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The Effect of University Students' Body Image and Eating Behaviors on Food Choices

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ABSTRACT

Body image perception and eating behavior disorders are influenced by genetic and environmental factors. Social pressures and abnormal body image trigger negative food choices. It is known that these problems are especially prevalent in adolescents and young adults. The aim of this study was to determine the presence of eating behavior disorders and body image perceptions among university students aged 18-24 years. In the study, the factors that university students with eating behavior disorders and abnormal body image perception pay attention to in their food choices were examined. Within the scope of the study, 7 hypotheses were established and Food Choice Questionnaire (FCQ), Body Image Questionnaire (BSQ) and Eating Attitude Test (EAT-26) scales were used to evaluate the hypotheses. After excluding participants who did not meet the age criteria and who gave incomplete or inconsistent answers to the survey questions, the questionnaires of 134 individuals were evaluated. Partial Least Squares Structural Equation Model (PLS) and Smart PLS 3 package program were used for reliability and validity analyses of the questionnaires and tests of the hypotheses. Significant results were obtained for 4 of the hypotheses (p<0.05). It was determined that the gender of university students had the highest effect on body image perception. It was also determined that body image perception and gender had an effect on eating behavior. Eating behaviors were also found to have an effect on food choice. Early detection of eating behaviors and body image disorders of university students is important for taking necessary precautions against future disorders and for health and academic success.

Introduction

Nutrition is defined by the World Health Organization (WHO) as "the intake of nutrients for the body's needs". A balanced and healthy diet varies according to sociocultural and personal characteristics (gender, age, degree of physical activity, etc.), accessible foods and diets (WHO, 2015). The increase in processed foods with industrialized social life and the change in lifestyles have led to difficulties in dietary patterns. Individuals living in developed countries generally have easy access to the foods they want anytime and anywhere. It is estimated that adults make food choices approximately 220 times daily (Wansink, 2006). Food choice is a dynamic, situation-dependent, multifactorial and complex set of decisions (Cabral et al., 2017).

The food selection process is not a simple process but involves many sensory and non-sensory factors that interact with each other. The price, accessibility, sensory character and healthfulness of food are the main factors that influence food choice. There is a complex relationship between the sensory nature of food and consumers' food choices, which may vary according to the person making the choice (Honkanen and Frewer, 2009). Food odor,

appearance and texture are sensory factors, while environmental, individual, sociological, psychological, economic and sociodemographic characteristics are non-sensory factors. Examples of non-sensory factors are the knowledge level, specific preferences, health status and cultural life of the person making the choice. Understanding the factors affecting food choice at the societal level is important for public health (Dikmen et al., 2016). People's food preferences affect their own bodies and also affect food production systems. The importance of global marketing and consumer-oriented product development has increased in recent years. Understanding the reasons for people's food choice behaviors can be useful both in the creation of media content and in the organization of health promotion campaigns (Milosevic et al., 2012).

Understanding the factors affecting the food choices of university students is very important in terms of studies on healthy nutrition of university students and the awareness they will gain. This study compiles the information on food choice, body image perception and eating disorders in the literature and compares our findings with university students. We aimed to identify eating behavior disorders and/or body image perceptions among university students and to determine the factors that university students with eating behavior disorders and/or abnormal body image perceptions pay attention to in their food choices. Hypotheses were formulated to guide this investigation. Hypotheses were formulated to guide this study. The findings from this study may enable health professionals, university students and their parents to better address the risks that influence food choices and the potential health risks that may arise from food choices.

In this study, the effects of body image and eating behaviors on food choices of university students were examined through Partial Least Squares Structural Equation Model (PLS-SEM). Factors affecting food choices were examined under 2 headings: body image and eating behavior.

Body Image

Body image is a multifaceted concept that includes thoughts and behaviors related to one's appearance. Body image perception (body dissatisfaction) is an internal evaluation of one's body, including concerns about one's perception of one's appearance, body control and avoidance behaviors (e.g., choosing clothes that hide body shape) (Chin et al., 2009).

