RESEARCH   Open Access

ARAŞTIRMA   Açık Erişim

Dimensions of Body Image: Body Image Scale

Beden İmajının Boyutları: Beden İmajı Ölçeği

Ezgi Saylan 🔵, Vesile Soyyiğit 🔵

Authors Information

Ezgi Saylan
Research Assistant, Artvin Çoruh University, Artvin, Turkey
ezgisaylan@artvin.edu.tr

Vesile Soyyiğit
Professor, Trabzon University, Trabzon, Turkey
vesile@trabzon.edu.tr

ABSTRACT

This study aims at developing a measuring instrument of which validity and reliability for measuring the body images of individuals during adolescence and young adulthood are proven. The study group consists of 384 high school students. The content validity of the study was tested by seeking an expert opinion and the construct validity was tested by applying explanatory (EFA) and confirmatory (CFA) factor analysis. In the scope of analysis, IBM SPSS Statistics v20.0 and Lisrel 8.80 programs were used. As a result of EFA, a four-factor structure, which explains 62% of the total variance and is composed of 21 items, was obtained. The factors were called "Negative Perception of the Body", "Evaluation Sensitivity", "Positive Perception of the Body", and "Body Change". As a result of CFA, it was determined that the four-factor structure consisting of 21 items had an adequate fit index. As a consequence of reliability analysis, it was found that the Cronbach Alpha internal consistency coefficients, calculated for EFA and CFA samples, being .92 and .88 fell within acceptable values. The findings obtained following the item analysis demonstrated that the total score of items listed in the Body Image Scale presented a high level of predictive power and distinctiveness. The Body Image Scale can be defined as a valid and reliable measuring instrument to be used to measure the body image of adolescents and young adults.

ÖZET

Bu çalışmanın amacı, ergenlik ve genç yetişkinlik dönemlerindeki bireylerin beden imajını ölçmeye ilişkin geçerliği ve güvenirliği kanıtlanmış bir ölçme aracı geliştirmektir. Araştırma grubunu 384 lise öğrencisi oluşturmuştur. Çalışmada uzman görüşüne başvurularak kapsam geçerliği; açımlayıcı (AFA) ve doğrulayıcı faktör analizi (DFA) uygulanarak yapı geçerliği test edilmiştir. Analizler kapsamında IBM SPSS Statistics v20.0 ve Lisrel 8.80 programlarından faydalanılmıştır. AFA sonucunda, toplam varyansın %62'sini açıklayan ve 21 maddeden oluşan 4 faktörlü bir yapıya ulaşılmıştır. Faktörler "Bedeni Olumsuz Algılama", "Değerlendirme Duyarlılığı", "Bedeni Olumlu Algılama" ve "Bedeni Değiştirme" olarak isimlendirilmiştir. DFA sonucunda, 21 madde ve 4 faktörlü yapının yeterli uyum indekslerine sahip olduğu belirlenmiştir. Güvenirlik analizlerinde AFA ve DFA örneklemleri için hesaplanan Cronbach Alfa iç tutarlık katsayılarının .92 ile .88 olarak kabul edilebilir değerler arasında yer aldığı görülmüştür. Madde analizi sonucunda ulaşılan bulgular, Beden İmajı Ölçeği'ndeki maddelerin toplam puanı yordama gücünün ve ayırt edicilik düzeylerinin yüksek olduğunu göstermiştir. Beden İmajı Ölçeği'nin ergenler ve genç yetişkinlerin beden imajını ölçmek amacıyla kullanılabilecek geçerli ve güvenilir bir ölçme aracı olduğu belirtilebilir.

Ethical Statement The research was reviewed by Trabzon University Social and Human Sciences Scientific Research and Publication Ethics Committee and was given permission.

INTRODUCTION

The body image is considered a complex and multi-faceted structure, which attempts to examine how individuals perceive the size and shape of their bodies and experience it cognitively and emotionally (Wolff & Clark, 2001), and involves the subjective appreciation, perceptions, and attitudes of an individual related to his/her body, in particular to his/her appearance (Cash & Szymanski, 1995; Murray et al., 2011). This concept expresses the self-assessment of an individual concerning his/her body and is conceptualized as a universal structure (Mendelson et al., 2001).

