

Determination of difference between freshman and senior-level of psychology students in terms of the eating attitudes and psychological symptoms

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Summary. *Aim:* Eating disorder (ED) is a deviation in eating habits that are based on insufficient or overeating and mental influences, causing serious problems such as anxiety. In recent years, some physical appearances have become more prominent in social settings such as TV and social media. The purpose of this study was to investigate the impacts of appearance with body dissatisfaction, perfectionism levels, and psychological symptoms of the university students on the eating attitude enrolled at the department of psychology. Particularly, it focused on whether any changes in the attitudes towards eating habits could change after psychology education in college. *Method:* Data was collected from the psychology students at their freshman in 2015 and senior years in 2019 by utilizing a longitudinal study methodology. Data collection tools contained Positive and Negative Perfectionism Scale (PNPS), Social Appearance Anxiety Scale (SAAS), Brief Symptom Inventory (BSI), and the Eating Attitudes Test (EAT). *Study Group:* A total of 53 college students were included in the study. Most of them (N=40, 75.6%) were female and few (N=13, 24.5%) were male. The average ages of the students were found 20.6(2015 sd parameter 1.8, 2019 sd parameter 1.7) years old during the data collection process. *Results and Discussion:* The findings showed that male students achieved lower scores than females in terms of eating habits (EAT) and psychological symptoms (BSI), and higher on appearance anxiety levels (SAAS) based on the results of the pretest and posttest sessions.

Key words: eating behaviors, appearance anxiety, perfectionism.

Introduction

Eating disorder (ED) is one of the most common problems among teenagers and commonly considered to be affected by their attitudes towards social and physical appearances, and perfectionism (especially physically) as well as having any forms of psychological symptoms (1-3).

Several studies have been conducted regarding eating habits and disorder cases at different age stages and groups concerning other significant factors such as perfectionism, body image dissatisfaction, gender issues, eating behavior, personality, and parental bonding (1-9).

In a related study, Eisenberg (10) investigated the prevalence, correlation, persistence, and treatment-related issues of the eating disorder among a group of college students, randomly selected. The researchers collected data from students through an internet survey at a large university in 2005 and 2007. The SCOFF(Sick, Control, one stone, Fat, Food) questionnaire was utilized to measure ED symptoms of the participants. The SCOFF basically describes five essential questions for ED 'Sick, Control, one stone, Fat, Food'. A total of 2822 students, 56% of the group asked to participate, completed initial survey questions at baseline. The students were required to be at least 18 years old. The prevalence of positive ED screens was

found 13.5% women and 3.6% for men. Some of the students with positive screens (20%) stated that they had previously received mental health treatment. In 2007, out of the initial group, 753 students participated in the follow-up survey. The results at baseline initial group were used to predict symptoms 2 years later. The findings of the study showed prevalent and persistent ED symptoms for the participants. The study also suggested that a brief screen such as SCOFF can identify students with ED symptoms.

In another study, ethnic differences in eating disorder symptoms among college students were explored (11). They studied the importance of body mass index (BMI). A reliable method was utilized to collect data from Hispanic, Asian, and white college women from two different groups. Controlling their BMI levels, the effects of ethnic differences in eating disorder and concern about weight and shape were analyzed. The results revealed that no statistical differences existed among the participants. A total of 407 freshmen students (sample 1) and 123 college students (sample 2) at a large university were selected for the participants. In the first sample, Hispanic students were more concerned than Asian and White students regarding weight and shape concerns. However, when BMI is controlled the differences disappeared. Besides, the participants showed that the more weight a person has, the higher levels of concerns appear. Therefore, it is important to lose weight to treat eating disorders and reduce the symptoms.

The main purpose of this study was to explore how much certain attitudes towards physical and social appearances and psychological anxieties affect eating behaviors among a group of college students. The findings would be important for the researchers to overview the correlations and regressions between those variables. Also, it is especially valuable to study the evolution of teenagers before and after psychology education at college in a longitudinal research methodology.

Materials and Methods

This study was designed as a quasi-experimental with pretest and posttest methodology. For the study

ethics committee approval received on 03/04/2019 from Nuh Naci Yazgan University. The participants initially responded to the items on the questionnaires in their freshmen years in 2015. After four years of university education in 2019, the same participants were asked to answer the same questions to identify the changes in their attitudes and behaviors about eating habits. Data was collected in their classrooms and students were promised extra points for participation in the study.

Participants

The participants were composed of university students enrolled in the department of psychology at a private university in Turkey. The average ages of the students were found 20.6 years old during the data collection process. 40 (76%) participants were female and 13 (24%) were males. Students are required to take psychology courses during their course of undergraduate education such as introductory psychology, social psychology, developmental psychology, health psychology, psychopathology.

In 2015, 67 students agreed to participate in the study at their freshmen year and completed data collection tools. After four years, the same students were found and asked to continue the study by filling out items in the same inventories. 60 of them participated in the second half of the study. After reviewing their responses for inconsistencies, errors, and incompleteness, responses from 53 participants for both data collection sessions were included in the study for data analysis.