Positive body image perception (body and functioning appreciation) is the respect and appreciation for one's own body with a sense of acceptance, beauty and confidence (Halliwell, 2015). Negative body image perception is defined as a negative evaluation of one's body and includes body shape and body weight status. This leads to maladaptive eating behaviors (Verstuyf et al., 2012). Examples of maladaptive eating behaviors include unrealistic desire to be thin, restricted eating, binge eating, purging and overtraining. Body image disturbance is also associated with poor quality of life and mental health problems and is defined as a public health crisis due to its increasing prevalence and negative effects (Dorfman, 2019).

Many factors affect body dissatisfaction. The most important of these factors is the media. Studies show that there is a positive relationship between social media use and eating disorders and body image perception. For example, appearance-related social media use has a stronger association with negative body image than general social media use (Mingoia et al., 2017). In general, it is stated that negative body image perception is more common in women and adolescents. In a study conducted by Amaral and Ferreira (2017) in adolescents, it was found that negative body image perception was 42.9% in girls and 10.7% in boys. According to the objectification theory, body shame and negative body image perception emerge in women who do not meet unrealistic standards by increasing the focus on the characteristics of certain body parts of social norms with the influence of mass media (Tiggemann, 2011). In addition, it is stated that parents' negative comments and pressures about the child's eating habits and body weight negatively affect the child's body image and eating behaviors. On the contrary, when parents provide emotional support and approval to their children, this may increase positive body image and healthier eating behaviors (Gillison et al., 2016).

Eating Behavior

Eating behavior disorder is defined as problematic eating behaviors and consists of concerns about body weight, body size or shape (Voelker et al., 2014). Eating disorders encompass a variety of psychiatric disorders such as anorexia nervosa, bulimia nervosa, binge eating disorder, and unspecified eating disorders. The American Psychiatric Association has defined these disorders according to the "Diagnostic and Statistical Manual of Mental Disorders-5" (DSM-5) criteria. The diagnostic criteria for Anorexia Nervosa include having a body weight well below normal for age and height, having an excessive fear of increasing body weight, and having a distorted perception of body weight or shape. Blumia Nervosa is characterized by recurrent and uncontrollable episodes of binge eating and compensating for these episodes with compensatory behaviors (e.g. vomiting, excessive exercise or use of laxatives). This leads to intense anxiety and a distorted perception of body weight and shape. Binge eating disorder involves uncontrollably consuming excessive amounts of food over a period of time, feeling guilt, shame or discomfort following these episodes, and experiencing such behavior on a regular basis. This impairs personal functioning and can lead to intense anxiety about body weight or shape. Unspecified eating disorders include conditions that do not fully meet the specific diagnostic criteria for eating disorders but lead to severe discomfort and impaired functioning (APA, 2013).

Eating disorders are caused by factors such as body image dissatisfaction, concerns about body weight, low self-esteem and the desire to be perfect. As a result of these concerns that start in early childhood, restrictive

eating behavior may occur in individuals. The prevalence of eating behavior disorders is increasing day by day. It is reported that 100,000 people are diagnosed with eating behavior disorders every year (Smink et al., 2012). Eating behavior disorders occur as a result of the combination of many genetic, environmental and personal factors. Şanlıer et al. (2008) found that the prevalence of eating behavior disorder among university students in Turkiye was 22.8%.

The first appearance of eating behavior disorders in individuals is often between the ages of 14-25. The reason why eating behavior disorders are more common in this age range may be related to trying to cope with multiple stress factors such as social environments, moving away from family, transition to adulthood, and academic expectations. In the general population, it has been found that the likelihood of anorexia neurosis or bulimia neurosis in women is three times higher than in men, and the frequency of eating behavior disorders is related to women's body weight (Şanlier et al., 2008).