The body image is the combination of the real body appearance of an individual and the experiences he/she goes through as part of his/her efforts to reach the ideal body. The attitude and the meaning the individual attributes to the parts and functions of his/her body may differ as well as the fact that the individual's assessment of his/her own body and the assessments of others regarding his/her body may vary. In this context, the dimensions of body image can be considered positive and negative body image. Possessing a positive body image enables individuals to accept all the aspects of their bodies, even those contradicting the ideals displayed on media, and to appreciate the functions their bodies execute for their own sake (Andrew et al., 2014). An individual who appreciates his/her body also respects his/her body and at the same time refuses to acknowledge the appearance ideals imposed on media as the sole form of human beauty (Tylka & Wood-Barcalow, 2015). Possessing a negative body image causes an individual to bear negative thoughts regarding his/her body appearance and to find this body image ugly.

Body image contains various components. These components are considered as perceptions (how the individual visualizes the size and shape of his/her body), attitudes (what the individual thinks about his/her body both cognitively and emotionally, and to what extent his/her body conforms to the ideal body image), and behaviors (limited or overeating, over exercising, and dieting) (Botta, 1999; Rucker & Cash, 1992). These three components play an effective role in the body image development of an individual. Body image is a psychological phenomenon that is significantly influenced by social factors (Grogan, 2016). The gender, age, body structure, meaning ascribed to the body, and social beauty ideals can be ranked among the factors affecting the body image. In addition, the body image is shaped through media and by the attitudes and behaviors of family and peers, and all these have positive or negative effects on one's body image.

Widely accepted standards presenting social beauty ideals with which an individual can compare his/her appearance is communicated via family, peers, and especially using mass media (Hargreaves & Tiggemann, 2004). In today's world of technology, mass media takes a significant place in the lives of individuals. Individuals spend long times in these virtual fields and their body image is influenced by this process. Generally, in a great many societies, the ideal body image is presented as a strongly built, muscular, and athletic structure for man while it is reflected as a delicate and slightly built structure for the woman. The media does not only emphasize the fact that the self-worth of individuals should rely on their appearances but also presents an increasingly unattainable strong cultural beauty ideal (Clay et al., 2005). Individuals, consciously or unconsciously, compare themselves with these ideal images imposed by the media (Aliyev & Türkmen, 2014).

Even though the body image is a concept that involves subjective perceptions of an individual about his/her own body, these perceptions do change and development within the context of both internal and external factors throughout one's life. In particular, during adolescence, the body becomes the focal point

of the individual and the assessments regarding his/her body play a considerable role in the development of an adolescent boy or girl (Oktan, 2012). Therefore, adolescence is considered to be a transition period during which body image goes through substantial changes (Wood et al., 1996) and a significant aspect based on which the adolescent represents and assesses himself/herself (Jones, 2002). When the literature on body image is examined, it catches attention that particularly the perceptions of adolescents concerning their body images are scrutinized and studied due to the rapid changes in their bodies (Barker & Galambos, 2003; Helfert & Warschburger, 2011; Jones, 2004; Lawyer & Nixon, 2011; Maezono et al., 2019; McCabe & Ricciardelli, 2004; Oktan & Şahin, 2010; Tiggemann & Slater, 2017).

In the international literature, there are measuring instruments developed to measure the body images of an individual (Avolos et al., 2005; Callaghan et al., 2015; Cash et al., 2002; Cash et al., 2005; Cooper et al., 1987; Cuzzolaro et al., 2006; Hormes et al., 2008; McKinley & Hyde, 1996; Mendelson et al., 2001; Secord & Jourard, 1953; Tylka & Wood-Barcolow, 2015; Tylka et al., 2005); on the other side, examining the literature in Turkey, efforts are noticed for adapting the body image measuring instruments (Anlı et al., 2015; Bakalım & Taşdelen-Karçkay, 2016; Doğan, 2010; Doğan et al., 2011; Hovardaoğlu 1993; Yağmurcu & Tosun, 2018). For this reason, developing a measuring instrument intrinsic to the Turkish literature is considered to be a significant need. Also, it calls attention that the existing measuring instruments are adjustable to any individual rather than measuring the body image during certain developmental periods. Within this scope, considering the deficiencies in the literature and the increasing importance of body image, especially during adolescence and young adulthood, it is aimed at developing a measuring instrument that proved to be valid and reliable peculiar to these development periods.

