

# A cross-sectional study on the relationship between intuitive eating, hedonic hunger and body mass index in university students

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## ABSTRACT

**Introduction:** Unhealthy diet is an important factor in the formation of obesity. In recent years, the relationship between the concepts of intuitive eating and hedonic hunger and obesity has begun to be investigated.

**Objectives:** The aim of this study is to evaluate the effects of intuitive eating and hedonic hunger on mental health, sleep quality and body mass index.

**Methods:** In this cross-sectional study, a questionnaire including demographic and general health information, dietary habits, height and body weight measurements was administered to 62 female and 38 male university students aged 18-36 years. The questionnaire also included the Intuitive Eating Scale, the Food Power Scale, the Food Craving Questionnaire, the Pittsburg Sleep Quality Scale, the Warwick-Edinburgh Mental Well-Being Scale, and the Motivation to Eat Deliciously Scale. Number, percentage, mean and standard deviation values were calculated in the evaluation of the data. The relationships between variables were analyzed by independent samples T test, Pearson correlation and regression analyses.

**Results:** A positive correlation was found between intuitive eating, hedonic hunger ( $r=0.332$ ,  $p<0.01$ ) and mental well-being ( $r=0.375$ ,  $p<0.01$ ). Intuitive eating was found to be negatively correlated with food cravings ( $r=-0.413$ ,  $p<0.01$ ) and body mass index ( $r=-0.202$ ,  $p<0.05$ ). It was found that 28.7% ( $R^2$  adjusted=0.287) of the variance of the intuitive

eating score was explained by hedonic hunger, food craving and body mass index.

**Conclusions:** Intuitive eating was associated with hedonic hunger, cravings, mental well-being, and body mass index. In addition, poor sleep quality supports hedonic hunger. Clinical trial registration number: NCT05501782

## KEYWORDS

Intuitive eating, hedonic feeding, body shape, sleep disorder, mental health.

## INTRODUCTION

Obesity caused by positive energy balance is very common all over the world<sup>1</sup>. One of the causes of obesity is unhealthy eating habits<sup>2</sup>. The increasing prevalence of obesity indicates that it is difficult to regulate food intake. Regulation of food intake is a complex process influenced by several factors<sup>3</sup>. Food intake is generally regulated by homeostatic and hedonic pathways<sup>4</sup>. Homeostatic hunger is an increase in the desire to eat to eliminate the negative energy balance after the depletion of energy stores, while hedonic hunger is defined as a tendency to eat only because of the desire for taste and is an important factor in the increase of obesity in the world<sup>4,5</sup>. There are two important differences between homeostatic and hedonic hunger. The first difference is that in hedonic hunger, the food is preferred because of its taste. The second difference is that hedonic hunger occurs in short-term fasts. Physiological energy deficit in long-term fasting has an effect on food intake<sup>4</sup>.

Sleep is an important factor that can affect eating behavior. Decreased or increased sleep time helps to increase food intake and disrupt homeostatic control<sup>6</sup>. Sleep disturbance att-

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racts attention as a factor that contributes to obesity<sup>7</sup>. Shortening of sleep duration is associated with increased food intake, altered energy expenditure, and changes in the concentration of hormones that affect hunger and satiety<sup>7,8</sup>. Excessive energy intake following shortening of sleep duration is thought to be under the control of hedonic hunger, not hormonal factors<sup>8</sup>.

People can feel physical and emotional hunger. Physical hunger is a physical sensation accompanied by signals such as low energy, irritability, and stomach rumbling. Emotional hunger can be triggered by loneliness, sadness and stress<sup>9</sup>. In intuitive eating, food intake occurs in response to physiological hunger and satiety cues rather than emotional cues<sup>10</sup>. The concept of intuitive eating is based on three basic approaches: allowing to eat unconditionally, eating for physical reasons rather than emotional reasons, and eating based on physical hunger and satiety signals<sup>11</sup>. Responding to external factors rather than appetite cues is associated with weight gain<sup>12</sup>. People who practice this way of eating are not obsessed with overeating, do not ignore hunger cues, and do not follow a set of food rules. They prefer foods that are effective in the functioning of their bodies and that they enjoy consuming. They rely on the feeling of hunger and fullness to guide when and how much food to consume<sup>13</sup>. Intuitive eating is more sustainable than dieting<sup>10</sup>. Intuitive eating is linked to lower body mass index (BMI), lower cholesterol and cardiovascular risk<sup>10,14</sup>. In addition, it is inversely related to disordered feeding behavior and leads to lower weight and maintenance of glucose level<sup>10,14</sup>.