In individuals with eating disorders, behaviors such as overweight and disfigured body image, limited nutrition, self-induced vomiting, laxative use and excessive exercise may be observed. Social pressures to be thin and negative body image perceptions encourage individuals to diet incorrectly. Improper dieting practices increase the likelihood of an eating behavior disorder. Short-term, low-calorie shock diets under very severe conditions may result in breaking the rules and overeating (Wilson, 2010).

Parents play a key role in helping their children develop healthy eating habits. When children reach young adulthood, especially when they start to live away from home, the influence of parents on eating behaviors decreases. It is reported that unhealthy eating behaviors and negative body image perception are more common among university students. There may be significant changes in the lifestyles of university students who do not live with their families. Therefore, it is known that eating behavior disorders increase among university students (Eisenberg et al., 2011).

The literature was reviewed by evaluating the behaviors affecting and being affected by food choice, sample, scale/scales used, methods and package programs. Many national and international studies on food choices of individuals were examined, and when Table 1, which was created as a result of the literature review, was examined, it was seen that food choices were evaluated in many aspects such as self-confidence, body image, social media, family pressure, disordered eating, emotional eating, body mass index, and demographic characteristics. In addition, it was determined that most of the studies were conducted on adolescents and young adults. It was seen that the most preferred package program in the studies was SPSS.

Material and Methods

Sampling and Data Collection

Data were collected through face-to-face and online surveys. The sample of the study was selected from the students of a foundation university in Istanbul. Simple random sampling method was used in the study. In this method, each individual in the population has an equal probability of being selected. The study is a cross-sectional study and data were collected through a questionnaire. The sample size was determined as a minimum of 89 at 95% power, 0.15 effect size and p=0.05 significance level according to the multiple linear regression model in G*Power 3.1 program. The effect size was determined as small (0.15) in line with the reviewed literature (Cohen, 1988). In the study, the questionnaire form was completed by the participants. The exclusion criteria were determined as being outside the age range of 18-24 years, giving incomplete or inconsistent answers to the survey questions; the inclusion criteria were determined as being between the ages of 18-24 years and being a student at the university. As a result of the evaluation, 134 participants were included in the study by excluding those who did not meet these criteria. This number of participants whose data were evaluated in the study is sufficient both in terms of meeting the minimum sample level obtained as a result of power analysis and in terms of the PLS-SEM used in data analysis to provide reliable results in small sample sizes (Henseler et al., 2009). The fact that the factor loadings given in Table 3 are above 0.6 supports this reliability (Nunnally & Bernstein, 1994).

The questionnaire consists of 4 parts. In the first part, there are questions about the demographic characteristics of the students including age, gender, grade level and the department they are studying. The second part includes 36 questions from the Food Choice Questionnaire (FCQ), the third part includes 34 questions from the Body Image Questionnaire (BSQ) and the fourth part includes 26 questions from the Eating Attitude Test (EAT-26). In addition, the relationship between body image and eating behaviors was examined, and hypotheses were formulated regarding the effect of the student's gender and grade level in the university, as it is an important factor in many behaviors related to food choice.

The reliability and validity of the data were analyzed with SMART PLS 3 package program. Factor loadings, Cronbach's Alpha, Composite Reliability and Rho_A values were examined to test the model reliability. $R2$ value was examined to test the explanatory power of the model. For validity analysis, Construct and Discriminant values were examined. Convergent and discriminant validity were tested with AVE and HTMT values. Then, the results of the hypothesis tests were reached by looking at the t and p values of the sub-samples with bootstrapping to make sense of the PLS-SEM path coefficients. As a result of the analysis, the relationships between body image, eating behaviors and food choices of university students were determined.

Food choice questionnaire (FCQ)

The Food Choice Questionnaire (FCQ) was developed by Steptoe et al. (1995) to determine food choice motivations in the UK. In a study investigating the applicability of this questionnaire in different populations,

it was found to have moderate to good reliability. The questionnaire has been translated into many languages and has been used in many countries and studies have been conducted on the factors affecting food choice. (2016) investigated the validity and reliability of the FCQ in Turkiye and found that it was applicable to the Turkish population.