METHOD

Participants

The study group consisted of 400 high school students receiving education in high schools affiliated with the Ministry of National Education in Ortahisar District of Trabzon Province during the 2019-2020 academic year. Once the lost data (n=16) were removed from the data set, the statistical analysis was performed on a total of 384 participants, 209 (53.4%) of whom were women and 179 (46.6%) were men. The age of participants ranged between 14 and 18, the average age being 16.15 (±1.14). The data of 384 participants were randomly split in half using the SPSS program and two separate data sets were created. Within this context, as part of the construct validity, both EFA and CFA were performed with 192 participants each. The average age of 192 participants subject to EFA analysis was 16.17 (±1.10); 98 (51%) of whom were women and 94 (49%) were men. The average age of 192 participants subject to CFA analysis was 16.14 (±1.17); 107 (55.7%) of whom were women and 85 (44.3%) were men.

Ethical Statement

The authors declare that they continue to work by scientific study ethics and the Helsinki declaration in this study. Accordingly, the research was reviewed by Trabzon University Social and Human Sciences Scientific Research and Publication Ethics Committee and was given permission.

Measures

In this study, the "Body Appreciation Scale" and "Personal Information Form" drawn up by the researchers were utilized to be employed in the scope of convergent validity during the developing of a measuring instrument.

Body Appreciation Scale. The Body Appreciation Scale developed by Tylka & Wood-Barcalow (2015) and adapted to Turkish by Anlı et al. (2015) is a 5-point Likert scale composed of 10 items. The corrected item-test correlation of scale takes .31 and .76 values, and its internal consistency reliability coefficient is determined to be .88. The scale does not contain any reverse code items and the total body appreciation score is attained by summing up the points received from each item. The minimum and maximum scores to be attained on the scale are 10 and 50, respectively, and the high score indicates a high level of body appreciation (Anlı et al, 2015).

Personal Information Form. The Personal Information Form, declaring the purpose of research, expressing the significance of support by participants, and requesting the participants to fill in their gender and age, was created by the researchers.

Procedure

During scale development, scale developing stages established in the literature were employed (Rust & Golombok, 1997; Karakoç & Dönmez, 2014; Şahin & Boztunç-Öztürk, 2018). Initially, the feature was intended to be measured, in other words, the purpose of the measuring instrument was determined, and using the measuring instrument to be developed, it was aimed to measure the body image perceptions of adolescents and young adults. Then, the relevant literature was profoundly inquired about; the books, articles, papers, and dissertations in the literature were scrutinized. It was observed that foreign literature on body image contained more studies; thus, the measuring instruments developed to that end were obtained through e-mail upon the permission of relevant authors, and the items involved in the scale were probed. Later on, an item pool was created within the scope of features acquired as a result of a literature scan and a draft form was drawn up. The draft was reviewed by expert lecturers from "Psychological Counselling and Guidance" departments of various universities, improper items were removed, and the draft was modified in line with the recommendations. Taking the opinions of experts into consideration, a 30-item trial form was created. The trial form of the Body Image Scale was designed on the lines of a 5-point Likert scale. The participants were asked to choose the optimal option for themselves while answering the scale items, which are, namely, "I strongly disagree", "I don't agree", "Undecided", "I agree", and "I strongly agree".

Once the 30-item trial form was generated, an expert opinion was sought again for the content validity. Considering the content validity of the scale, once again, a field expert group of a total of 12 people was established involving 3 experts from "Turkish Teaching" department, 1 expert from "Assessment and Evaluation" department, and 8 experts from "Psychological Counseling and Guidance" department of various universities. According to experts' opinions, content validity rates and index of items were calculated. 30-item scale that was put into final form in line with the expert opinion became ready to use.

