

Penilaian Hubungan antara Harapan Kurus, Kepuasan Tubuh, dan Sikap Perilaku Makan

Assessment of the Relationship between Thinness Expectations, Body Satisfaction, and Eating Attitude and Behavior

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ABSTRAK

Latar Belakang: Ketidakpuasan tubuh lebih sering terjadi pada remaja dan prevalensinya meningkat di negara negara maju dan negara – negara berkembang. Keadaan tersebut terkait dengan perilaku diet yang tidak sehat.

Tujuan: Mengevaluasi hubungan antara ekspektasi kelemahan, kepuasan tubuh, dan sikap serta perilaku makan dalam interaksi interpersonal.

Metode: Penelitian ini dilakukan antara 372 mahasiswa/siswi. Formulir survei disiapkan menggunakan Program Google Survei. Formulir kuisioner terdapat karakteristik sosiodemografi, pengukuran antropometri, Interpersonal Outcome Expectancies for Thinness (IOET), Nutritional Changes Process Scale (NCPS), dan Body Shape Questionnaire (BSQ).

Hasil: Didapatkan bahwa tidak ada perbedaan yang signifikan secara statistik rerata jumlah nilai skala IOET, BSQ, dan NCPS menurut jenis kelamin ($p > 0,05$). Menurut sub-dimensi skala NCPS, ditentukan bahwa nilai rata-rata dari kelegaan dramatis dan kebebasan sosial lebih tinggi pada wanita daripada pria ($p < 0,05$). Namun, nilai rata-rata dari manajemen penguatan, kontrol stimulus, sistem kontrol interpersonal, dan penyalahgunaan zat lebih rendah pada wanita dibandingkan pria ($p < 0,05$). Selain itu, ketika distribusi ketipisan diperiksa dalam hubungan dengan keluarga, anggota keluarga lain, guru, teman, kolega, dan orang asing menurut jenis kelamin, ditentukan bahwa tidak ada perbedaan yang signifikan secara statistik ($p > 0,05$). Diketahui bahwa ada korelasi positif sedang dan kuat antara BSQ dan NCPS dan skor total IOET, masing-masing ($p < 0,05$).

Kesimpulan: Telah ditentukan bahwa bentuk tubuh penting dalam hubungan interpersonal di antara mahasiswa dan ketidakpuasan tubuh mungkin terkait dengan perilaku makan.

Kata Kunci: Ketidakpuasan Tubuh, Bentuk Tubuh, Perilaku Makan, Hubungan Interpersonal, Badan Kurus.

ABSTRACT

Background: Body dissatisfaction is more common in adolescents and its prevalence is increasing in developed and developing countries. This situation is associated with unhealthy dieting behaviors.

Purpose: It was aimed to evaluate the relationship between weakness expectations, body satisfaction, and eating attitudes and behaviors in interpersonal interaction.

Methods: This study was conducted on 372 university students. The survey form was prepared using the Google Surveys Program. In the questionnaire form, there are sociodemographic characteristics, anthropometric measurements, Interpersonal Outcome Expectancies for Thinness (IOET), Nutritional Changes Process Scale (NCPS), and Body Shape Questionnaire (BSQ).

Results: It was found that there was no statistically significant difference in the total score means of the IOET, BSQ, and NCPS scales according to gender ($p > 0.05$). According to the NCPS scale sub-dimensions, it was determined that the means scores of dramatic relief and social liberation were higher in females than males ($p < 0.05$). However, the mean scores of reinforcement management, stimulus control, interpersonal control systems, and substance abuse were lower in females than males ($p < 0.05$). In addition, when the distribution of thinness was examined in relationships with family, other family members, teachers, friends, colleagues, and foreigners according to the gender, it was determined that there was no statistically significant difference ($p > 0.05$). It was determined that there were moderate and strong positive correlations between BSQ and NCPS and IOET total scores, respectively ($p < 0.05$).

Conclusion: It has been determined that body shape is important in interpersonal relationships among university students and body dissatisfaction may be related to eating behaviors.

