is a significant similarity between the results of this study and the literature.

Eating behavior disorder was detected in 29.8% of the participants who were not satisfied with their current weight, and the difference between the groups was significant ($p<0.05$). In a study conducted on university students, 43.9% of the students who were not satisfied with their body weight had an eating behavior disorder. When the satisfaction levels with body weight and the incidence of eating disorders were evaluated, a significant difference was found [17]. This study is significantly similar to the literature.

Eating behavior disorder was detected in 29.7% of the participants who stated that their emotional state affects nutrition, and the difference between the groups was significant ($p<0.05$). In obese people, there is a connection between eating behavior and the person's emotions. It has been observed that negative mood states increase the amount of eating in obese individuals [18]. In this study, eating disorders were found to be statistically significant in a significant part of the individuals who said that emotional state affects nutrition.

Conclusion

It was determined that 25.2% of the participants included in the research had an EAT score of 30 and above and had eating disorder symptoms. When the EAT scores of the participants included in the study were compared according to gender, eating behavior disorders were found in 30.6% of women and 11.4% of men, and the difference between the groups was found to be significant. When the BMI and EAT scores of the participants are evaluated, the eating behaviors of the individuals change as the weight increases. Eating behavior disorder was detected in 36.4% of those who felt obese and 23.0% of those who felt slightly obese, and the difference between the groups was found to be significant. Eating behavior disorder was detected in 29.8% of individuals who were not satisfied with their current weight, and the difference between the groups was found to be significant. Eating behavior disorder was detected in 29.7% of individuals who said that their emotional state affects nutrition, and the difference between the groups was found to be significant.

According to the results obtained in this research, although many factors affect eating disorder, it is more common in obese individuals. Starting from childhood, it can be suggested that individuals should be educated in schools in a planned and programmed way and that acculturation processes should be established that will enable them to acquire the right habits.

Note: “The abstract of this study was published as a poster presentation at the 14th European Public Health Conference-2021.”

Conflict of interests
The authors declare that they have no competing interests.

Financial Disclosure
All authors declare no financial support.

Ethical approval
This study, which was approved by the Inonu University Health Sciences Non-Interventional Clinical Research Ethics Committee and the Chief Physician of Turgut Özal Medical Center, is a cross-sectional study.

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