

## **Disordered Eating Attitudes and Negative Automatic Thoughts Negatively Affect the Self-Esteem of Turkish High School Students**

**Hatice Kumcağız**

Assistant Professor, Ondokuz Mayıs University, Faculty of Education, Department of Guidance and Psychological Counseling, Samsun, 55000, Turkey

*Received: December 18 2013*

*Accepted: January 23 2014*

---

### **ABSTRACT**

This study reports on the relationship between adolescents' eating attitudes and self-esteem, automatic thoughts and some other variables. Participants consisted of 597 students from the 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup> grades of 4 different Anatolian high schools selected randomly using the cluster sampling method. The mean age of adolescents was 16.45 years with a standard deviation of 1.14. Adolescents completed a questionnaire including the Personal Information Form, Coopersmith Self-Esteem Inventory, Automatic Thoughts Questionnaire and Eating Attitudes Test. Data was analysed using the SPSS program. In the study, there was a significant difference between girls and boys in terms of their Body Mass Index values and self-esteem scores. There was also a significant difference between the students with  $\geq 30$  EAT scores and those with  $\leq 29$  EAT scores in terms of negative automatic thoughts and self-esteem levels. Thus, it is important to conduct further studies to increase the self-esteem of adolescents, particularly those with negative automatic thoughts, and to help them adopt healthy eating habits. Increasing students' self-esteem, introducing them to healthy eating behaviours and reducing their negative thoughts within the scope of guidance services may also be helpful.

**KEYWORDS:** Adolescent, Self-Esteem, Eating Attitude, Automatic Thoughts, Turkey.

---

### **INTRODUCTION**

Adolescence is a process during which individuals experience various developmental changes. During this period, adolescents face daunting developmental tasks including establishing an identity, accepting their changing physical characteristics, learning skills for a healthy lifestyle, separating from family, developing morals and values, becoming a contributing member of society, and selecting a vocation (Anderson & Olnhausen, 1999). Among them, the physical changes occurring in their bodies are important. Because adolescents question their character, how they look, what they feel about themselves this process may affect self-esteem. Self-esteem is typically defined as a positive or negative attitude towards an object, namely the self (Rosenberg, 1965), and indicates the extent to which the individual believes himself to be capable, significant, successful, and worthy (Coopersmith, 1967). It is possible to separate people into two groups, ones who have high self-esteem and those who have low self-esteem. People with high self-esteem tend to get higher points on measures of life satisfaction (Utsey, Ponterotto, Reynolds, & Cancelli, 2000), happiness (Cheng & Furnham, 2003), hope (Heaven & Ciarrochi, 2008), effective coping styles (Ni ve diğerleri, 2012), and optimism (Makikangas, Kinnunen, & Feldt, 2004). While people with low self-esteem tend to get higher points on measures of stress, loneliness, anxiety and depression (Fathi-Ashtiani, Ejei, Khodapanahi, & Tarkhorani, 2007; Yaacob, Juhari, Talib, & Uba, 2009). As seen in previous research, high self-esteem positively influences an individual's psychological state and is related to positive life outcomes and positive adjustment, while low self-esteem has a negative impact on an individual's life and is correlated with poor adjustment. This may partly explain why an individual with low self-esteem tends to underestimate others' appreciation and overemphasize others' attitudes about their weaknesses and deficits while processing information from the outer world as part of their self-esteem (Whelan, Haywood, & Galloway, 2007).

Besides self-esteem, negative automatic thoughts may be a key factor potentially influencing people's psychological health and the way they view their lives. Automatic thoughts describe individuals' inner talks about themselves, their lives and future. They arise spontaneously in relation to an incident without any conscious effort (Türkçapar, 2007). Automatic thoughts may reveal various emotions including negative feelings (Gökçakan & Gökçakan, 2005). These negative feelings include guilt, shame, anxiety, depression, unhealthy anger, unhealthy jealousy and unhealthy envy. However, individuals do not recognize negative thoughts but rather the accompanying feelings. Additionally, the emotional effects of automatic thoughts also have an impact on an individual's behaviours (Şirin & Izgar, 2013). Meanings and interpretations attributed to phenomena that have been experienced determine

---

\*Corresponding Author: Hatice Kumcağız, Assistant Professor, Ondokuz Mayıs University, Faculty of Education, Department of Guidance and Psychological Counseling, Samsun, 55000, Turkey.

people's emotional and behavioural reactions (Hamarta, Arslan, Saygın, & Özyeşil, 2009). It is also known that negative automatic thoughts form individuals' negative perceptions about themselves, their future and the outer world, and, consequently, lead to unhealthy emotions (Çivitci, 2009; Froh ve diğerleri, 2007). Thus, automatic thoughts can also influence individuals' self-esteem levels and eating attitudes.