## OBJECTIVE

This study was conducted to evaluate the relationship between intuitive eating, hedonic hunger, sleep quality and body mass index of university students.

## MATERIALS AND METHODS

This study was conducted between April-June 2022 with the participation of 62 female and 38 male students aged 18-36 from various universities. Participating students from Istanbul Medeniyet University, Bozok University, Afyon Kocatepe University and Anadolu University were included in the study. An online survey was applied to the participants. The invitation to participate in the study and the link to access the survey were shared with individuals registered in the authors' social media accounts and e-mail accounts. The study invitation was shared on the authors' Facebook, Twitter and Instagram accounts. In addition, an invitation to participate was sent via WhatsApp to the people registered on their phones. The link to access the survey was shared with individuals who accepted the participation invitation. Online consent was obtained from the participants before starting the survey. Arrangements were made for each participant to answer the questions in the survey only once.

The questionnaire included a total of seven sections. In the first section, there were 20 questions about demographic data and general health status of the participants, and 11 questions including dietary habits and anthropometric measurements. Other parts of the questionnaire consist of Intuitive Eating Scale (IES-2), the Power of Food Scale (PFS-Tr), Food Craving Questionnaire (FCQ-T), the Pittsburg Sleep Quality Scale (PSQI), the Warwick-Edinburgh Mental Well-Being Scale (WEMWBS) and the Palatable Eating Motive Scale (PEMS). Consent from the participants was also obtained with the questionnaire form.

### ***Intuitive Eating Scale (IES-2)***

The intuitive eating scale (IES-2) consists of 23 questions, each of which includes five options ranging from strongly agree to strongly disagree. A 5-point Likert scale was used in the scale. 1,2,3,7,8,9,10. The scoring of the answers given to the questions differs from the other questions. In these questions, I strongly disagree 5, I disagree 4, I am undecided 3, I agree 2 and I strongly agree 1 point. The scoring of the answers to the other questions is in the opposite order (strongly disagree 1, disagree 2, undecided 3, agree 4, and strongly agree 5 points). According to the options chosen by the individuals, the scores they receive per question vary. The scale score was calculated by dividing the total score obtained at the end of the questions by 23. Intuitive eating behavior also increases in parallel with the increase in the scale score. The median values of the Intuitive Eating Scores of the students participating in the study were found. Participants with a scale score below the median value were evaluated as non-intuitive eating behaviors, and participants with a median value and above were evaluated as individuals with intuitive eating behavior<sup>15</sup>.

### ***Power of Food Scale (PFS-Tr)***

Power of food scale (PIS) is a scale developed to evaluate the effects of palatable foods on the psychological and hedonic states of individuals. A validated version of this scale consisting of 15 items was used. The scale was evaluated using a 5-point Likert scale. Accordingly, I strongly disagree 1 point, I disagree 2 points, I am undecided 3 points, I agree 4 points, and I strongly agree 5 points. The scores obtained from all items were divided into five and the scale score was found. It was concluded that the hedonic hunger levels of individuals with a nutritional power score of 2.5 and above increased. It has been accepted that individuals with a high nutritional power score are sensitive to the food environment and psychologically under the influence of food<sup>16</sup>.

### ***Food Craving Questionnaire (FCQ-T)***

The Food Craving Questionnaire (FCQ-T) is a scale developed for the assessment of food cravings. The Turkish version

with a reliability study was used in this study. In this scale, evaluation is made with a 6-point Likert scale. It was scored always 6 points, mostly 5 points, often 4 points, occasionally 3 points, rarely 2 points, never 1 point. The high scale scores of the participants indicate an increase in food cravings<sup>17</sup>.

### **Pittsburg Sleep Quality Scale (PSQI)**

Pittsburg Sleep Quality Scale (PSQI) is a scale developed to evaluate sleep quality. This scale includes 18 items with 7 components. These components are subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbance, use of sleep medication, and daytime sleep dysfunction. Each component is scored between 0-3 points and the total score is a maximum of 21. A total score of 5 or more indicates poor sleep quality and an increase in the score indicates a decrease in sleep quality<sup>18</sup>.