To receive feedback on the application time and comprehensibility of items listed on the body image scale, one of the schools involved in the research was randomly chosen and a pretest was conducted on 30 adolescent volunteers. For the pretesting, adequate care was taken to ensure that the sample represents the target group, thus the sample was established accordingly. Following the pretesting, a discussion was held with students on the items and their opinions were taken regarding the comprehensibility. Depending on the feedback from students, it was seen that no revision was required on the items. Afterward, the application schedule for the trial was set by getting in contact with high schools involved in the research, and the implementations were carried out. Accordingly, the trial form was submitted to

a total of 400 high schoolers, and it took about 10 minutes for each student to complete the scale. Once the lost data (n=16) were removed from the data set, the statistical analysis was performed on 384 participants. The data were randomly split in half using the SPSS program and two separate data sets were obtained, and within this context, as part of the construct validity, both EFA and CFA were performed with 192 participants for each. In scale adaptation and development studies, the sample size must be fivefold of the item number is considered sufficient (DeVellis, 2014). Therefore, the sample size reached meets this criterion.

Data Analysis

In the study, EFA and CFA processes were carried out with the intent to test the construct validity of the Body Image Scale. Then, the Body Appreciation Scale was employed to assess the convergent validity, and reliability analyses were conducted by the use of the Cronbach Alpha internal consistency coefficient technique. Lastly, item analysis was performed on Body Image Scale. Within the scope of analysis, IBM SPSS Statistics v20.0 and Lisrel 8.80 programs were utilized.

RESULTS

Content Validity

An approach called the Lawshe technique was used to estimate the content validity. Candidate scale forms were created by taking notice of the stages of the mentioned approach. As part of the Lawshe technique, each item is ranked as "Proper", "Proper but should be Corrected", and "should be Removed" (Yurdugül, 2005). The control forms containing scale items and rankings established in this regard were handed out to 12 experts in total. Later, the distributed forms were examined, and expert opinion was obtained. In the next stage, the content validity ratio (CVR) of items and content validity index (CVI) was calculated. When the values calculated by Lawshe (1975) are considered, it is seen that the content validity standard (CVS) was judged to be .56 by 12 experts. The content validity ratio of items 1, 3, 5, 6, 13, 14, 17, 21, and 29 was determined to be 1; while it is .84 for items 2, 4, 7, 8, 10, 11, 12, 19, 23, 24, 25, 27, 28 and 30; and .67 for items 9, 15 and 22 and it was established to be higher than the minimum value. Furthermore, it was established that the content validity ratio of items 16, 18, 20, and 26 was lower than the minimum value specified to be .56. The mentioned items were reviewed, expert opinions were weighed, and it was found that the recommended corrections were related to grammar and sentence structure; thus, these items were revised and included in the analysis. Once the CVR was obtained, the CVI was calculated. CVI is obtained by calculating the average CVR values (Yeşilyurt & Çapraz, 2018). The CVI value for 30 items included in the scale was determined to be .80. As this value is bigger than the CVR value (CVI>CVR), it can be stated that content validity is ensured. Lastly, the final form was drawn up based on CVR and CVI standards. Then, the implementation stage was initiated.

Construct Validity

Explanatory Factor Analysis (EFA)

EFA was conducted for a 30-item trial form of scale. To apply EFA to a certain set of data, the sample size must be adequate and applicable for the data factor analysis (Karaman, 2015). To this respect, the sample size was observed initially. Depending on the judgment that the sample size must be fivefold of item number in scale adaptation and development studies (DeVellis, 2014), several 192 data was reached. It can be stated that the sample size of the study meets the suggested standard.

When applying EFA, the conformity of the data set to the factor analysis is determined by the results of Bartlett's Test of Sphericity and Kaiser-Meyer-Olkin (KMO) sample adequacy standard. For the 30-item trial form, the KMO value was established to be .91 and the result of Bartlett's Test of Sphericity ($\chi2$=2830.09, df= 435, p<.001) was established to be significant. KMO value being higher than .60 and Bartlett's test is a significant indication that the data set is appropriate for factor analysis and possesses a high level of sample adequacy (Büyüköztürk, 2016). The cross-correlation values of scale items in the anti-image matrix were detected to be .85 and .95. On the grounds of the information that these values must be bigger than .50, it can be specified that the values are of adequate size. The variance values of 30 items subjected to analysis in the communalities table are detected to be between .47 and .73. These values are expected to be above .50 (Çakır, 2014).