Health problems resulting from eating disorders are common among adolescents. Eating disorders and related attitudes and behaviours have become worldwide problems, especially among adolescents and young women (Chang, Lin, & Wong, 2011). In the related literature, there are studies on eating disorders, depression, anxiety and low self-esteem (M. Bas, Asci, Karabudak, & Kiziltan, 2004; Erol & Toprak, 2002). Studies conducted both in Turkey and abroad have reported that eating disorders are more common in adolescents (Murat Bas & Kiziltan, 2007; Kaye, 2008; Özgen, Kınacı, & Arlı, 2012; Özmen, Çetinkaya, Ergin, Şen, & Erbay, 2007; Tanrıverdi, Savaş, Gönüllüoğlu, Kurdal, & Balık, 2011). Previous studies also identified that family problems, low self-esteem, obesity and struggles with weight and food may be risk factors (Celikel, Cumurcu, Koc, Etikan, & Yucel, 2008).

Although the aforementioned previous research revealed some important demographics as well as contributing risk factors for eating disorders, little is known about the relation between eating attitudes, self-esteem and negative automatic thoughts in adolescents. To date, according to my knowledge, no study in the related literature has addressed eating attitudes, negative automatic thoughts and self-esteem at the same time. Moreover, identifying the relationship between these variables believed to affect eating attitudes may contribute to guidance and psychological counselling practices in educational institutions and guide further studies.

Thus, the present study set out to answer the following questions:

1. Is there a significant difference between the mean scores of Body Mass Index (BMI), Eating Attitudes Test (EAT), Negative Automatic Thoughts (NATs) and Self-Esteem (SE) in adolescents in terms of gender?
2. Is there a significant difference between the mean BMI, NAT and SE scores of adolescents with  $\geq 30$  EAT scores and the mean scores of those with  $\leq 29$  EAT scores?
3. Is there a significant relationship between the EAT scores, SE and NATs of adolescents?

## METHOD

### Participants

The present study was a school-based cross-sectional study implemented in Samsun. The cross-sectional study is one of the most commonly used survey-research designs which aims to describe characteristics of a population or the differences among two or more populations at a particular time (Shaughnessey, Zechmeister, & Zechmeister, 2012). Samsun is a highly populated district. It is located in the central Black Sea region of Turkey and approximately 414 kilometres from Ankara, the capital city of Turkey. According to the records of the Samsun Provincial Directorate for National Education, there were 14 Anatolian high schools and a total of 9000 high school students in İlkadım, a town in Samsun, in the second semester of the 2012-2013 educational and training year. These students were considered the target population of the study. Sample size was calculated using Krejcie and Morgan (1970) sample size formula.

Using this formula, the recommended sample size for a population of 9000, a confidence level of 95% and a degree of accuracy of 5% was 368. It should be noted that a 95% confidence interval and 5% degree of accuracy is most commonly used in social sciences research. The sample group was composed of students randomly selected from one of the 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup> grades of 4 different Anatolian high schools (two private, two state) in İlkadım, which were determined using the cluster sampling method. The sample consisted of 597 students. Of these students 322 were female, 275 were male. The mean age of adolescents was 16.45 with a standard deviation of 1.14. Students were diverse in terms of socioeconomic status. The response rate was approximately 96%.

### Measures

*Demographic Information Form:* The Demographic Information Form contains information about students' sociodemographic characteristics including gender, age, grade level, perceived income level, perceived academic success and self-reported weight and height. Self-reported weight and height were used to calculate Body Mass Index (BMI). BMI is calculated using the formula:  $BMI = \text{weight (kg)} / \text{height square (m}^2\text{)}$ . According to the BMI classification,  $19.99 \text{ kg/m}^2$  and under is considered "underweight,"  $20-24.99 \text{ kg/m}^2$  is "normal,"  $25-29.99 \text{ kg/m}^2$  is "overweight" and  $30.0 \text{ kg/m}^2$  and over is "obese" (Şimşek, Koruk, & Altındağ, 2007). Previous studies revealed that self-reported weight and height are reliable for assessing obesity related morbidities and behaviours in adolescents (Strauss, 1999).

*Eating Attitudes Test (EAT):* The Eating Attitudes Test, which was originally developed by Garner and Garfinkel (1979) as an index of the symptoms of anorexia nervosa, was translated and validated into Turkish

by Savaşır & Erol (1989). The EAT consisting of 40 items is a six point Likert type scale and its cut-off score is 30. The 1<sup>st</sup>, 18<sup>th</sup>, 19<sup>th</sup>, 23<sup>rd</sup>, 27<sup>th</sup> and 39<sup>th</sup> items can be evaluated as “sometimes,” “rarely” and “never” accounting for 1 point, 2 points and 3 points, respectively. Other choices are evaluated as 0 points. For the other items of the scale, “always” accounts for 3 points and “usually” for 1 point, while other choices are calculated as 0 points. The total score is calculated by adding up all points obtained from each question (I. Savaşır & Erol, 1989).

