

## BESLENME VE DİYETETİK BÖLÜMÜ ÖĞRENCİLERİNİN YEME TUTUMLARININ KARŞILAŞTIRILMASI

COMPARISON OF EATING ATTITUDES OF STUDENTS OF DEPARTMENT  
OF NUTRITION AND DIETETICS

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### ÖZ

**AMAÇ:** Bu çalışma Üniversitede Beslenme ve Diyetetik öğrenimini sürdüren öğrenciler ile bu alan dışında eğitim alan öğrencilerin yeme tutumlarını karşılaştırmak amacıyla planlanmıştır.

**GEREÇ VE YÖNTEM:** 54 beslenme ve diyetetik 3. sınıf öğrencisi (Grup 1), 53 diğer bölümlerin 3. sınıfında eğitimine devam eden öğrenciye (Grup2) Aralık 2017 tarihinde Yeme Tutum Testi (EAT) uygulanmış, ayrıca yaş, boy, kilo sorgulanmış ve Body Mass Index (BMI) hesaplanmıştır. Veriler SPSS 21.0 versiyonunda girilmiştir. İstatistiksel olarak Chi-Square, Mann-Whitney U, Wilcoxon W, Mann-Whitney Rank Sum Testleri ile değerlendirilmiştir. Değerlendirmede  $p<0.005$  anlamlı kabul edilmiştir.

**BULGULAR:** İki grubun ortalama EAT skorları değerlendirildiğinde anlamlı bir fark bulunmadı ( $p=0.498$ ). Elde edilen ortalama puanların düşük olması her iki grubunda negatif yeme tutumu sergilemediğini düşündürmüştür. Ancak kesme puanı değerlendirmesinde her iki grupta da yeme bozukluğu görülmektedir. Gruplar arası kilo ve BMI karşılaştırmalarında Grup 1'in ideal kilolarına daha yakın oldukları tespit edilmiş ve anlamlı fark saptanmıştır ( $p=0.005$ ).

**SONUÇ:** Yapılan çalışmanın örneklemini küçük olması ile birlikte hem beslenme ve diyetetik hemde diğer üniversite öğrencileri arasında negatif yeme tutumu davranışının arttığını ifade edebiliriz.

**ANAHTAR KELİMELEER:** Üniversite öğrenci, Öğrencilerde beslenme, Yeme tutum testi.

### ABSTRACT

**OBJECTIVE:** In this study, we compare the eating habits of students studying in the Department of Nutrition and Dietetics at a state university in Turkey, with those of students from other departments.

**MATERIAL AND METHODS:** The study included 54 third-year students who were studying in the Department of Nutrition and Dietetics (Group 1) and 53 third-year students from other departments (Group 2) of the same university. An Eating Attitudes Test (EAT) was applied to all students included in the study on December 2017, and data was obtained on age, height and weight, from which Body Mass Index (BMI) was calculated. The data was analysed using SPSS version 21.0 software, and Chi-Square, Mann-Whitney U, Wilcoxon W and Mann-Whitney Rank Sum tests were used to evaluate the obtained data. A p-value of  $<0.005$  was considered significant.

**RESULTS:** No significant difference was identified in the mean EAT score values of the two groups ( $p=0.498$ ). A low mean score suggests the existence of no negative eating habits in either group, although in an evaluation of the cut-off value, eating disorders were identified in both groups. When the groups were compared in terms of weight and BMI, Group 1 was found to be closer to their ideal weight, with a significant difference was observed between the two groups ( $p=0.005$ ).

**CONCLUSIONS:** Although our study sample was small, the findings suggest that negative eating habits increase both among students of the Department of Nutrition and Dietetics and also those of other departments.

**KEYWORDS:** University student, Student nutrition, Eating attitudes test.

## INTRODUCTION

In recent years, nutritional attitudes and behaviours have begun to change with the development of technology and media around the world. Eating attitudes and behavioural changes may on the one hand lead to the spread of obesity like an epidemic, while on the other hand, the perception of being thin and fit is triggered (1). Among adolescents and the younger generations in particular there is a desire to be fit or to look thinner, and this can lead to negative nutritional development (2,4) along with such associated diseases as vitamin and mineral deficiencies, anorectic diseases and psychosomatic disorders. Professional groups that often engage in eating and drinking may be affected nutritionally by their profession, leading them to overeat, to refuse to eat or to consume healthy foods. The reason for this is yet to be fully explained, although it is thought that it may be a subconscious issue. The treatment of eating disorders (ED) should be through a multidisciplinary approach, with one of the contributors being dietitians. People receiving education or who are employed in the field of nutrition and dietetics are constantly dealing with food and diet, which may have an effect in determining their daily eating behaviours. This is thought to be a cognitive process in which thoughts are reflected on behaviours, and in which the subconscious is activated (5). In recent years, studies of the eating attitudes of dietitians or nutrition and dietetics students have witnessed a marked increase. A European study investigating eating behaviours in dietitians showed that approximately 8 percent of the sample was considered at risk of developing an ED, while 14 percent had pre-existing issues with eating or weight that had motivated them to study nutrition (6). The primary aim of the present study is to evaluate the eating behaviours of students enrolled in a nutrition and dietetics department, and to determine the differences between their eating behaviours and those of the students of other departments. As a secondary approach, the BMI and weights of two groups are compared.