Data Collection Tools

The study data was collected via four different questionnaires in addition to a sociodemographic form. Positive and Negative Perfectionism Scale (PNPS) was developed by Oguzhan Kirdok to measure the features of perfectionism in 2004 (12). It was designed with the uses of three forms of scales designed to measure depression (13), anxiety (14), and self-respect (15) inventories. It assesses both positive and negative perfectionism of individuals with 17 items on the inventory. The reliability value (Cronbach alpha) in the original study was found 0.81.

Social Appearance Anxiety Scale (SAAS) was the second data collection tool developed to measure anxiety by Spielberger in 1973 (14). The original version

of the SAAS consists of 17 items with 5-point Likert scale response options.

Brief Symptom Inventory (BSI) is an instrument designed to identify nine dimensions of physical symptoms in adolescents and adults (16). It consists of 53 items that use a 5-point Likert scale. The BSI is generally used to gather information regarding treatment procedures, patient progress, and psychological assessment. It has an average internal reliability score of 0.70.

The Eating Attitudes Test (EAT), developed by Garner and Garfinkel (17) in 1979, was another data collection tool implemented in the study. It is a 40-item inventory to determine whether a person might have an eating disorder required for professional attention. The EAT items are answered with a 6-point Likert scale from always (6) to never (0) options. The reliability (Cronbach alpha) of the EAT in the original study was found around 0.87.

Hypothesis

This study was guided by the seven hypotheses regarding how college students' eating habits, appearance anxiety, perfectionism, and psychological disturbances evolve during their college education. It was necessary to investigate these hypotheses to provide a general perspective of their eating habits.

H1: There is a significant difference between the eating attitudes of college students in their freshman and senior years.

H2: There is a positive correlation between the number of psychological symptoms and deterioration in eating attitudes among college students in the freshman and senior years.

H3: There is a positive correlation between eating attitudes and the social appearance anxiety among college students in the freshman and senior years.

H4: There is a significant difference between deterioration in eating attitudes and positive-negative perfectionism levels among college students in the freshman and senior years.

H5: The eating habit positively correlates with psychology symptoms.

H6: The eating habit positively correlates with appearance anxiety.

H7: The eating habit positively correlates with perfectionism.

Results

It is important to investigate college students' eating attitudes before and after achieving psychology education. In this study, initially, the participants' sociodemographic factors were analyzed. Sociodemographic issues included gender and ages of the students concerning four important features provided from EAT, PNSP, SAAS, and BSI inventories. Table 1 illustrates the relationship between sociodemographic factors and features related to eating attitudes.

Gender

Average scores of the data collection inventories in regard to gender differences were summarized in Table 1. According to the table 1, most of the participants (N=40, 75.6%) were female and few (N=13, 24.5%) were male students. Moreover, females showed higher levels of social appearance disturbance (SAAS) and psychological symptoms (BSI).

Following four years of psychology education, female students scored dramatically lower on the eating habits (EAT), physical symptoms (BSI) and improved on social appearance (SAAS). Both male and female participants scored approximately same levels of perfectionism (PNSP). No further elaboration wasn't discussed on this aspect since the number of female and male students were not equivalent.

Factors Affecting Eating Behaviors

In the second part of the study, we investigated how some particular factors including the attitudes towards

Table 1. The relationship between gender and EAT, PNSP, SAAS, and BSI scores of the participants

Gender	N (%)	EAT		PNSP		SAAS		BSI	
		Pre-EAT	Post-EAT	Pre-PNSP	Post-PNSP	Pre-SAAS	Post-SAAS	Pre-BSI	Post-BSI
Male	13 (24.5)	85.9	81.8	30.6	30.7	16.6	20.8	48.3	32.8
Female	40 (75.6)	85.4	57.2	28.7	27.2	20.5	23.1	71.4	39.5

perfectionism, physical symptoms, and social appearance affect the eating behaviors of the college students at different levels. Similarly, the findings were compared to test the hypothesis. Data analysis included statistical tests including regression analysis, correlational analysis, ANOVA. The results also revealed that certain important relationships between college students' eating behaviors evolve during their psychology education.

During data analysis in terms of the above study purposes, it was suggested using three data combinations. First, eating attitudes were compared between freshmen and senior year students. As shown in Table 2, freshmen and senior scores showed a low positive correlation (0.27) for eating habits. Besides, there exists a statistically significant difference between freshman and senior-level students (p -value < 0.05) for eating habits. This outcome supported hypothesis 1. These results refer to the effectiveness of psychology education towards eating habits.