*Coopersmith Self-Esteem Inventory (CSEI)*: This inventory was developed by Stanley Coopersmith in 1967 (Coopersmith, 1967). It is a measure used to evaluate one's attitudes towards oneself within multiple contexts. The adaptation of the inventory into Turkish and the validity and reliability study was carried out by Turan and Tufan (1987) administering the inventory to groups of individuals  $\geq 17$  years of age. In the reliability test conducted by Turan and Tufan (1987), the inventory was administered to 56 people at 15-day intervals, and the correlation was found to be  $r = 0.76$  ( $p < 0.05$ ). In the validity test, Coopersmith's Self-Esteem Inventory and Rosenberg's Self-Esteem Scale were administered to a group of 200 people, and the correlation was found to be  $r = 0.62$  ( $p < 0.05$ ). Coopersmith's Self-Esteem Inventory consists of items which can be answered as either “like me” or “unlike me.” These items address a person's view of life, family relationships, social relationships and strengths. The scores derived from the inventory are multiplied by 4 and possible scores range from 0–100. High scores indicate high self-esteem. This scale has two different versions: one is for children and the other is for adults. The adult version also has two different subscales, one of which is a short 25-item form and the other is a longer form with 58 items (Yenidünya, 2005). The present study used the short 25-item form. Previous studies used both the Eating Attitude Test and Coopersmith Self-Esteem Inventory in different samples in Turkey since their item content is easy to understand.

*Automatic Thoughts Questionnaire (ATQ)*: It is a 30-item Likert-type self-report measure which was developed by Hollon and Kendall (1980) to measure depressogenic thought frequency. The adaptation of the questionnaire into Turkish was carried out twice by Aydın and Aydın (1990) and by Şahin and Şahin (1992). In Şahin and Şahin (1992) study, which was conducted on university students, the Cronbach's alpha was 0.93 while it was 0.95 in Aydın and Aydın (1990) study which compared depressive subjects with normal subjects. The criterion-related validity was computed as 0.75 (Şahin & Şahin, 1992) and 0.70 (Aydın & Aydın, 1990) by the Beck Depression Inventory (BDI). ATQ is a five point Likert-type scale. The lowest score of the scale is 30 and the highest score is 150. High scores indicate high frequency of negative automatic thoughts. The Cronbach's alpha was computed as 0.93 in the reliability studies carried out in Turkey. The total item correlation between item scores and total score was calculated as 0.30–0.69 (Işık Savaşır & Şahin, 1997).

## Data Collection and Analysis

Before the research was conducted, related approvals were obtained from the Samsun Provincial Directorate for National Education. Before data collection, selected school principals or vice-principals were informed about the study and its date of administration. The scales were given out to the participants in their own classes during their guidance courses. Before administering the scales, students were informed about the research objective, and then their verbal consents for the study were obtained. Volunteer students were included in the study and asked to answer questions sincerely while reassuring them that their answers would remain confidential. A total of 620 students were involved in the study. However, 17 of those students had to be excluded from the study due to mistakes identified on their data collection forms; 6 students were also excluded in the process of data analysis and thus, the study was completed with the remaining 597 students. The administration of questionnaires took about 30 minutes to complete. Collected data was analysed using the SPSS 16 program. Before the analyses, outliers and assumptions were checked. For this purpose, EAT, CSEI and ATQ scores of adolescents were converted to standardised  $z$ -scores.  $Z$ -scores between +4 and -4 are acceptable in large samples (Hair, Black, Babin, & Anderson, 2010). The 6 participants out of this range were excluded. Normality assumption was controlled with the Kolmogorov-Smirnov test, skewness and kurtosis values, Histogram, normal Q-Q plot and Box-plot graphs. The Kolmogorov-Smirnov test was significant for EAT, CSEI and ATQ scores which indicates the normality assumption was not met. However, Pallant (2011) suggest that this situation in Kolmogorov-Smirnov tests is common in large samples. EAT, CSEI and ATQ skewness and kurtosis values ranged from -1.96 to +1.96, except for the EAT kurtosis score which is 3.08. Researchers also recommend using graphical approaches in large samples instead of using formal inference tests (Garson, 2012; Tabachnick & Fidell, 2007). Histogram, normal Q-Q plot, and Box-plot graphs for EAT, CSEI and ATQ scores revealed that the data is approximately normal. The homogeneity of variance assumption was controlled with Levene's test. Because independent sample  $t$ -test robust the violation of homogeneity of variance assumption (Hinton, Brownlow, McMurray, & Cozens, 2004), if the homogeneity of variance assumption was violated, I reported the  $t$ -test row of results labeled Equal variances not assumed. For the Pearson Correlation analysis, linearity assumption was controlled separately with Scatterplot graphics for dependent variables, and it is

clear that the variables show a linear relation. Pearson Correlation values range between +1 and -1. Positive correlation means that a participants who gets a high score on one variable, has a high score on another variable. Negative correlation means that a participant who gets a high score on one variable, has a low score on another variable. A significance level of .05 was accepted for all analyses.