### **Warwick-Edinburgh Mental Well-Being Scale (WEMWBS)**

In this study, the Warwick-Edinburgh Mental Well-Being Scale (WEMIOS) was used. The scale consists of 14 questions and is evaluated with a 5-point Likert scale. It is scored as 1 point to strongly disagree, 2 points to disagree, 3 points to slightly agree, 4 points to agree and 5 points to completely agree. The total score on the scale is between 14 and 70. The increase in the total score indicates that the mental well-being of the individual increases<sup>19</sup>.

### **Palatable Eating Motive Scale (PEMS)**

The Palatable Eating Motivation Scale (PEMS), consisting of 20 items, was used to determine the reasons why the participants consumed delicious foods and beverages. In this scale, evaluation is made with a 5-point Likert scale. The higher the score obtained from the scale, the greater the effect of food on people<sup>20</sup>.

The compliance of this study with ethical rules was approved by the decision of the the Ministry of Health, Istanbul Medeniyet University Göztepe Training and Research Hospital Clinical Research Ethics Committee, dated 16.03.2022 and numbered 2022/0145. Informed consent was obtained from the participants in this study.

The data obtained at the end of the study were evaluated with the SPSS 22 (IBM, NY) package program<sup>21</sup>. The number and percentage values of the participants in the variable groups and the mean and standard deviation values of the scale scores were calculated. Independent samples T test, Pearson correlation and regression analyzes were performed to evaluate the relationship between intuitive eating scale scores and other scale scores and body mass index.  $P < 0.05$  was considered statistically significant.

## **RESULTS**

The mean age of the university students participating in this study was  $21.7 \pm 2.7$  years. 62 of the students are female and 38 are male. It was determined that the average of the students' body mass index (BMI) values was  $22.8 \pm 4.6$  kg/m<sup>2</sup>.

Demographic characteristics of the participants are given in Table 1. 62.0% (n=62) of the participants were female and 38.0% (n=38) were male. It was determined that 68.0% of the participants had irregular sleeping hours. Only 32% of individuals evaluated themselves as happy. The monthly income of 62.0% of the participants is below 357 \$.

**Table 1.** Demographic characteristics of the participants

Demographic features	N	%
Gender		
Female	62	62.0
Male	38	38.0
Who do you live with?		
With family	47	47.0
Alone	7	7.0
At home with friend	14	14.0
In the dormitory	32	32.0
Smoking		
No	73	73.0
Yes	27	27.0
Alcohol use		
No	71	71.0
Yes	29	29.0
Presence of chronic disease		
No	92	92.0
Yes	8	8.0
Have you ever used antidepressants?		
No	92	92.0
Yes	8	8.0
Are bedtimes regular?		
Yes	32	32.0
No	68	68.0

**Table 1 continuation.** Demographic characteristics of the participants

Demographic features	N	%
General mood assessment		
Happy	31	32.0
Anxious	21	21.0
Annoyed	21	21.0
Tired	18	18.0
Other	9	9.0
Physical activity		
I never do	36	36.0
2-3 days a week	25	25.0
Mmore than 3 days a week	9	9.0
1 day per week	30	30.0
Income status		
<255 \$	35	35.0
255-357 \$	27	27.0
357-765 \$	31	31.0
>765 \$	7	7.0

Table 2 shows the distribution of the participants according to their meal skipping, consuming delicious food, intuitive eating, hedonic hunger and body mass index classes. It was determined that 90.0% of the individuals had the habit of skipping meals. It was determined that the most common reason for skipping meals was reluctance to eat. 53.0% of the participants stated that they were satisfied with their body weight and 62.0% stated that they had not applied a weight loss diet before. It was determined that 93.0% of the participants had a low tendency to consume palatable food, 44% had hedonic hunger, and 60.0% had a weight within normal limits. It was determined that 53.0% of the participants had intuitive eating.

Table 3 evaluates the relationship between participants' consuming delicious food, intuitive eating, hedonic hunger, excessive food consumption, sleep quality, mental well-being and body mass indexes. PEMS score was positively correlated with hedonic hunger ( $r=0.424$ ,  $p<0.01$ ), FCQ-T score ( $r=0.242$ ,  $p<0.05$ ) and PUKI score ( $r=0.237$ ,  $p<0.05$ ). A positive correlation was found between intuitive eating and hedonic hunger ( $r=0.332$ ,  $p<0.01$ ) and mental well-being ( $r=0.375$ ,  $p<0.01$ ). Intuitive eating was found to be negati-