Table 2 also illustrated that positive low correlation between freshmen and senior students according to PNPS (0.29), SAAS (0.24), and BSI (0.17) test scores. Moreover, there existed a statistically significant difference among them in the case of psychological symptoms (BSI). That shows that a strong and effective psychology education has an impact on students' psychological development. Secondly, Pre-EAT scores were compared with the initial scores of the PNPS, SAAS, and BSI collected in their freshman year. Later, Post-EAT scores were compared with the scores of the PNPS, SAAS, and BSI for their freshman year. Lastly, we compared Pre-EAT scores with the PNPS, SAAS, and BSI results collected in both their freshman and senior years. The results of the three comparisons are illustrated in Table 3. Table 3 presented that statistically significant differences were found for eating attitudes for freshmen students.

R-square scores (correlation coefficient) were shown between eating attitudes among freshmen students, between freshmen and seniors. Also, eating atti-

Table 2. Comparison of the freshmen and senior students' scores of EAT, PNPS, SAAS, and BSI inventories

	EAT	PNPS	SAAS	BSI
Correlation	0,27	0,29	0,24	0,17
P-value	0,0000	0,3587	0,2712	0,0001

Table 3. Regression statistics and ANOVA results and significant statistical figures

P-VALUE	Freshmen- EAT	Senior- EAT	Freshmen & Senior-ALL
R Square	0.24	0.06	0.35
Sig. F	0.003	0.39	0.002
Freshmen-PNPS	0.094	0,284	0,060
Freshmen-SAAS	1 0.916	0,577	0,733
Freshmen-BSI	0.009	0,188	0.025
Senior-PNPS			0,355
Senior-SAAS			0.013
Senior-BSI			0,704

tudes (EAT), social/physical appearance anxiety (PNPS, SAAS), perspectives of perfectionism (BIS) freshmen and seniors were also summarized.

Pre- and Post-tests (EAT, PNPS, SAAS, BIS) scores were compared with each other. P-values, r-squared, and significant F scores are illustrated in table 3. Some of the P-values were insignificant since their values were higher than the boundary (0.05) for statistical difference.

The first important result was that eating attitude of freshmen and social/physical appearance anxiety (PNPS, SAAS), perspectives of perfectionism (BIS) for both freshmen and senior students had statistically significant differences. The correlations coefficients were also found to be low positive levels, and such as result supported hypothesis 2, 3, and 4.

The scores of the eating attitude and perspectives of perfectionism for freshmen is correlated with a low positive relationship (0.24) with each other. Also, eating attitudes and perfectionism for freshmen students were found to have a statistically significant difference (p -value < 0.05). That result supported hypothesis 5.

On the other hand, the eating attitude was not correlated with social/physical appearance anxiety (PNPS, SAAS) among freshman and senior levels. Therefore Hypothesis 6 and 7 were not supported by this finding. Table 4 summarizes the findings of hypothesis testing.

Discussion

Identifying eating disorders and eating behaviors of young adults (college students) is important to de-

Table 4. Results of the hypothesis tests

		Accept	Reject
H1	There is a significant difference between the eating attitudes of college students in their freshman and senior years.	√	
H2	There is a positive correlation between the psychological symptoms and deterioration in eating attitudes among college students in the freshman and senior years.	√	
H3	There is a positive correlation between eating attitudes and the social appearance anxiety among college students in the freshman and senior years.	√	
H4	There is a significant difference between deterioration in eating attitudes and perfectionism levels among college students in the freshman and senior years.	√	
H5	Eating habit positively correlates with psychological symptoms.	√	
H6	Eating habit positively correlates with appearance anxiety.		√
H7	Eating habit positively correlates with perfectionism.		√

velop methods and approaches towards the treatment process. Also, the findings could be essential for designing courses and curriculum for college students especially psychology majors.

The findings from freshman students revealed that males scored higher on eating habits (EAT) and perfectionism (PNSP), however, lower on social appearance disturbance (SAAS) and psychological symptoms (BSI) than females. These results supported previous findings in the literature (18-21) at some certain degrees.

As found in earlier similar studies (22-23), a statistically significant difference was found between freshman and senior-level students (p -value < 0.05) in terms of the eating attitudes and psychological symptoms.

Other related important features including perfectionism and social/physical appearance for them also provide important results in terms of eating attitudes and its evolution during college education.

More detailed and extensive studies could be conducted as a qualitative research methodology to generate deeper and specific consequences. A mixed

methodology could also be a good approach to identify more detailed understandings of the situations.

Any improvement in training and eating attitudes tests could be an idea that the appropriate education for the young generation might change the deceptive perception of society created by the advertisements. For this reason, it is important that institutions such as ministries of national education, the higher education council, other education-related authorities should offer and support such courses that contain topics regarding eating attitudes and importance of balanced diet chapters are important for the physical and social development of the students.

Conclusion

This study was constructed to investigate the revolutions of university students' eating habits, perfectionism, psychological symptoms, and appearance anxiety that were affected by psychology education for four years in college. It is important to identify such patterns and tendencies among these four variables for creating treatments and providing important methodological approaches for college students. Also, it would help university decision-makers to design a more appropriate and useful curriculum for the psychology department. Finally, the results are expected to provide great inputs for future researches.

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