## RESULTS

This section presents the results of the research questions. Table 1 presents descriptive statistics about the study sample. As seen in Table 1, 322 (53.9%) of the adolescents included in the study group were girls while 275 (46.1%) were boys. Among all 597 participants, 46 girls had  $\geq 30$  EAT scores and this figure represents 7.7% of all the students and 14.3% of all the girls. 30 boys had  $\geq 30$  EAT scores and this figure represents 5% of all the students and 10.9% of all the boys.

Table 2 shows body mass classifications of the adolescents. As seen in Table 2, 38.9% (232) of adolescents were "underweight" with a BMI of  $\leq 19.99$ , 50.6% (302) were "normal" with a BMI between 20-24.99, 9.9% (59) were "overweight" with a BMI between 25-29.99 and 0.7% (4) were "obese" with  $\geq 30$  BMI.

Table 1 *Distribution of adolescents according to grade and gender (N=597)*

Gender	Grades							
	9 <sup>th</sup> Grade		10 <sup>th</sup> Grade		11 <sup>th</sup> Grade		12 <sup>th</sup> Grade	
	Number (n)	%	Number (n)	%	Number (n)	%	Number (n)	%
Girl	77	23.9	74	23	76	23.6	95	29.5
Boy	69	25.1	77	28	62	22.5	67	24.4
Total	146	24.5	151	25.3	138	23.1	162	27.1

The study group was composed of 597 students from 13-19 years old. The mean age of the students was  $16.45 \pm 1.14$  years of age. 146 (24.5%) of the participants were 9<sup>th</sup> grade students, and 77 (23.9%) of them were girls, and the remaining 69 (25.1%) were boys. The 10<sup>th</sup> grade students were composed of 151 (25.3%) students, 74 (23%) of whom were girls and 77 (28%) of whom were boys. There was a total of 138 (23.1%) 11<sup>th</sup> grade students and 76 (23.6%) of them were girls while 62 (22.5%) were boys. Finally, 162 (27.1%) were 12<sup>th</sup> grade students and 95 (29.5%) of them were girls while 67 (24.4%) were boys.

Table 2 *Distribution of adolescents according to gender and body mass index (N=597)*

Gender	Body Mass Classification							
	Underweight		Normal		Overweight		Obeze	
	Number (n)	%	Number (n)	%	Number (n)	%	Number (n)	%
Girl	150	46.6	153	47.5	18	5.6	1	0.3
Boy	82	29.8	149	54.2	41	14.9	3	1.1
Total	232	38.9	302	50.6	59	9.9	4	0.7

Table 3 *Means, Standart Deviations of BMI, EAT, SE, NATs and Independents Sample t- tests*

	Girl		Boy		t-test	p-value
	Mean	Standard Deviation	Mean	Standard Deviation		
Body Mass Index (kg/ m <sup>2</sup> )	20.55	2.63	21.82	3.14	-5.31	0.000**
Eating Attitudes Test	17.82	10.65	16.74	11.16	1.21	0.227
Negative Automatic Thoughts	57.88	19.67	56.31	20.52	0.96	0.340
Self-esteem	63.25	19.43	66.58	16.94	-2.23	0.026*

Note: Degree of Freedom (df) values up to down 594.73, 595, 595, 535.91, respectively. \*p<0.05; \*\*p<0.001

As shown in Table 2, the values of the female students were identified as follows: BMI was  $20.55 \pm 2.63$  kg/ m<sup>2</sup>, the mean eating attitudes score was  $17.82 \pm 10.65$ , the mean score of negative automatic thoughts was  $57.88 \pm 19.67$  and the mean level of self-esteem was  $63.25 \pm 19.43$ . The values of the male students were as follows: BMI was  $21.82 \pm 3.14$  kg/ m<sup>2</sup>, the mean EAT score was  $16.74 \pm 11.16$ , the mean score of NAT was  $56.31 \pm 20.52$  and the mean level of SE was  $66.58 \pm 16.94$ . In order to investigate gender differences in EAT, SE and NATs scores, a series of independent sample t-tests were conducted. Results indicated that there was a significant difference between the girls and boys in terms of BMI values and self-esteem scores ( $p < 0.05$ ;  $p < 0.001$ ).

Table 4 The mean and standard deviation values of BMI, NAT and SE scores in terms of the students with  $\geq 30$  EAT score and those with  $\leq 29$  EAT score (N=597)

	$\geq 30$ EAT score		$\leq 29$ EAT score		t-test	p-value
	Mean	Standard Deviation	Mean	Standard Deviation		
<b>BMI</b>	21.86	3.68	21.03	2.81	-1.88	0.066
<b>NATs</b>	67.14	21.10	55.70	19.51	-4.73	0.000*
<b>SE</b>	55.63	18.29	66.12	18.03	4.68	0.000*

Note: Degree of Freedom (df) values up to down 88.17, 595, 595 respectively. \*p< 0.001