Keywords: Body Dissatisfaction, Body Shape, Eating Behaviors, Interpersonal Relations, Thinness



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INTRODUCTION

Body dissatisfaction is defined as individuals having negative feelings and thoughts about their bodies¹. It occurs due to the incompatibility between the body perceived by the person and the body people want to have². It is more common in adolescents and its prevalence is increasing in developed and developing countries.^{1,3} It has been reported that 50% of adolescent women and 30% of adolescent men are not satisfied with their bodies¹. There are many causes of body dissatisfaction. These include media, cultural and ethnic reasons, and socioeconomic level.^{3,4} Since the media emphasizes that attractiveness is only possible with thinness, it can lead to body dissatisfaction in individuals⁵. This situation puts pressure on women and forces them to be thinner. In a study, it was reported that websites such as Facebook and Instagram have an effect on body image perception⁶. Having a thin body is considered ideal in Western societies. It causes individuals in countries where a thin body is considered ideal to try to have a thinner body⁷. In addition, it has been reported that as the income level of individuals increases, the level of body dissatisfaction also increases.

One of the most important causes of disordered eating behaviors is body dissatisfaction. It is associated with unhealthy dieting behaviors such as vomiting, drug use, skipping meals, and using laxatives.⁵ In a study, it was reported that eating behaviors such as weight loss and dieting were observed in individuals with body dissatisfaction⁸. In their study carried out on 1011 adolescents, Uchôa et al. found that the increase in body dissatisfaction was positively associated with the increased risk of eating disorders in adolescents, and this risk was higher in girls than in boys⁹. Additionally, Argyrides and Kkeli suggested that the internalization of thin-ideal thinking was a determinant in the development of impaired eating behaviors in female university students.¹⁰ In this study, it was aimed to evaluate the relationship between expectations of thinness in interpersonal interaction, body satisfaction, and eating attitudes and behaviors.

METHODS

Research Sample

The universe of the research consisted of the students who study at the Faculty of Health Sciences of Ankara Yıldırım Beyazıt University. The ethics approval of the study was granted by Ankara Yıldırım Beyazıt University (Project No: 2020-258) ethics committee in 2020 and it was carried out in accordance with the

Declaration of Helsinki. The researchers tried to reach students of all departments via the e-posta and no sample selection was performed. Individuals under the age of 18, those with any psychological illness, students that were in the exam period, and participants who left without filling out the questionnaire despite being volunteers were not included in the study. The data collection process was completed with the participation of 384 students who volunteered to participate in the study. Because of their chronic diseases affecting food intake, 12 students were excluded from the study. For this reason, the data to be evaluated were obtained from the questionnaire forms completed by 372 students.

Data Collection Tools

The survey form was prepared using the Google Surveys Program. The data collection of the research was carried out by complete the questionnaire on the online system due to the Covid-19 epidemic. The links of the prepared questionnaires were sent to the students by e-mail. The questionnaire form consisted of 4 sections. All the forms used as data collection tools were shared with a student group of 15 people before starting the real application, and details such as whether there were incomprehensible questions and how long it took on average were tested. Participants confirmed that they participated in the study by reading the informed consent text before filling out the questionnaire sent via Google Forms.

Sociodemographic Characteristics and Anthropometric Measurements

This section included students' sociodemographic data such as age, gender and anthropometric measurements such as body weight and height. Body weight and height were evaluated based on the participants' own reports online. The necessary information was given to the participants to be able to accurately measure their body weight and height. In this context, the participants were warned to wear the thinnest clothes when weighing their body weight. Body mass index (BMI) was calculated by the researchers by dividing body weight (kg) by the square of height (m²) and evaluated according to the BMI classification determined by the World Health Organization¹¹.

Interpersonal Outcome Expectancies for Thinness (IOET) Scale

It was developed by Li et al. to determine to what extent having a thin body plays a role in our social



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life.¹² The Turkish validity and reliability study was conducted by Erzurum Alim et al¹³ and reported that IOET is a valid and reliable scale for university students (Cronbach alpha: 0.93). This scale consists of two sections. In the first section, there are 8 items questioning the possible interpersonal consequences of being thin, and each item is prepared as a 7-point Likert scale. It can be scored between 8 and 56. The second section considers the situations stated in the first section. It is aimed to determine to what extent being thin affects our relationships with other individuals such as family, relatives, and colleagues. This section is prepared as a 5-point Likert scale and is not scored¹².