Within the scope of EFA, the method identified by Kaiser (1960) was employed to determine the number of factors. This method maintains that those having an eigenvalue bigger than 1 indicate a factor (Karaman, 2015). As a result of factor analysis on the 30-item form, a structure consisting of five factors of which eigenvalues were bigger than 1 was obtained. The variance value explained by the stated five factors on the scale is 61.34%. A principal Component Analysis was performed by employing the Promax rotation method; thusly, it was intended to determine the factor structure of the scale. The Promax rotation method is one of the oblique rotation methods. The oblique rotation method is founded on the idea that factors are correlated (Büyüköztürk, 2002) and these methods provide the optimal solution for the data set (Karaman, 2015). For the Promax rotation method, a kappa value is set, and it is expressed that this value being higher than 4 would be the optimal solution (Tabachnick & Fidell, 2015). As it is assumed to be a correlation between factors in this study, the Promax rotation method was employed, and the kappa value was set to be 4. As a result of rotations, the scale transformed into a 4-factor structure composed of 21 items.

In the repeated factor analysis for the 21-item form of the Body Image Scale, KMO (.90) and Bartlett values ($\chi2$=1794.16, df= 210, p<.001) were detected to be appropriate. Looking at the cross-correlations of scale items in the anti-image matrix, it is seen that values vary between .85 and .94 and are of adequate size (>.50). Besides, in the communalities table demonstrating the calculated variance percentage, it is found that the communality values range from .50 to .73 and meet the criterion of .50.

A Principal Component Analysis was performed on the final state of a scale composed of 21 items, a scree plot was created, and the structure of the scale was attempted to be determined. Table 1 demonstrates what percentage of the total variance is reflected on the data set by the determining factors.

Table 1. Explained Total Variance Table

	Baseline eigenvalues			Loads sum of squares		
	Total	Variance Percentage	Cumulative Percentage	Total	Variance Percentage	Cumulative Percentage
1	8.58	40.84	40.84	8.58	40.84	40.84
2	1.93	9.21	50.05	1.93	9.21	50.05
3	1.38	6.58	56.63	1.38	6.58	56.63
4	1.13	5.38	62.00	1.13	5.38	62.00
5	.91	4.34	66.34			
6	.77	3.66	70.00			
7	.71	3.40	73.40			
8	.62	2.95	76.36			
9	.60	2.87	79.23			
10	.58	2.75	81.98			
11	.54	2.56	84.54			
12	.49	2.32	86.86			
13	.45	2.13	88.98			
14	.42	2.02	91.00			
15	.39	1.83	92.83			
16	.33	1.55	94.39			
17	.29	1.38	95.76			
18	.28	1.33	97.10			
19	.26	1.25	98.34			
20	.20	.93	99.27			
21	.15	.73	100.00			

As a result of Principal Component Analysis, a four-factor structure was attained which explained variance value is 62% and eigenvalue is higher than 1. It is detected that the first factor within this total has an eigenvalue of 8.58 and variance of 40.84%; the second factor presents an eigenvalue of 1.93 and variance of 9.21%; the third factor has an eigenvalue of 1.38 and variance of 6.58%, and the fourth factor presents an eigenvalue of 1.13 and variance of 5.38%. From the point of view of DeVellis (2014), a total variance explained by a factor must not be less than 5%. The obtained findings comply with this view.
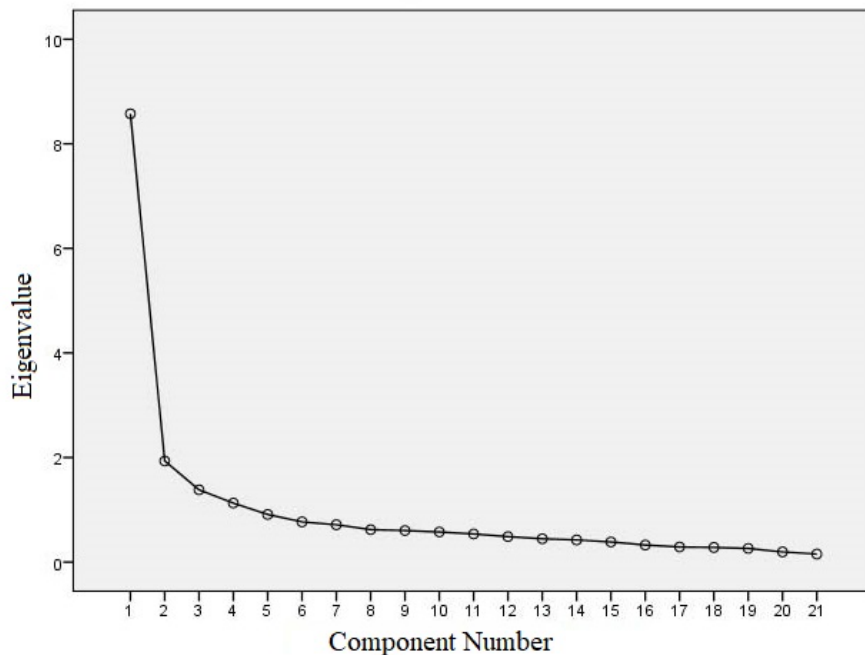
Figure 1. Scree plot