In the light of the information given in Table 4, for the students with an EAT score of  $\geq 30$ , the mean body mass index was  $21.86 \pm 3.68$  kg/ m<sup>2</sup>, the mean score of negative automatic thoughts was  $67.14 \pm 21.10$  and the mean score of self-esteem was  $55.63 \pm 18.29$ . However, for the students with an EAT score of  $\leq 29$ , the mean body mass index was  $21.03 \pm 2.81$  kg/ m<sup>2</sup>, the mean NAT score was  $55.70 \pm 19.51$  and the mean SE score was  $66.12 \pm 18.03$ . A series of independent samples t-tests was implemented to compare to the EAT score of  $\geq 30$  adolescents with  $\leq 29$  EAT score adolescents in terms of BMI, NAT and SE. A significant difference was documented between the students with  $\geq 30$  EAT score and those with  $\leq 29$  EAT score in terms of their negative automatic thoughts and self-esteem levels (p< 0.001).

The Pearson Correlation was used to examine the association between self-esteem, automatic thoughts and eating attitudes.

Table 5 Correlations between EAT, SE and NATs

		SE	NAT	EAT
<b>SE</b>	Pearson Correlation	1	-.476*	-.229*
	Sig. (2-tailed)		.000	.000
	N	597	597	597
<b>NATs</b>	Pearson Correlation	-.476*	1	.249*
	Sig. (2-tailed)	.000		.000
	N	597	597	597
<b>EAT</b>	Pearson Correlation	-.229*	.249*	1
	Sig. (2-tailed)	.000	.000	
	N	597	597	597

Note: \*p< 0.01

As Table 5 shows, the Pearson Correlation results showed that there is a minor negative correlation between SE and NAT, a small negative correlation between SE and EAT as well as NATs and EAT.

## DISCUSSION

The present study investigated the association between self-esteem, negative automatic thoughts and distorted eating attitudes in adolescents. Results indicate that 14.3% of the girls, 10.9% of the boys as well as 12.7% of all the students have distorted eating attitudes. This finding is similar to Celikel et al. (2008) who discovered that the rate of eating disorders in female university students was 12.4%. There was a significant difference between the girls and boys in terms of BMI values. Based on the results, one can deduce that the girls cared about their body image more than the boys in adolescence. Some studies conducted on university students also concluded that female students were weaker than males in terms of self-esteem about body image. There are studies that indicate the significant and positive relationship between eating disorders with BMI and emotional symptoms (Menzel et al., 2010; Özdoğan, Yardımcı, & Özçelik, 2012; Rojo-Moreno et al., 2013). However, when the present study considers the students' NATs in terms of gender, no significant difference was found between the mean NAT scores of the girls and the mean NAT scores of the boys. Yavuzer and Karataş (2013) discovered no significant difference between the adolescents' NAT scores in terms of gender. It is possible to say that this finding supports the findings of the present study. When the students' eating attitudes were evaluated in terms of gender, no significant difference was found between the girls' mean scores about eating attitudes and the boys' mean scores about eating attitudes. However, when the students' eating attitudes were evaluated in terms of total EAT score, the ratio of the girls (7.7%) with a cut-off score of 30 and over was higher than that of the boys (5%). Accordingly, it may be said that the eating disorder symptoms of the girls are more pronounced than those of the boys. In the body image assessment of adolescents, peer groups, family and messages they receive from the media have a crucial place. Messages from the

media are observed to be especially influential on female adolescents. In such a period as adolescence, when the main focus is on the body and growth, comparisons female adolescents make as a result of the messages received from the media cause negative feelings. Female adolescents seeing the ideal image reflected by the media have low body satisfaction and display signs of depression (Oktan & Şahin, 2010). It is thought that there was a significant relationship between adolescents' symptoms of depression and negative thoughts and low body satisfaction. When the related literature was reviewed, studies indicating that the incidence and prevalence of eating disorders was higher in girls in adolescence were found (Kaye, 2008).

There are many factors that may affect the self-esteem of adolescents. Gender is among the most important factors. When the students' levels of self-esteem were evaluated in terms of gender, the present study yielded a significant difference between the mean SE scores of the girls and the mean SE scores of the boys. In line with this result, previous research also revealed that the self-esteem of boys was higher than that of girls. For example, Çetin and Çavuşoğlu (2009) reported that the mean scores of self-esteem were lower in girls than in boys. Similarly, Chapman and Mullis (2002) also found that the boys' levels of self-esteem were higher than those of the girls. No significant difference was found between the students with  $\geq 30$  EAT scores and those with  $\leq 29$  EAT scores in terms of BMI. However, when the mean scores were evaluated, the mean scores of the students with  $\geq 30$  EAT scores were (only a little) higher than the mean scores of the students with  $\leq 29$  EAT scores. This means that the students with higher EAT scores also have a higher BMI. Özgen et al. (2012) revealed significant differences between BMI and eating attitudes.

There was a significant difference between the students with  $\geq 30$  EAT scores and those with  $\leq 29$  EAT scores in terms of negative automatic thoughts. Özgen et al. (2012) suggested that adolescents' psychological states may influence eating behaviour and that they ate more when they were anxious and stressed. This finding supports the finding of the present study.