Body shape questionnaire (BSQ)

The Body Shape Questionnaire (BSQ) developed by Cooper et al. (1987) is used to determine the concerns about body image of people with or without eating behavior disorder (Cooper et al., 1987). As a result of the validity and reliability assessment conducted by Akdemir et al. (2012), it was determined that the BSQ is an applicable measurement tool for Turkish population in determining body image perceptions.

Eating attitude test (EAT-26)

It is the short form of the Eating Attitude Test-40 developed in 1979 to identify anorexia nervosa and later revised by Garner, Olmstad, Bohr and Garfinkel (1982). It is a measurement tool used to identify people who are prone to eating behavior disorder. The scale was adapted into Turkish by Okumuş and Berk (2020) and it was found to be an applicable measurement tool for the Turkish population.

Data Analysis

The reliability and validity analyses of the responses of the questionnaires used in the study and the tests of the hypotheses were carried out using the Partial Least Squares Structural Equation Model (PLS-SEM) and Smart PLS 3 package program, a second generation statistical software. PLS-SEM is a statistical analysis method used in modeling complex relationships between variables. Compared to other methods, it has a more flexible and adaptable modeling technique (Schneeweiss, 1991). PLS-SEM is an important method in terms of requiring normality assumption, providing reliable results in small sample sizes and performing successful measurements in complex model estimations (Henseler et al., 2009). PLS, which is one of the most popular methods for data analysis today, is a variance-based structural equation modeling technique. The PLS-SEM model consists of two stages. These are the evaluation of the measurement model and the evaluation of the structural model. In the first stage, reliability and validity analyses of the theoretical model are performed. In addition to this, in the second stage, the structural model is evaluated, that is, path analysis is performed in which the hypotheses are tested. PLS-SEM was chosen as the most appropriate analysis method for this study because it can evaluate the research model holistically, thus reducing measurement errors, reliably explaining the relationships between variables, and most importantly, providing accurate results for small sample sizes.

Hypotheses Tested

The research hypotheses regarding the effect of body image and eating behaviors of university students on food choices are as follows.

H1: Body image perceptions of university students have an effect on food choices.

H2: University students' eating behaviors have an effect on food choices.

H3: Body image perceptions of university students have an effect on their eating behaviors.

H4: Gender of university students has an effect on food choices.

H5: Gender of university students has an effect on their body image perceptions.

H6: Gender of university students has an effect on their eating behaviors.

H7: Grades of university students have an effect on their food choices.

Limitations of the Study

The study was planned to be conducted by face-to-face survey method, but due to the factors of transportation to the sample and survey administration time, most of the questionnaires were filled out via Google form. For this reason, there is no information on how and in which environment they filled out the questionnaire forms.

Since the study was conducted with the students of a foundation university in Istanbul, the number of samples reached is one of the limitations of this study. The fact that this study cannot be conducted in different regions, universities, populations and larger sample sizes is among the limitations of the study.

Results and Discussion

Demographic findings of the research sample are given in Table 2.

Evaluation of the Measurement Model

Before proceeding to test the hypotheses examined in the study, validity and reliability analyses of the measurement model were conducted. The measurement model was formed with 96 factors and 5 variables, including a total of 94 survey questions and 2 demographic characteristics. Analyses were conducted with Smart PLS package program. The results of the analysis are given in Table 3. Although it is stated that factor loadings should be greater than 0.70, it has been determined that this value should be above 0.60 (Chin, 2010; Hair et al. 2016). When the factor loadings of the model established in this study are examined, it is seen that all statements have values above 0.60. Sample factor loadings for the questionnaire items are given in Table 3. Although Cronbach's Alpha (Internal Consistency Reliability) is frequently used in the literature in terms of reliability, Composite Reliability and Rho_A values are also frequently used in PLS-SEM. For research reliability, the Composite Reliability value should be above 0.80 and other values should be above 0.60 (Nunnally & Bernstein, 1994). When we examine the values obtained in the model established in this study, it is seen that the minimum Composite Reliability value is 0.838, the