Body Shape Questionnaire (BSQ)

The body Shape Questionnaire was developed to evaluate the concerns of individuals about body shape and weight. The questionnaire consists of 34 items prepared on a 6-point Likert scale. The questionnaire is evaluated between 1–6 points. Individuals can get the lowest score of 34 points and the highest score of 204 points in total. A score of less than 110 points in the questionnaire indicates mild body dissatisfaction, a score of between 111–140 points indicates medium body dissatisfaction, and scores above 140 indicate severe body dissatisfaction¹⁴. The validity and reliability study of the BSQ was conducted by Akdemir et al. in 2012 (Cronbach alpha: 0.96)¹⁵.

Nutritional Changes Process Scale (NCPS)

The Nutritional Changes Process Scale was developed by Prochaska et al¹⁶. In order to determine how eating experiences, affect people's eating habits. This scale consists of 12 subscales and 48 items and is prepared as a 5-point Likert scale. Scale items are scored between 1 and 5. Individuals can get a minimum of 48 and a maximum of 240 points on the scale. For all subscales, the highest score of 20 points and the lowest score of 4 points can be obtained.¹⁶ The validity and reliability of this scale was made by Menekli and Fadiloğlu (Cronbach alpha: 0.94)¹⁷. The subscales of the scale is: consciousness raising, dramatic relief, environmental reevaluation, self-

reevaluation, social liberation, counter conditioning, helping relationships, reinforcement management, self-liberation, stimulus control, interpersonal control systems and substance abuse.

Statistical analysis

The statistical evaluations of the data obtained from the study was performed using IBM SPSS (Statistical Packet for Social Sciences) package program for Windows (version 24.0). The categorical data of the study were expressed as number (n) and percentage (%), while the numerical data were expressed as min–max, mean (\bar{X}), standard deviation (\pm SD), or median values. Since the data approached a normal distribution when the number of the sample was more than 30, analyses specific to normal distribution were made¹⁸. The t-test was used for the evaluation of two normally distributed independent data and the one-way ANOVA test was used to evaluate the difference between more than two independent means. The chi-square test was used to evaluate qualitative data. The Spearman correlation analysis was used to determine the correlations between scale scores. The correlation coefficient of 0.00–0.19, 0.20–0.39, 0.40–0.69, 0.70–0.89, 0.90–1.00 were respectively evaluated as very weak relationship, weak (low) relationship, moderate relationship, strong (high) relationship, and very strong relationship¹⁸.

RESULTS AND DISCUSSION

Sociodemographic characteristics (%) of the students and the mean-standard deviation ($X \pm SS$) and min–max values of their anthropometric measurements are given in Table 1. According to this, 35.5% of the students participating in the study were male (n = 132) and 65.5% were female (n = 240). The mean age of students was 20.46 ± 1.87 years. The mean height, body weight, and body mass index of the university students were 168.78 ± 8.86 cm, 62.27 ± 12.22 kg, and 21.73 ± 2.99 kg/m², respectively.

Table 1. Sociodemographic Characteristics and Anthropometric Measurements of Individuals.

	X ± SS	(Min–Max)
Age	20.46 ± 1.87	(18–29)
Height (cm)	168.78 ± 8.86	(150–192)
Body Weight (kg)	62.27 ± 12.22	(37–115)
Body Mass Index (BMI, kg/m ²)	21.73 ± 2.99	(14.64–35.49)

BMI = Body mass index

The mean–standard deviation ($X \pm SS$) and min–max values of the scales and subscales according to gender is shown in Table 2. It was found that there was no statistically significant difference in the total score

means of the IOET, BSQ, and NCPS scales according to gender ($p > 0.05$). According to the NCPS scale sub-dimensions, it has been determined that the mean scores of dramatic relief and social liberation were higher in



females than males ($p < 0.05$). However the mean scores of reinforcement management, stimulus control, interpersonal control systems, and substance abuse were lower in females than males ($p < 0.05$). Otherwise, it was found that female mean scores of consciousness raising,

environmental reevaluation, self-reevaluation, counter conditioning, helping relationships, and self-liberation points were higher than male mean scores. However, this result is not statistically significant ($p > 0.05$).