There was also a significant difference between the students with  $\geq 30$  EAT scores and those with  $\leq 29$  EAT scores in terms of self-esteem level. Bas and Kiziltan (2007) discovered that the rate of abnormal eating attitude was 26.4% in boys while it was 38.7% in girls. They stated that both female and male adolescents followed a diet for weight control. This study also revealed that female adolescents followed a diet for weight control more frequently than male adolescents and there was a significant relationship between diet and weight control.

The result of correlation indicated that there was a relationship between eating attitude and automatic thoughts and self-esteem. As a result, an inverse relationship was found between eating disorders and SE, that is, while SE increases, the EAT score decreases. In the light of this result, while the level of self-esteem decreases, disordered eating attitude increases. Thus, there is a strong and significant relationship between eating attitude and self-esteem, as several studies show (Tanrıverdi ve diğerleri, 2011).

There is a negative relationship between eating attitudes and the self-esteem of the students. The related literature has studies supporting the finding of the present study (Oktan & Şahin, 2010). However, a positive relationship was observed between eating disorders and NAT; that is, when NAT increases so do disordered eating attitudes. According to the result of the correlation, the students' level of self-esteem decreases while eating disorders increase and when eating disorders increase so do individuals' levels of automatic thought. Accordingly, intense negative feelings prevent individuals from acting effectively and getting satisfaction from life. The study finding in the related literature indicated that there was a negative relationship between life satisfaction and irrational thoughts (Çivitci, 2009; Froh ve diğerleri, 2007). Thus, it is possible to say that this finding supports the finding of the present study. Individuals satisfied with their lives have high levels of self-esteem and thus fewer irrational thoughts. The present study includes some limitations as do all scientific studies. First, the study findings only involve some high schools located in a city centre. Further studies should be repeated in different sample groups. This will enhance the generalizability of the study results. The second limitation of the present study is that the measuring tools used are based on self-reporting. Thus, the data obtained requires trust in the answers of the high school students to the measuring tools.

The present study examined the relationship between adolescents' eating attitudes and automatic thoughts and self-esteem. The study findings involve important results for the field of psychological counselling and guidance. The study concluded that the relationships between eating attitudes and automatic thoughts and self-esteem were significant, and that eating attitudes were appreciably associated with self-esteem and automatic thoughts.

The results derived from the present study may guide counsellors, psychologists and parents. In this respect, the present study has important contributions. First, it revealed the relationships of the students' eating attitudes with their automatic thoughts and self-esteem. It indicates the necessity to carry out studies in order to increase the self-esteem of adolescents, especially those with negative automatic thoughts, and to help them develop healthy eating behaviours. Practices should be introduced such as increasing students' self-esteem, introducing them to healthy

eating behaviours and reducing their negative thoughts within the scope of guidance services. Some recommendations have also been developed in light of the study findings.

It will be useful to help students gain healthy eating attitudes and behaviours at all levels of education, training and guidance services. Activities should be planned in order to increase low self-esteem when dealing with the symptoms of eating disorders based on the result that the symptoms of eating disorders related to low levels of self-esteem. Negative thoughts negatively affect psychological well-being and self-esteem. Thus, it will also be helpful to develop programs in order to increase psychological well-being and to decrease irrational thoughts at the same time, as well as emphasizing self-esteem as opposed to irrational thoughts in activities of psychological counselling and guidance intended for individuals suffering from psychological distress.

#### **Acknowledgment:**

The authors declare that they have no conflicts of interest in this research.