**Table 2.** The distribution of the participants according to their meal skipping, consuming delicious food, intuitive eating, hedonic hunger and body mass index classes

	N	%
Meal skipping status		
Yes	40	40.0
No	10	10.0
Sometimes	50	50.0
Reason for skipping meals		
Because I join	17	17.0
Because I don't want	40	40.0
Because I can't find the time	22	22.0
Other	21	21.0
How do you find your weight?		
I am satisfied with my current weight	53	53.0
I wish I was weaker	32	32.0
I wish I was heavier	15	15.0
Weight loss diet application status		
Yes	38	38.0
No	62	62.0
Delicious food consumption scale		
High tendency to consume delicious foods	7	7.0
Low tendency to consume tasty foods	93	93.0
Intuitive Eating		
Intuitive eaters	53	53.0
Non-intuitive eaters	47	47.0
Food power scale		
There is hedonic hunger and influence from food	44	44.0
No hedonic hunger and no influence from food	56	56.0
Body Mass Index		
<18.5 Underweight	13	13.0
18.5-24.9 Normal Weight	60	60.0
25.0-29.9 Lightweight	19	19.0
≥ 30 Obese	8	8.0

**Table 3.** The correlation between participants' consuming delicious food, intuitive eating, hedonic hunger, excessive food consumption, sleep quality, mental well-being and body mass indexes.

	<b>PEMS</b>	<b>IES-2</b>	<b>PFS-Tr</b>	<b>FCQ-T</b>	<b>PUKI</b>	<b>WEMWBS</b>	<b>BMI</b>
Palatable Eating Motivational Scale score (PEMS)	1						
Intuitive Eating Score (IES-2)	-0.033	1					
Power of Food Scale (PFS-Tr)	<b>0.321</b>	<b>0.332</b>	1				
Food Craving Questionnaire Score (FCQ-T)	<b>0.322</b>	<b>-0.413</b>	-0.054	1			
Pittsburgh Sleep Quality Score (PSQI)	<b>0.198</b>	-0.06	0.11	-0.003	1		
Mental well-being score (WEMWBS)	-0.002	<b>0.375</b>	<b>0.405</b>	<b>-0.528</b>	-0.077	1	
Body Mass Index (BMI)	0.091	<b>-0.202</b>	0.096	0.05	-0.023	0.167	1

† Independent samples T test. p<0.05.

vely correlated with food cravings (r=-0.413, p<0.01) and body mass index (r=-0.202, p<0.05). It was determined that mental well-being was positively correlated with hedonic hunger (r=0.405, p<0.01) and negatively correlated with excessive food cravings (r=-0.528, p<0.01).

In Table 4, hedonic hunger, excessive food cravings, Pittsburgh sleep quality, mental well-being, palatable food consumption motivation scores and body mass indexes of intuitive and non-intuitive eaters were compared. Intuitive eaters have higher food power and mental well-being scale sco-

**Table 4.** Comparison of power of scale, excessive food cravings, Pittsburgh sleep quality, mental well-being, palatable food consumption motivation scores and body mass indexes of intuitive and non-intuitive eaters

<b>intuitive eating</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>SE</b>	<b>F</b>	<b>df1</b>	<b>df2</b>	<b>p</b>
<b>Power of Food Scale Score (PFS-Tr)</b>								
Intuitive eaters	53	2.45	0.798	0.1096	7.72	1	92.8	<b>0.007</b>
Non-intuitive eaters	47	1.98	0.897	0.1308				
<b>Food Craving Questionnaire Score (FCQ-T)</b>								
Intuitive eaters	53	103.26	44.09	6,056	14.05	1	86.9	<b>&lt;0.001</b>
Non-intuitive eaters	47	141.49	56.25	8,204				
<b>Pittsburg Sleep Quality Scale Score (PSQI)</b>								
Intuitive eaters	53	6.3	2.83	0.389	1.03	1	97.9	0.313
Non-intuitive eaters	47	6.85	2.58	0.376				
<b>Warwick-Edinburgh Mental well-being Sacle Score (WEMWBS)</b>								
Intuitive eaters	53	51.15	12.79	1,757	11.74	1	82.6	<b>&lt;0.001</b>
Non-intuitive eaters	47	40.43	17.76	2.59				
<b>Body Mass Index (BMI)</b>								
Intuitive eaters	53	21.81	3.62	0.498	5.29	1	80.3	<b>0.024</b>
Non-intuitive eaters	47	23.91	5.26	0.767				
<b>Palatable Eating Motivational Sacle Score (PEMS)</b>								
Intuitive eaters	53	1.53	0.749	0.1029	0.24	1	97.2	0.622
Non-intuitive eaters	47	1.6	0.614	0.0895				

† Independent samples T test. p<0.05.

res; food craving scale scores and body mass index values were found to be lower.