Table 2. The Mean, Standard Deviation ($X \pm SD$), And Min–Max Values of The Scores Obtained by Individuals from The Scale and Subscales According to Gender (N = 372).

Measures	Gender		P
	Male (n=132) X ± SS (Min–Max)	Female (n=240) X ± SS (Min–Max)	
BSQ	73.57 ± 30.47 (34–172)	80.16 ± 34.12 (34–181)	$p > 0.05^b$
IOET	20.03 ± 10.71 (8–56)	21.59 ± 11.39 (8–56)	$p > 0.05^b$
NCPS Total Score	92.80 ± 31.87 (48–201)	94.42 ± 30.73 (48–190)	$p > 0.05^b$
Cognitive process	Consciousness raising	7.28 ± 3.08 (4–19)	$p > 0.05^b$
	Dramatic relief	8.25 ± 2.99 (4–18)	$p < 0.05^a$
	Environmental reevaluation	7.96 ± 3.33 (4–17)	$p > 0.05^b$
	Self-reevaluation	7.82 ± 3.24 (4–18)	$p > 0.05^b$
	Social liberation	8.80 ± 3.39 (4–19)	$p < 0.05^a$
Behavioral process	Counter conditioning	7.74 ± 2.98 (4–19)	$p > 0.05^b$
	Helping relationships	8.46 ± 3.76 (4–19)	$p > 0.05^b$
	Reinforcement Management	7.02 ± 3.46 (4–16)	$p < 0.05^a$
	Self-liberation	8.80 ± 3.60 (4–17)	$p > 0.05^b$
	Stimulus control	6.86 ± 3.25 (4–19)	$p < 0.05^a$
	Interpersonal control systems	7.47 ± 3.32 (4–16)	$p < 0.05^a$
	Substance abuse	6.33 ± 3.11 (4–19)	$p < 0.05^a$

^aStudent t test, $p < 0.05$; ^bStudent t test, $p > 0.05$

Table 3 shows the distribution of the degree to which being thin affects relationships between individuals by gender. According to the findings, 50.8% of men and 52.9% of women stated that thinness was not effective on

relationships with the family ($p > 0.05$). The rates of female and male participants who stated that thinness had little effect on their relationships with siblings, aunts, uncles, and cousins were found to be similar ($p > 0.05$).



Table 3. Evaluation of The Possible Effects of Thinness In Individuals' Relationships with Family, Other Family Members, Teachers, Friends, Colleagues, and Foreigners by Gender (n = 372).

*Measures	Consciousness raising	Dramatic relief	Environmental reevaluation	Self-reevaluation	Social liberation	Counter conditioning	Helping relationships	Reinforcement management	Self-liberation	Stimulus control	Interpersonal control systems	Substance abuse	Total NCPS score	Total IOET Score	Total BSQ score	
Consciousness raising	-															
Dramatic relief	0.71*	-														
Environmental reevaluation	0.55*	0.67*	-													
Self-reevaluation	0.75*	0.69*	0.60*	-												
Social liberation	0.47*	0.60*	0.58*	0.56*	-											
Counter conditioning	0.68*	0.67*	0.55*	0.67*	0.54*	-										
Helping relationships	0.51*	0.54*	0.53*	0.51*	0.46*	0.46*	-									
Reinforcement management	0.60*	0.46*	0.47*	0.63*	0.34*	0.55*	0.39*	-								
Self-liberation	0.68*	0.68*	0.53*	0.79*	0.57*	0.66*	0.58*	0.53*	-							
Stimulus control	0.60*	0.53*	0.54*	0.60*	0.39*	0.63*	0.43*	0.70*	0.50*	-						
Interpersonal control systems	0.58*	0.54*	0.58*	0.59*	0.38*	0.57*	0.51*	0.65*	0.53*	0.72*	-					
Substance abuse	0.54*	0.38*	0.40*	0.49*	0.27*	0.53*	0.34*	0.74*	0.41*	0.76*	0.64*	-				
Total NCPS	0.83*	0.82*	0.76*	0.86*	0.68*	0.80*	0.69*	0.75*	0.82*	0.78*	0.78*	0.68*	-			
Total IOET	0.31*	0.33*	0.24*	0.39*	0.34*	0.27*	0.26*	0.29*	0.31*	0.24*	0.29*	0.19*	0.38*	-		
Total BSQ	0.62*	0.59*	0.47*	0.77*	0.52*	0.61*	0.46*	0.56*	0.67*	0.56*	0.53*	0.51*	0.74*	0.40*	-	