#### **REFERENCES**

1. Anderson, J. A., & Olmhausen, K. S. (1999). Adolescent self-esteem: A foundational disposition. *Nursing Science Quarterly*, 12(1), 62–67. doi:10.1177/08943189922106422
2. Aydın, G., & Aydın, O. (1990). Otomatik Düşünceler Ölçeğinin geçerlik ve güvenilirliği. *Psikoloji Dergisi*, 7(4), 51–57.
3. Bas, M., Asci, F. H., Karabudak, E., & Kiziltan, G. (2004). Eating attitudes and their psychological correlates among Turkish adolescents. *Adolescence*, 39(155), 593–599.
4. Bas, M., & Kiziltan, G. (2007). Relations among weight control behaviors and eating attitudes, social physique anxiety, and fruit and vegetable consumption in Turkish adolescents. *Adolescence*, 42(165), 167–178.
5. Celikel, F. C., Cumurcu, B. E., Koc, M., Etikan, I., & Yucel, B. (2008). Psychologic correlates of eating attitudes in Turkish female college students. *Comprehensive Psychiatry*, 49(2), 188–194. doi:10.1016/j.comppsy.2007.09.003
6. Chang, Y.-J., Lin, W., & Wong, Y. (2011). Survey on Eating Disorder-Related Thoughts, Behaviors, and Their Relationship with Food Intake and Nutritional Status in Female High School Students in Taiwan. *Journal of the American College of Nutrition*, 30(1), 39–48. doi:10.1080/07315724.2011.10719942
7. Chapman, P. L., & Mullis, A. K. (2002). Readdressing gender bias in the Coopersmith Self-Esteem Inventory - Short form. *Journal of Genetic Psychology*, 163(4), 403–409.
8. Cheng, H., & Furnham, A. (2003). Personality, self-esteem, and demographic predictions of happiness and depression. *Personality and Individual Differences*, 34(6), 921–942. doi:10.1016/S0191-8869(02)00078-8
9. Coopersmith, S. (1967). *The antecedents of self-esteem*. San Francisco: W.H. Freeman.
10. Çetin, H., & Çavuşoğlu, H. (2009). Yetiştirme yurdunda ve aileleri ile yaşayan adölesanların benlik saygıları ve psikolojik belirtilerinin karşılaştırılması. *Dokuz Eylül Üniversitesi Hemşirelik Yüksekokulu Elektronik Dergisi*, 2(4), 137–144.
11. Çivitci, A. (2009). Relationship between Irrational Beliefs and Life Satisfaction in Early Adolescents. *Eurasian Journal of Educational Research (EJER)*, (37), 91–109.
12. Erol, A., & Toprak, G. (2002). Üniversite öğrencisi kadınlarda yeme bozukluğu ve genel psikolojik belirtileri yordayan etkenler. *Türk Psikiyatri Dergisi*, 13(1), 48–57.
13. Fathi-Ashtiani, A., Ejei, J., Khodapanahi, M.-K., & Tarkhorani, H. (2007). Relationship between self-concept, self-esteem, anxiety, depression and academic achievement in adolescents. *Journal of Applied Sciences*, 7, 995–1000.
14. Froh, J. J., Fives, C. J., Fuller, J. R., Jacofsky, M. D., Terjesen, M. D., & Yurkewicz, C. (2007). Interpersonal relationships and irrationality as predictors of life satisfaction. *The Journal of Positive Psychology*, 2(1), 29–39. doi:10.1080/17439760601069051

15. Garner, D. M., & Garfinkel, P. E. (1979). The Eating Attitudes Test: An index of the symptoms of anorexia nervosa. *Psychological medicine*, 9(2), 273–279.
16. Garson, G. D. (2012). *Testing statistical assumptions*. North Carolina: Statistical Associates Publishing.
17. Gökçakan, Z., & Gökçakan, N. (2005). Depresyonda bilişsel terapi. *Mersin Üniversitesi Eğitim Fakültesi Dergisi*, 1(1), 91–101.
18. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis*. Upper Saddle River, NJ: Prentice Hall.
19. Hamarta, E., Arslan, C., Saygın, Y., & Özyeşil, Z. (2009). Benlik saygısı ve akılcı olmayan inançlar bakımından üniversite öğrencilerinin stresle başa çıkma yaklaşımlarının analizi. *Değerler Eğitimi Dergisi*, 7(18), 25–42.
20. Heaven, P., & Ciarrochi, J. (2008). Parental Styles, Gender and the Development of Hope and Self-Esteem. *European Journal of Personality*, 22(8), 707–724. doi:10.1002/per.699
21. Hinton, P. R., Brownlow, C., McMurray, I., & Cozens, B. (2004). *SPSS Explained*. London: Routledge.
22. Hollon, S., & Kendall, P. (1980). Cognitive Self-Statements in Depression - Development of an Automatic Thoughts Questionnaire. *Cognitive Therapy and Research*, 4(4), 383–395. doi:10.1007/BF01178214
23. Kaye, W. (2008). Neurobiology of anorexia and bulimia nervosa. *Physiology & Behavior*, 94(1), 121–135. doi:10.1016/j.physbeh.2007.11.037
24. Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30(3), 607–610. doi:10.1177/001316447003000308
25. Makikangas, A., Kinnunen, U., & Feldt, T. (2004). Self-esteem, dispositional optimism, and health: Evidence from cross-lagged data on employees. *Journal of Research in Personality*, 38(6), 556–575. doi:10.1016/j.jrp.2004.02.001
26. Menzel, J. E., Schaefer, L. M., Burke, N. L., Mayhew, L. L., Brannick, M. T., & Thompson, J. K. (2010). Appearance-related teasing, body dissatisfaction, and disordered eating: A meta-analysis. *Body Image*, 7(4), 261–270. doi:10.1016/j.bodyim.2010.05.004
27. Ni, C., Lo, D., Liu, X., Ma, J., Xu, S., & Li, L. (2012). Chinese female nursing students' coping strategies, self-esteem and related factors in different years of school. *Journal of Nursing Education and Practice*, 2(4), p33.
28. Oktan, V., & Şahin, M. (2010). Kız ergenlerde beden imajı ile benlik saygısı arasındaki ilişkinin incelenmesi. *Uluslararası insan bilimleri dergisi*, 7, 1–12.
29. Özdoğan, Y., Yardımcı, H., & Özçelik, A. .. (2012). Yurtta Kalan Üniversite Öğrencilerinin Beslenme Alışkanlıkları. *Karadeniz*, 4(15), 139–149.
30. Özgen, L., Kinacı, B., & Arlı, M. (2012). Ergenlerin yeme tutum ve davranışları. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi*, 45(1), 229–247.
31. Özmen, D., Çetinkaya, A. C., Ergin, D., Şen, N., & Erbay, P. D. (2007). Lise öğrencilerinin yeme alışkanlıkları ve beden ağırlığını denetleme davranışları. *TSK Koruyucu Hekimlik Bülteni*, 6(2), 98–105.
32. Pallant, J. (2011). *SPSS survival manual: a step by step guide to data analysis using the SPSS program*. Sydney: Allen & Unwin.
33. Rojo-Moreno, L., Rubio, T., Plumed, J., Barberá, M., Serrano, M., Gimeno, N., ... Livianos, L. (2013). Teasing and Disordered Eating Behaviors in Spanish Adolescents. *Eating Disorders*, 21(1), 53–69. doi:10.1080/10640266.2013.741988
34. Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, N.J.: Princeton University Press.
35. Savaşır, I., & Erol, N. (1989). Yeme Tutumu Testi: Anoreksiya Nevroza Belirtileri İndeksi. *Psikoloji Dergisi*, 7, 19–25.
36. Savaşır, I., & Şahin, N. H. (1997). *Bilişsel-davranışçı terapilerde değerlendirme: Sık kullanılan ölçekler*.