minimum Cronbach Alpha value is 0.879 and the minimum Rho A value is 0.846. These results show that the study has a medium level of reliability. R2 value, which is another indicator examined in the established structural model, is used to analyze the explanatory power and stability of the model. If the R2 value is greater than 0.75, the model has strong predictive ability, if it is between 0.50-0.75, it has moderate predictive ability, and if it is between 0.25-0.50, it has weak predictive ability. When we look at the R2 values of the model established in this study, it is seen that the values are in the range of 0.611-0.741. It is possible to say that the prediction/explanation ability of the model is at a medium level.

The validity of the study was examined under two headings: construct validity and discriminant validity. AVE (Avarage Variance Extracted) value should be minimum 0.50 to test the convergent validity (Fornell & Larcker, 1981). When the results obtained from the study are analyzed, it is seen that the minimum AVE value is 0.681. In order to test the discriminant validity, HTMT (Heterotrait-Monotrait Ratio) and Fornell-Larcker values were examined. The HTMT value is the ratio of the mean correlations of the statements of all variables to the geometric mean correlations of the statements of the same variable. These values are required to be below 1.0. Table 4 shows the HTMT values of the variables in the study model. Since all values are below 1.0, the validity values of the model are appropriate.

According to Fornell and Larcker (1981), the square root of the AVE values of the model should be greater than the correlations between all constructs in the study. The values shown in bold in Table 4 are the square roots of the AVE values of the model. Since all of these values are higher than the correlation coefficients, the validity values of the model established in the study are sufficient.

Data Analysis

Table 5 presents the path coefficient, sample mean, standard deviation, t-test and p-test values of the tested hypotheses. In order to assess the significance of the PLS-SEM path coefficients, 1000 sub-samples were taken from the existing sample by resampling (bootstrapping). The t and p values of the sub-samples were calculated. In the study, the threshold t test value was determined as 1.96 for 95% significance level (p ≤0.05) (Chin, 2010).

According to the values given in Table 5, it is seen that hypotheses H2, H3, H5, H6 are accepted. When the accepted hypotheses are ranked according to their degree of importance, it is seen that hypothesis H5, that is, the effect of gender of university students on their body image perceptions, has the highest effect. This hypothesis is followed by H3, H6 and H2 hypotheses respectively.

This study is important as it is the first known study to investigate the effect of body image and eating behaviors of university students on food choices and to use PLS-SEM in this regard and it is thought to contribute to the literature.

Evaluation of the Structural Model

It is important for health and success to identify eating behavior and body image disorders of university students

in advance and to take necessary measures. Determining the problems in advance makes it easier to take measures against future disorders.

Of the 7 hypotheses tested in the study, 4 were accepted and 3 were rejected. The results of the hypotheses are summarized as follows:

H1: The hypothesis that body image perceptions of university students have an effect on food choices is rejected. As seen in hypothesis H3, individuals who experience body dissatisfaction may develop different eating behaviors as a reaction to this dissatisfaction. And as we will see in hypothesis H2, these different eating behaviors affect individuals' food choices. However, according to the result of hypothesis H1, there is no effect. It is thought that this result is due to the narrowness of the sample.

H2: The hypothesis that university students' eating behaviors have an effect on their food choices is accepted. Tuğal and Bilgiç (2019) stated that individuals with disordered eating behavior pay more attention to food choices than individuals without eating behavior disorder. This result obtained from university students also supported the literature. In our study, it was concluded that there is a positive relationship between eating behavior and food choice.