In addition to these findings, the scree plot shown in Figure 1 related to the eigenvalue demonstrates the existence of four dimensions. The scree plot is the presentation of the eigenvalue in the graph and gives the amount of variance explained by each factor (Büyüköztürk, 2016).

Following the results obtained from EFA, item numbers in the scale were reformulated. When the factor loads of items related to the Body Image Scale composed of 21 items are examined:

- It is seen that the first factor involves seven items and items 6, 8, 10, 12, 13, 14, and 18 constitute one dimension. When these items whose factor loads vary between .58 and .98 are analyzed, it is found that these items are associated with the negative perceptions and assessments of an individual regarding his/her body; thus, named the "Negative Perception of the Body" factor.
- The second factor involves five items and items 1, 2, 5, 11, and 21 constitute one dimension. Item 21 possesses an adequate factor load value both under the first and the second factor. An item best explains the dimension which represents the factor under which it has a higher load value, and if the difference in load value between factors is .10 and above (Büyüköztürk, 2016). In this respect, item 21 is considered under the second factor. Analyzing these items whose factor loads range from .54 to .88, it is identified that these items are associated with the assessments of others regarding the body of an individual; thus, named the "Evaluation Sensitivity" factor.
- The third factor involves five items and items 4, 7, 15, 16, and 17 constitute one dimension. Item 16 presents an adequate level of load value under two factors; however, it is considered under the third factor as it presents a higher value therein. When these items whose factor loads vary between .49 and .85 are analyzed, it is seen that these items are associated with the positive perceptions and assessments of an individual regarding his/her body; thus, named the "Positive Perception of the Body".
- The fourth factor involves four items and items 3, 9, 19, and 20 constitute one dimension. When these items whose factor loads vary between .70 and .89 are analyzed, it is found that these items are associated with the desire of an individual to make changes to his/her body and the relevant efforts; thus, named the "Body Change" factor.

Table 2. Factor Loads of Items related to Body Image Scale

Scale Item numbers	Factor Loads			
	1	2	3	4
M10	.98			
M18	.84			
M12	.78			
M14	.69			
M6	.64			
M8	.61			
M13	.58			
M2		.88		
M5		.84		
M11		.73		
M1		.59		
M21	.40	.54		
M15			.85	
M7			.82	
M16	.31		.64	
M17			.49	
M4			.49	
M3				.89
M9				.75
M19				.72
M20				.70

Confirmatory Factor Analysis (CFA)

CFA was conducted on data collected from the second study group. By employing CFA, it is aimed at identifying the compliance of the previously established structure with the new data set (Orçan, 2018). Bearing in mind the scale of four sub-dimensions and 21 items obtained as a result of EFA, Lisrel 8.80 program and Path Diagram was created. Following CFA, when item factor loads and t-values were analyzed, no problematic item was detected. Once the model was established, certain corrections were suggested in line with the program. Looking at the correction index, it was detected that errors in items 1. and 5., 2. and 5., 7. and 15 were related. The corrections suggested by the program to improve the established model were executed by seeking an expert opinion.

The perfect and acceptable fit values related to fit indices were examined with the intent to detect the adequacy of the test model (Hu & Bentler, 1999) and the values attained in line with the corrections are summed up in Table 3.