*Pearson Chi-square test, p > 0.05

There was no statistically significant difference between gender and the possible effects of thinness on individuals' relationships with their teachers (p > 0.05). The rates of women who reported that weakness had a greater impact on relationships with friends and colleagues was higher than those of men. However, this difference is not statistically significant (p > 0.05).

Correlations between the NCPS subscales, IOET, and BSQ are given in Table 4. It was determined that there was a positive and moderate relationship between the

BSQ and NCPS subscales (p < 0.05). However, there was a strong relationship between BSQ and self-reevaluation (r = 0.77; p < 0.05). In addition, moderate (r = 0.40) and strong (r = 0.74) positive correlations were found between the total scores of the BSQ and NCPS and IOET, respectively. A positive and weak relationship was found between the NCPS subscales, the NCPS total scores and IOET (r = 0.24–0.39; p < 0.05).



Table 4. Correlations between The NCPS Subscales, The Total NCPS, IOET and BSQ scores.

Individuals Relationships	Gender	No effect n (%)	Less effective n (%)	Medium impact n (%)	Very efficient n (%)	Too much impact n (%)	p
Family	Male	67 (50.8)	22 (16.7)	18 (13.6)	14 (10.6)	11 (8.3)	0.271 ^a
	Female	127 (52.9)	32 (13.3)	43 (17.9)	29 (12.1)	9 (3.8)	
Other family members (siblings, aunts, uncles, cousins)	Male	56 (42.4)	32 (24.2)	32 (24.2)	7 (5.3)	5 (3.8)	0.061 ^a
	Female	120 (50.0)	47 (19.6)	40 (16.7)	28 (11.7)	5 (2.1)	
Teacher	Male	68 (51.5)	32 (24.2)	23 (17.4)	6 (4.5)	3 (2.3)	0.097 ^a
	Female	158 (65.8)	38 (15.8)	31 (12.9)	10 (4.2)	3 (1.3)	
Friend	Male	44 (33.3)	35 (26.5)	33 (25.0)	13 (9.8)	7 (5.3)	0.718 ^a
	Female	81 (33.8)	54 (22.5)	58 (24.2)	35 (14.6)	12 (5.0)	
Friend/colleague/colleagues	Male	51 (38.6)	30 (22.7)	31 (23.5)	13 (9.8)	7 (5.3)	0.523 ^a
	Female	90 (37.5)	47 (19.6)	54 (22.5)	39 (16.3)	10 (4.2)	
Foreigners	Male	55 (41.7)	27 (20.5)	24 (18.2)	16 (12.1)	10 (7.6)	0.344 ^a
	Female	125 (52.1)	47 (19.6)	31 (12.9)	22 (9.2)	15 (6.3)	

^aPearson Correlation Analysis, $p < 0.05$

All eating disorders, including obesity, are a major public health problem today. Body dissatisfaction has increased as a result of unrealistic social standards in both men and women^{19,20}. It is considered ideal for men to have a muscular body structure, and to be thin and slim for women²¹. This study investigated the relationship between Turkish university students' body satisfaction, thinness expectations, and eating attitudes and behaviors. The study included 132 male (35.5%) and 240 female (65.5%) university students. The average age of the students was found to be 20.46 ± 1.87 years. The average body weight, height, and BMI of the students were 62.27 ± 12.22 kg, 168.78 ± 8.86 cm, and 21.73 ± 2.99 kg/m², respectively. One of the most important factors affecting body satisfaction is body weight and hence BMI¹⁴. The fact that the BMI averages of the individuals participating in the study are within the normal range according to the WHO indicates that the study was conducted on healthy individuals without obesity problems. Similarly, in other studies conducted to evaluate body satisfaction, the participants' average BMI was found as 21.74 kg/m², 21.22 kg/m², and 22.14 kg/m²²²⁻²⁴.