Table 5 presents the results of the multivariate linear regression analysis to evaluate the effects of participants' motivation to consume palatable food, hedonic hunger, cravings for food, sleep quality, mental well-being and body mass indexes on intuitive eating. As a result of the analysis, it was determined that there was a significant regression model,  $F(6,93)=7,644$ ,  $p<0,01$ ). Accordingly, 28.7% of the variance of the intuitive eating score ( $R^2_{\text{adjusted}}=0.287$ ) was found to be explained by hedonic hunger, food cravings and BMI. Hedonic hunger ( $\beta=0.296$ ,  $t(93)=2.870$ ,  $p<0.01$ ,  $pr2=0.330$ ) significantly affects intuitive eating; on the other hand, the desire to food cravings ( $\beta=-0.330$ ,  $t(93)=-3.025$ ,  $p<0.01$ ,  $pr2=-0.098$ ) and body mass index ( $\beta=-0.237$ ,  $t(93)=-2.713$ ,  $p<0.01$ ,  $pr2=-0.828$ ) affects intuitive eating negatively and significantly.

the students felt anxious (Table 1). This study is in agreement with other work. Abdulla et al.<sup>24</sup> found in their study that 29.4% of university students did not engage in physical activity. In this study, it was observed that 36% of the students did not engage in physical activity (Table 1). It was observed that university students should be directed to increase physical activity.

It was determined that the majority of university students had the habit of irregular eating and skipping meals<sup>25</sup>. In this study, the rate of university students who skipped meals was found to be 90.0% (Table 2). Based on this result, it is thought that university students are likely to experience health problems caused by inadequate nutrient intake in the future.

Weight gain and obesity is a health problem that also affects university students<sup>26</sup>. In this study, it was determined that 32.0% of the students wanted to be thinner. (Table 2).

**Table 5.** The results of the multivariate linear regression analysis to evaluate the effects of participants' motivation to consume palatable food, hedonic hunger, cravings for food, sleep quality, mental well-being and body mass indexes on intuitive eating

	Unstandardized		Standardized		R <sup>2</sup> adjusted	P
	B	Std. error	$\beta$	t		
Constant (Intuitive eating score) (IES-2)	89,804	9.81		9,153	0.287	0,000
Palatable Eating Motivational Sacle Score (PEMS)	0.017	0.117	0.015	2.87		0.885
Power of Food Scale Socre (PFS-Tr)	0.330	0.115	0.296	2.87		<b>0.005</b>
Food Craving Questionnaire Score (FCQ-T)	-0.098	0.032	-0.33	-3,025		<b>0.003</b>
Pittsburg Sleep Quality Scale Score (PSQI)	-0.549	0.522	-0.094	-1,051		0.296
Warwick-Edinburgh Mental well-being Sacle Score (WEMWBS)	0.110	0.114	0.112	0.965		0.337
Body Mass Index (BMI)	-0.828	0.305	-0.237	-2,713		<b>0.008</b>

† Linear Regression.  $p<0,05$ .

## DISCUSSION

In this study, the relationship between intuitive eating, hedonic hunger, sleep quality and body mass index of university students was investigated.

Sleep disorders are common among university students<sup>22</sup>. In this study, it was determined that 68.0% of the students had irregular sleeping hours (Table 1). Sleep disorders can adversely affect the health of university students.

Studies have shown that young adults are vulnerable to mental stress. In addition, various conditions that can disrupt daily and academic life have been associated with the deterioration of students' mental health and increased feelings of unhappiness<sup>23</sup>. In this study, it was determined that 21.0% of

Accordingly, a difference was found between the proportions of individuals who want to lose weight and those who need to lose weight. It was observed that some of the participants wanted to lose weight even though they did not need to lose weight. This suggests that some students may be at risk of developing an eating disorder.