Table 3. Fit Index Values obtained from CFA

Examined Fit Index	Perfect Fit Standards	Acceptable Fit Standards	Obtained Fit Index	Result
χ^2/df	$0 \leq \chi^2/df \leq 2$	$2 \leq \chi^2/df \leq 3$	1.72	Perfect
GFI	$.95 \leq GFI \leq 1.00$	$.90 \leq GFI \leq 95$	.87	Acceptable
AGFI	$.90 \leq AGFI \leq 1.00$	$.85 \leq AGFI \leq .90$	.83	Acceptable
CFI	$.95 \leq CFI \leq 1.00$	$.90 \leq CFI \leq .95$	.95	Perfect
NFI	$.95 \leq NFI \leq 1.00$	$.90 \leq NFI \leq .95$	.90	Acceptable
NNFI	$.95 \leq NNFI \leq 1.00$	$.90 \leq NNFI \leq .95$	.94	Acceptable
IFI	$.95 \leq IFI \leq 1.00$	$.90 \leq IFI \leq .95$	.95	Perfect
RMSEA	$.00 \leq RMSEA \leq .05$	$.05 \leq RMSEA \leq .08$	.061	Acceptable
SRMR	$.00 \leq SRMR \leq .05$	$.05 \leq SRMR \leq .10$	.063	Acceptable
PNFI	$.95 \leq PNFI \leq 1.00$	$.50 \leq PNFI \leq .95$	.77	Acceptable
PGFI	$.95 \leq PGFI \leq 1.00$	$.50 \leq PGFI \leq .95$	.67	Acceptable

$\chi2$=309.73, df=180

In line with the corrections, Path Diagram given in Figure 2 was created. When Figure 2 is analyzed, it is seen that the item factor loads range from .38 to .83, these values are above .30 and meet the required standard. In consideration of these results, it can be stated that the item factor loads are at a good level.
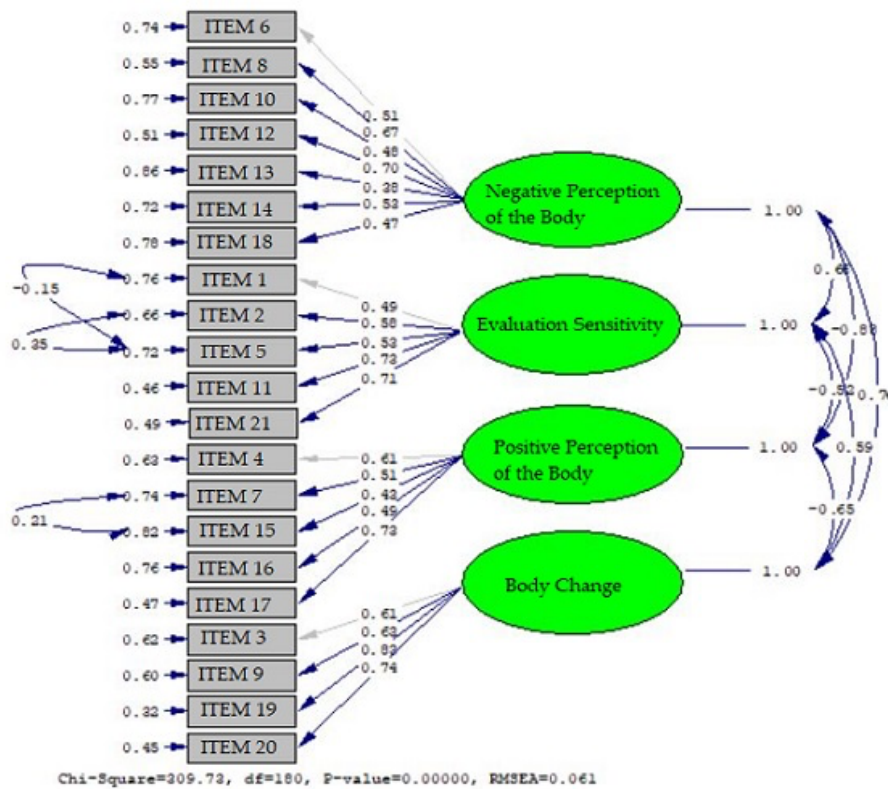
Figure 2. Path diagram and factor loads related to Body Image Scale

When Table 3 and Figure 2 are examined, it is identified that CFA reveals $\chi2$=309.73 and df=180 and to this respect, the calculation is as follows $\chi2/df$=1.72. Considering the fit standard values, the calculated ratio being less than 2 represents a perfect fit. The analysis revealed that RMSEA value being .061, SRMR value being .063, PGFI value being .67, NFI value being .90, NNFI value being .94, and PNFI value being .77 fell within the acceptable value range. GFI value was established to be .87 while AGFI value

was .83. It can be stated that these values are approximately within the acceptable value range. CFI and IFI values were established to be .95. These values can be stated to correspond to the perfect fit.