This study evaluates the nutritional attitudes of third-year students studying nutrition and dietetics at Afyon Kocatepe University, located in western Turkey. Nutrition and dietary education in Turkey is provided as a four-year undergraduate course in universities, in which the first three years are mostly theoretical and practical courses, followed by a fourth year of field applications. Students who complete successfully their four years of education are awarded the title of Dietitian. For the comparison group, third-year students enrolled in other departments of the university in which health-related education is provided were included.

## MATERIALS AND METHODS

This cross-sectional study was carried out at the Health College of University. The respondents were briefed on the nature of this study, and all then filled out a 40-question Eating Attitudes Test (EAT). The EAT scale, developed originally by Garner and Garfinkel (7), comprises 40 questions aimed at measuring the behaviours and attitudes of anorexic patients towards food, as well as eating disorders seen in normal people (8). The scale takes the form of a Likert-type six-step response form that is used to determine eating attitudes and behaviours (8), with the respondent answering each question by marking the appropriate option. The scale is considered appropriate for application to individuals aged 11 years and above (8). The Turkish version of the scale was designed by Erol and Savaşır after conducting a validity and reliability study (9), and reported that the scale worked well in distinguishing between people with eating disorders and healthy individuals, as well as other patient groups, and had a high confidence coefficient (9). In the Turkish version, the cut-off score was not calculated (8), although Rocks et al. accepted (10) a score of  $\geq 20$ . The heights of the students were measured in meters, and the same weighing scale was used to measure their weights. The students ages were also recorded, and their BMI was calculated based on self-reported heights and weights [weight (kg)/height (m<sup>2</sup>)]. The perceived ideal BMI was calcu-

lated based on self-reported height and weight that the participants reported as their ideal weight. BMI values were categorized according to the World Health Organization (WHO) guide, in which a BMI level of  $<18.5$  kg/m<sup>2</sup> is classified as underweight, a BMI level of 18.5–24.9 kg/m<sup>2</sup> is within the normal range, and a BMI level of  $\geq 25.0$  kg/m<sup>2</sup> is overweight or obese (11).

### ETHICS COMMITTEE

Approval was obtained from the Directorate of Higher Education for the study and Ethics Committee Approval was obtained dated 01.12.2017 and numbered 2017/12-295 from the Ethics Committee of Clinical Investigations of Afyon Kocatepe University.

### STATISTICAL ANALYSIS

The statistical analysis was performed using Statistical Package for Social Sciences software, version 21.0. All continuous data was tested for normality, and an independent t-test was used for the comparison of ages. A Mann–Whitney U-test, Mann-Whitney Rank Sum and Wilcoxon signed-rank test were used to compare other continuous data, such as BMI and EAT scores, and a p-value of  $<0.005$  was considered statistically significant.

### RESULTS

Group 1 comprised 54 students of nutrition and dietetics, while Group 2 was made up of 53 students who were studying in other departments. Group 1 comprised 45 females (83.3%) and nine males (16.7%) (n=54), compared to 38 females (71.7%) and 15 males (28.3%) in Group 2 (n=53). The Eating Attitudes Test (EAT) was applied to both groups in December 2017, heights and weights were measured, ages were recorded, and the BMI of each respondent was calculated. A comparison of the mean EAT scores revealed no significant difference between the two groups, with values found to be close to each other (p=0.498) (**Table 1**). A low mean score suggests the presence of no negative eating attitudes in either group, although a significant difference was found in the mean weight (p=0.005) and BMI (p=0.003) of Group 1 (Table 1), which may be attributed to the fact that the respondents in Group 1 were closer to their ide-

al body weights. Differences in body weights cause the BMI value to change. When the EAT cut-off score is considered as  $\geq 20$  (10), 22 of the 54 participants (40.7%) in Group 1 were found to have eating disorders, of which 19 (86.7%) were female and three (13.3%) were male. In Group 2, 16 of the 53 (30.1%) individuals were found to meet the eating disorder criteria, and of these, 10 (62.5%) were female and six (37.5%) were male. There was a statistically significant difference between the two groups in terms of sex (p=0.005), and the frequency of eating disorders was found to be higher in Group 1, to a statistically significant degree (p=0.005), which suggests that students studying in the Department of Nutrition and Dietetics may be more likely to develop eating disorders.

This manuscript was written in accordance with the STROBE (Strengthening the Reporting of Observational studies in Epidemiology) guidelines.