H3: The hypothesis that body image perceptions of university students have an effect on eating behaviors was accepted. Individuals who experience body dissatisfaction may develop different eating behaviors as a reaction to this dissatisfaction. Birkenhead and Slater (2015) stated in their study that individuals' personal characteristics or how they see their own bodies are an important factor in their food choices. The negative relationship between body image satisfaction and disordered eating behavior in this study confirms the literature.

H4: The hypothesis that gender of university students has an effect on food choices is rejected. Of the students analyzed, 59.7% were female and 40.3% were male. Pelly et al. (2018) found that there is a difference in the food choices of men and women. In this study, no significant effect of gender on food choices was found. While a direct effect of gender was observed in hypothesess H5 and H6, it is thought that the reason for the lack of an effect on food choice arises from the difference in sampling.

H5: The hypothesis that university students' gender has an effect on their body image perceptions is accepted. It is thought that women are under more pressure than men to have a thin body structure and this pressure may cause eating behavior disorders (Byrne & McLean, 2001). This result obtained on university students also supported the literature. In the study, it was concluded that there is a positive relationship between gender and body image perception, that is, women experience higher body image anxiety than men.

H6: The hypothesis that gender of university students has an effect on eating behaviors is accepted. Tuğal and Bilgiç (2019) stated in their study that women are more risky in terms of developing eating behavior disorder than men. The positive relationship obtained in this study also

supports the literature by showing that female students experience higher levels of disordered eating behavior than male students.

H7: The hypothesis that university students' grades have an effect on their food choices is rejected. There was no significant difference between the eating behaviors of a first-year university student and a senior university student. The fact that the age scale in the hypothesis is narrow (the sample consists of 18-24 age range) supports the accuracy of the hypothesis test result.

The PLS-SEM analysis applied in the study was used for the first time in the literature on the problem of determining the effect of body image perceptions and eating behaviors of university students on food choices, and it is expected to contribute to the literature. The most important reason for preference and the most basic feature of the method and the package program used is

that it can provide accurate results at low sample sizes. Nevertheless, the results obtained from the study should be evaluated considering the narrow sample size of the research sample. Therefore, future research on this subject should be conducted with larger sample sizes and the proposed method should be used with different scales.

Negative body image perception may be influenced by factors such as media, social pressures and low self-esteem and may lead to eating behavior disorders. Since eating behaviors and body image disorders of university students affect the food choices of these individuals, early detection is important in terms of taking necessary precautions against future disorders and health and academic success. Parents' emotional support and approval of their children may strengthen positive body image and healthy eating attitudes.

Table 1. General summary of studies

Sources	Sample	Affected people	Influencers	Scale(s)	Data Analysis Method
Tuğal D and Bilgiç P. (2019)	Athletes 16-25 years old	Food Selection	Body Image and Eating Behaviors	BSQ EAT-40 FCQ	SPSS 21.0
Houshyari S and Kalkan I. (2019)	University Students 18-26 years old	Eating Attitudes and Behaviors	Physical Activity Level	DEBQ IPAQ	SPSS 22.0
Akdevelioglu Y and Yörüsün TÖ. (2019)	University Students 18-25 years old	Eating Attitudes and Behaviors	Demographic Characteristics, Emotional Eating, Body Mass Index	YTT-26 DEBQ	SPSS 20.0
Kuseyri G and Kiziltan G. (2019)	University Students 19-23 years old	Nutrition Status	Eating Awareness and Intuitive Eating Behavior	YÖF-30 IES-2 EYBP Consumption Frequency	SPSS 25.0
Karatas YF and Müftüoğlu S. (2020)	School of Health Students 18-35 years	Eating Awareness	Demographic Characteristics, Health Status, Nutrition Knowledge	YOF-30	R 4.0.2
Çil MA et al. (2020)	University Students 18-24 years old	Diet Quality and Eating Behaviors	Anthropometric Measurements	HYDA	SPSS 22.0
Varlık Ö and Arslan M. (2023)	Generations X-Y-Z 18-65 years	Food Selection	Body Mass Index	FCQ	SPSS 26.0
Murray K et al (2023)	Adults 18-74 Years	Intuitive Eating	Gender and Body Image Perception	IES-2 EIS-18 AFES Body Appreciation Scale-2 Body Consciousness Scale BCAQ	PROCESS 4.0 SPSS 25.0
Baker S et al (2023)	Adults 17-62 years	Disordered Eating Behaviors	Body Image Anxiety Profiles	PSI-SR FNAES EAT-26 IES-2	Mplus 8.7
Giacone et al. (2024)	General Population 38-77 years	Weight and Eating Behavior	Intuitive Eating	Emotional, Extrinsic and Restricted Eating Questionnaire	SPSS 29.0