Ankara: Türk Psikologlar Derneği Yayınları.

37. Shaughnessey, J. J., Zechmeister, E. B., & Zechmeister, J. S. (2012). *Research Methods in Psychology* (9th ed). New York, NY, US: Mc-Graw Hill.
38. Strauss, R. S. (1999). Comparison of measured and self-reported weight and height in a cross-sectional sample of young adolescents. *International Journal of Obesity*, 23(8), 904–908. doi:10.1038/sj.ijo.0800971
39. Şahin, N. H., & Şahin, N. (1992). Reliability and validity of the Turkish version of the automatic thoughts questionnaire. *Journal of Clinical Psychology*, 48(3), 334–340. doi:10.1002/1097-4679(199205)48:3<334::AID-JCLP2270480311>3.0.CO;2-P
40. Şimşek, Z., Koruk, İ., & Altındağ, A. (2007). Harran Üniversitesi Tıp Fakültesi ve Fen-Edebiyat Fakültesi birinci sınıf öğrencilerinin riskli sağlık davranışları. *Toplum Hekimliği Bülteni*, 26(3), 19–24.
41. Şirin, H., & Izgar, H. (2013). Üniversite Öğrencilerinin İletişim Becerileri ve Olumsuz Otomatik Düşünceleri Arasındaki İlişki, *12(2)*, 585–596.
42. Tabachnick, B. G., & Fidell, Linda S. (2007). *Using multivariate statistics*. Boston: Pearson/Allyn & Bacon.
43. Tanrıverdi, D., Savaş, E., Gönüllüoğlu, N., Kurdal, E., & Balık, G. (2011). Lise Öğrencilerinin Yeme Tutumları, Yeme Davranışları ve Benlik Saygılarının İncelenmesi. *Gaziantep Tıp Dergisi*, 17(1), 33–39.
44. Turan, N., & Tufan, B. (1987). Validity and reliability study for Coopersmith self esteem inventory. İçinde *Proceedings of the 23rd national psychiatry and neurological sciences congress book* (ss 816–817).
45. Türkçapar, M. H. (2007). *Bilişsel terapi: temel ilkeler ve uygulamalar*. Ankara: HYB Basım Yayın.
46. Utsey, S. O., Ponterotto, J. G., Reynolds, A. L., & Cancelli, A. A. (2000). Racial discrimination, coping, life satisfaction, and self-esteem among African Americans. *Journal of Counseling and Development*, 78(1), 72–80.
47. Whelan, A., Haywood, P., & Galloway, S. (2007). Low self-esteem: group cognitive behaviour therapy. *British Journal of Learning Disabilities*, 35(2), 125–130. doi:10.1111/j.1468-3156.2007.00418.x
48. Yaacob, S., Juhari, R., Talib, M., & Uba, I. (2009). Loneliness, stress, self esteem and depression among Malaysian adolescents. *Jurnal Kemanusiaan Bil. 14, Dis*.
49. Yavuzer, Y., & Karataş, Z. (2013). Ergenlerde Otomatik Düşünceler ile Fiziksel Saldırganlık Arasındaki İlişkide Öfkenin Aracı Rolü. *Türk Psikiyatri Dergisi*, 24(2), 117–123.
50. Yenidünya, A. (2005). *Lise Öğrencilerinde Rekabetçi Tutum, Benlik Saygısı ve Akademik Başarı İlişkisi*. (Master Thesis). İstanbul.