Some internal and external factors cause changes in human behavior. Nutrition change process means to determine the effects of experiences on some eating habits.¹⁶ In this study, according to the sub-dimensions of the NCPS scale, the mean scores of dramatic relief and social liberation were higher in females than males. This difference is thought to be caused by the sociocultural structure of the society and the fact that women are better at expressing emotional reactions and practices regarding inadequate and/or unbalanced nutrition¹⁶. However, the mean scores of

reinforcement management, stimulus control, interpersonal control systems, and substance abuse were found to be lower in women compared to men. This difference may be due to the sociocultural structure of the society and the higher tendency of men compared to women in issues such as developing healthy options, doing physical activity, and rewarding adequate-balanced nutrition behaviors¹⁷.

The self-liberation subscale evaluates the willingness of individuals to change their eating behaviors and their level of decision-making and action to these changes.¹⁷ In this study, women's mean scores from the self-liberation subscale were found to be higher than men ($p > 0.05$). According to the literature, the reason why the difference between the mean scores of the self-liberation subscale is not statistically significant stems from the fact that women want to change their unhealthy eating behaviors more than men, but they are more sensitive to stimuli that trigger unhealthy eating behaviors than men^{25,26}. The mean scores of the stimulus control subscale were higher in men than in women in this study, which supports this situation ($p < 0.05$).

With the changes in beauty criterion and zero body perception in the media due to the belief that "thin is beautiful" in the society, pressure is put on especially adolescents and young adult individuals, and individuals are unconsciously encouraged to diet. Such social trends may cause links to be established between being thin and being healthy and beautiful. The ideal of thinness is emphasized in many areas, and it is thought that the stigmatization of obesity increases as a result²⁷. Studies have shown that a poor body image perception leads to an increased risk of anxiety and depression and poor self-esteem^{28,29}. The study conducted by Önal²⁹ determined



that students with underweight or normal weight are more satisfied with their bodies than students who are overweight or obese, and body satisfaction decreases in both genders as BMI increases. Although there are many studies examining the relationship between weakness and body satisfaction, there are not many studies examining the perception of weakness and interpersonal communication in the literature. Therefore, this study examined the extent to which being thin affects interpersonal communication in male and female individuals. For this purpose, the researchers evaluated the answers given by the participants to items asking how effective it is to be thin in communication with family members, teachers, friends, colleagues, and strangers. According to the findings, 50.8% of men and 52.9% of women stated that thinness was not effective on their relationships with family members. The rates of female and male participants who stated that thinness had little effect on their relationships with other family members were found to be similar. Although the proportion of women who reported that thinness had a greater effect on their relationships with friends and colleagues was higher than that of men, this difference was not statistically significant.

In this study, a positive and moderate relationship was found between the BSQ and NCPs sub-scales ($p < 0.05$). Also, it was seen that there was a strong relationship between the BSQ and self-reevaluation ($r = 0.77$; $p < 0.05$). This relationship shows that the changes that can be seen in individuals' body shapes and eating attitudes and behaviors, especially in the way they evaluate themselves, are interrelated. In addition, strong ($r = 0.74$) and moderate ($r = 0.40$) positive correlations were found between the BSQ and total NCPs and IOET scores, respectively. A positive but weak relationship was found between the IOET and NCPs sub-scales and total scores ($r = 0.24-0.39$; $p < 0.05$). This shows that the body shapes of individuals are also important in interpersonal relations, but changes in individuals' eating attitudes and behaviors do not affect their interpersonal relationships.

CONCLUSION

In this study, a moderate and strong positive correlation was found between BSQ and total NCPs and IOET scores, respectively. This relationship shows that the changes in individuals' body shapes and eating attitudes and behaviors are interrelated. As a result, it was determined in this study that body shape is important in interpersonal relationships in university students and body dissatisfaction may be related to eating behaviors. More studies should be conducted to evaluate body shape and interpersonal relationships in different samples.

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