Table 2. Distribution of participants by demographic characteristics

Demographic Characteristics		Frequency	Percentage
Gender	Woman	80	59,7
	Male	54	40,3
	Total	134	100,0
Classroom	1	41	30,6
	2	31	23,1
	3	30	22,4
	4	32	23,9
	Total	134	100,0

Table 3. Measurement model results of the scales

Factor/Variable	Factor Load	T-Value	R2	Cronbach Alpha	Composite Reliability	Rho_A	AVE
Gender	1,00			1,00	1,00	1,00	1,00
Age	1,00			1,00	1,00	1,00	1,00
Food Selection			0,717	0,913	0,903	0,867	0,726
FCQ1	0,651	2,316					
...							
FCQ36	0,622	2,510					
Body Image			0,741	0,956	0,960	0,965	0,731
BSQ1	0,634	5,351					
...							
BSQ34	0,751	4,369					
Eating Behavior			0,611	0,879	0,838	0,846	0,681
EAT1	0,618	3,895					
...							
EAT26	0,624	3,142					

Table 4. HTMT and Fornell Larcker values for discriminant validity

HTMT	Body Image	Food Selection	Gender	Classroom	Eating Behavior.
Body Image					
Food Selection	0,349				
Gender	0,220	0,286			
Classroom	0,117	0,229	0.071		
Eating Behavior.	0,688	0,583	0.382	0.293	
Fornell L.	Body Image	Food Selection	Gender	Classroom	Eating Behavior.
Body Image	0,870				
Food Selection	-0,295	0,827			
Gender	0,203	-0,377	1,000		
Classroom	0,041	0,020	-0,071	1,000	
Eating Behavior	0,720	-0,381	0,331	0,032	0,757

Table 5. Analysis results of the structural model

Hypothesis	Path Coefficient	Sample Mean	Standard Deviation	T Value	P Value	Conclusion
H1	0,229	0,244	0,127	1,797	0,073	Rejected
H2	0,367	0,379	0,127	2,903	0,004	Not rejected
H3	-0,550	-0,540	0,112	4,901	0,000	Not rejected
H4	0,187	0,188	0,118	1,582	0,114	Rejected
H5	0,652	0,647	0,093	7,024	0,000	Not rejected
H6	0,455	0,455	0,111	4,098	0,000	Not Rejected
H7	0,023	0,038	0,174	0,134	0,894	Rejected

Declarations

Ethics Statement
It was discussed at the meeting of the Istanbul Esenyurt University Ethics Committee dated 02.05.2024 and numbered 2024-04, and it was unanimously decided that it was ethically appropriate.

Informed Consent
Within the scope of my scientific study, informed consent forms were given to the participants via an online form and the participants who accepted the consent answered the survey questions.

Author Contributions
Author is identified in the contribution form. H.S.Ç. conceptualized the study, A.T. wrote the original draft, H.S.Ç. performed the statistical analysis, and B.Ç.S. supervised the research and provided critical revisions. M.A. developed the methodology and ensured compliance with ethical standards, and H.S.Ç. conducted the experiments and collected the data. H.S.Ç. curated the dataset and created the visualizations. A.T. reviewed and edited the manuscript for intellectual content and clarity.

Data Availability
The data used to support the findings of this study can be made available upon request to the corresponding author.

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