Hedonic hunger occurs by suppressing various emotional states or as a reaction to emotional states, and may lead to the behavior of enjoying delicious food and overeating out of necessity. While the hunger that occurs when the need for energy develops causes the tendency to eat in the individuals, the desire to consume the foods that the individual enjoys develops without energy deprivation. Hedonic hunger can activate the desire for intense consumption of foods with

high fat and energy content, which are defined as delicious foods<sup>27</sup>. In this study, a positive correlation ( $r=0.424$ ,  $p<0.01$ ) was found between these two variables (Table 3). This study supports the previous study.

Poor sleep quality in university students increased the tendency to consume delicious foods. In a study conducted by Aık et al.<sup>6</sup>, a positive correlation was found between Pittsburgh sleep quality score and palatable food consumption motivation scale score. In a study by Abdulla et al.<sup>26</sup> it was concluded that deterioration in sleep quality supports the tendency to consume palatable food. In this study, it was observed that there was a positive relationship between the deterioration in sleep quality and the tendency to consume palatable food (Table 3) ( $r=0.237$ ,  $p<0.05$ ). This study shows parallelism with previous studies.

Karakaş and Saka<sup>28</sup> found a negative relationship between intuitive eating and hedonic hunger. In this study, a positive relationship was found between intuitive eating and hedonic hunger (Table 3) ( $r=0.332$ ,  $p<0.05$ ). In this study, it was found that the mean score of the food power scale was higher in individuals with intuitive eating ( $2.45\pm0.79$ ) than in individuals without intuitive eating ( $1.98\pm0.89$ ) (Table 4) ( $p<0.01$ ). These two studies contradict each other. There are not many studies on the relationship between intuitive eating and hedonic hunger and more comprehensive studies are needed.

In a study conducted by Karakaş and Saka<sup>28</sup>, it was determined that there is a negative relationship between intuitive eating and excessive food cravings. In this study, a negative relationship was observed between intuitive eating and excessive food cravings (Table 3) ( $r=-0.413$ ,  $p<0.05$ ). In addition, it was also found that individuals with intuitive eating had lower mean scores on the food craving questionnaire score ( $103.26\pm44.09$ ) compared to individuals who did not eat intuitively ( $141.49\pm56.25$ ) (Table 4) ( $p<0.01$ ). The result found in this study is consistent with the previous study.

It is stated that there is a positive relationship between mental well-being and intuitive eating<sup>29</sup>. In this study, a positive correlation was found between mental well-being and intuitive eating (Table 3) ( $r=0.375$ ,  $p<0.05$ ). In addition, it was determined that the mental well-being scale mean scores of individuals with intuitive eating ( $51.15\pm12.79$ ) were higher than individuals without intuitive eating ( $40.43\pm17.76$ ) (Table 4) ( $p<0.01$ ). This study supports the results of previous research.

It has been determined that there is a negative relationship between intuitive eating and BMI<sup>30</sup>. In this study, an inverse relationship was found between intuitive eating and BMI (Table 3) ( $r=-0.202$ ,  $p<0.05$ ). It was determined that the mean BMI of individuals with intuitive eaters ( $21.81\pm3.62$ ) was lower than individuals who did not eat intuitively ( $23.91\pm5.26$ ) (Table 4) ( $p<0.05$ ). Intuitive eating behavior has once again been found to support weight control. It is important to encourage intuitive eating to ensure weight control.

In this study, 28.7% ( $R^2_{\text{adjusted}}=0.287$ ) of the variance of intuitive eating was explained by palatable food motivation, hedonic hunger, cravings, sleep quality, mental well-being, and BMI. Here, the most effective variables were determined to be hedonic hunger, excessive food cravings and BMI (Table 5).

## CONCLUSION

The aim of this study was to evaluate the relationship between intuitive eating, hedonic hunger states, sleep quality and body mass index of university students. It was observed that obesity is not very common among university students and mean BMI values are within normal limits. It was observed that the majority of the students had a low tendency to consume palatable food, had an intuitive diet and did not have hedonic hunger. This situation also coincides with BMI values. Intuitive eating has a positive aspect with hedonic hunger and mental well-being; It was found that there is a negative correlation with excessive food cravings and BMI. Poor sleep quality supports the motivation for palatable eating. In the light of all these findings, it can be said that mental state, sleep quality and eating behaviors of university students may be related. It is important to improve mental state and sleep quality in order to prevent hedonic hunger and prevent obesity in university students.

## STUDY LIMITATIONS

The limitations of this study are that it was conducted online and not many participants could be reached. If the number of samples in the study increased, the relationships between variables could be seen more clearly.

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