**Table 1:** Intergroup comparison of mean EAT scores

	GROUPS	N	Mean±Std. Deviation	Median (25%-75%)	P
Height	Group 1	54	165.39±7.65	163.00 (160.00–168.00)	0.482
	Group 2	53	166.91±9.19	165.00 (160.00–172.50)	
Weight	Group 1	54	59.35±11.53	56.50 (50.75–68.00)	0.005
	Group 2	53	65.69±12.17	65.00 (56.00–75.50)	
Age	Group 1	54	21.61±2.04	21.00 (20.00–22.00)	0.454
	Group 2	53	21.26±1.69	21.00 (20.00–22.00)	
BMI	Group 1	54	21.59±3.10	20.86 (19.23–23.53)	0.003
	Group 2	53	23.50±3.55	23.14 (21.01–25.39)	
EAT Score	Group 1	54	18.00±7.08	16.00 (13.00–22.00)	0.498
	Group 2	53	18.68±11.66	14.00 (10.50–24.50)	

Mann-Whitney Rank Sum Test, Median (25%–75%)

### DISCUSSION

A multidisciplinary approach is needed for the treatment of nutritional diseases and eating disorders, and one of the most important tasks in such an approach falls to dietitians who take on responsibilities in learning the food consumption patterns of patients, recording their food consumption habits and explaining to them how to cope with the disease. These are the primary tasks of dietitians, and this situation consciously affects individuals who are educated or employed in this branch. In particular, people who enlist in weight-loss programs would prefer to see that people who give them nutritional education are of the ideal weight. Dietitians, whether continuing their nutrition and dietetics education or performing their profession, prefer to be skinnier or thinner, as this gives

them more confidence in front of their clients. Accordingly, people who provide nutritional education tend to avoid food, and this can be defined as an occupational disease. In a study by Cristen Harris comparing the eating attitudes of students of different departments, nutrition and dietetics students had stricter diets and tended to develop obsessions related to eating (12). Our study reveals that dietitians start to be affected in this way during their education, and previous literature contains several studies with similar results to those in our study, showing that nutrition and dietetics students tend to exhibit negative eating attitudes, and may be more likely to develop eating disorders (12-14). In our study, the EAT scores of the two groups were similar, which suggests the absence of negative eating attitudes. However, when the cut-off score was taken as  $\geq 20$ , a remarkable proportion of the participants in Group 1 (40.7%) were observed to have eating attitude disorders, and the rate was found to be lower in the comparison group (30.1%). In some students, an increased knowledge of nutrition may lead to obsessions with eating only healthy food and avoiding unhealthy food (i.e., orthorexia), which is something that is often observed among female dietetics students (15) and practicing dietitians (16). Eating disorders in this study refers all such disorders, including anorexia nervosa, anorexia bulimia and orthorexia (obsession with healthy eating).

When the students in both groups who were found to have eating disorders were compared in terms of sex, eating disorders were shown to be more common among women than men. This finding is consistent with that of Gunn et al. (17), who also reported higher rates of eating disorders among women. In our country, education in nutrition and dietetics is more popular among women, and so the majority of the students who participated in the study were women, and the control group was also composed mainly of women to ensure similarity between the groups.

Given that the students in both groups were in the third grade, their mean age was found to be similar, with no statistically significant difference observed in this regard ( $p=0.454$ ). The mean height of the groups was similar, again with no

statistically significant difference ( $p=0.482$ ). A statistically significant difference was found in favour of Group 1 in the comparison of the BMIs of the groups ( $p=0.003$ ). BMI is defined by WHO as: "BMI (Body Mass Index) is a simple index of weight-for-height that is commonly used to classify underweight, overweight and obesity in adults. BMI is defined as the weight in kilograms divided by the square of the height in meters ( $\text{kg}/\text{m}^2$ )" (11). In the WHO classification, the principal cut-off points of the ideal BMI ratio are listed as 18.50–24.99, whereas additional cut-off points were 18.50–22.99 and 23.00–24.99 (11).

A low BMI indicates a low body weight in proportion to height. The mean BMIs and body weights of the nutritional and dietetics students were found to be lower than in the comparison group, with a statistically significant difference found between the two groups Table 1. This indicates that nutrition and dietetics students are more cautious about their weight, or that they are more concerned about their eating habits. In a study ( $n=137$ ) by Rocks et al. (10), the mean BMI of nutrition and dietetics students ( $n=91$ ) was found to be  $20.9 \text{ kg}/\text{m}^2$ , whereas the mean BMI level of the students from other health-related departments ( $n=46$ ) was reported as  $21.2 \text{ kg}/\text{m}^2$ .

## CONCLUSIONS

Our study has shown that students studying in the department of nutrition and dietetics act responsibly in terms of their eating habits, and that women are affected more by negative eating habits than men. There is a need for more extensive studies in the future, as problems related to eating attitudes and behaviours are increasing day by day.

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