Convergent Validity

The Body Image Scale and Body Appreciation Scale were simultaneously conducted on 384 adolescents with intent to assess the convergent validity of the Body Image Scale. The relationship between Pearson Correlation Analysis and two measuring instruments was examined and the results were summarized in Table 4.

Table 4. Correlation between Body Appreciation Scale and Body Image Scale

	1	2	3	4	5	6
Body Appreciation Scale Total Score (1)	1					
1. Factor (2)	-.55**	1				
2. Factor (3)	-.33**	.55**	1			
3. Factor (4)	-.62**	.62**	.37**	1		
4. Factor (5)	-.45**	.58**	.42**	.46**	1	
Body Image Scale Total Score (6)	-.62**	.89**	.75**	.76**	.76**	1
Average	39.38	13.70	12.87	12.34	10.50	49.41
Standard Deviation	8.42	5.47	4.81	4.24	4.15	14.84

**p<.01

According to Table 4, a negative statistically significant correlation is observed between Body Appreciation Scale and Body Image Scale, and its sub-dimensions. As for Body Appreciation Scale, the positive body image increases as the total score increases; however, regarding Body Image Scale, the negative body image increases in contrast to the increase in the total score. The reason why there is a negative correlation between the two scales can be described in this manner.

Reliability Analysis

In reliability analysis of the Body Image Scale, Cronbach Alpha internal consistency coefficient technique was employed. The results are summed up in Table 5.

Table 5. Reliability Analysis Results of Body Image Scale

Factor	Item Number	Internal Consistency (Cronbach Alpha)	
		EFA Group	CFA Group
1. Factor	7	.88	.77
2. Factor	5	.85	.79
3. Factor	5	.79	.70
4. Factor	4	.79	.78
Total Scale	21	.92	.88

The consistency of the scale was tested separately in data sets on which EFA and CFA were performed. When Table 5 is analyzed, it is seen that the Cronbach Alpha internal consistency coefficients related to sub-dimensions within the EFA group are .88 for the first factor composed of seven items; .85 for the second factor composed of five items; .79 for the third factor composed of five items; and .79 for the fourth factor composed of four factors. It is observed that the Cronbach Alpha internal consistency coefficients related to sub-dimensions within the CFA group are .77 for the first factor composed of seven items; .79 for the second factor composed of five items; .70 for the third factor composed of five items; and .78 for the fourth factor composed of four factors. The Cronbach Alpha internal consistency coefficient obtained for all items demonstrates the total reliability of the scale in question, and a value of

.70 and above is accepted as a standard (Kılıç, 2016). As seen in Table 5, the values are bigger than .70 and the scale items along with sub-dimensions meet that criterion. As a result of the analysis of EFA and CFA groups, the Cronbach Alpha internal consistency coefficients of the total scale items were calculated as .92 and .88, respectively.

Item Analysis

The predictive power of items in the scale for total score and the level of distinctiveness were detected by conducting item analysis on Body Image Scale. To this respect, the corrected total-item correlation and the 27% lower-higher group comparisons were calculated. The results are summarized in Table 6.

Table 6. Results obtained from Item Analysis for Body Image Scale

Scale Item Numbers	Corrected Item Total Correlation	Groups	Average	Standard Deviation	*t*
I1	.49	Upper$_{\%27}$	3.29	1.19	11.67**
		Lower$_{\%27}$	1.57	.92	
I2	.46	Upper$_{\%27}$	3.81	1.16	11.95**
		Lower$_{\%27}$	1.94	1.08	
I3	.47	Upper$_{\%27}$	4.10	1.03	11.58**
		Lower$_{\%27}$	2.19	1.31	
I4	.54	Upper$_{\%27}$	2.96	1.13	9.50**
		Lower$_{\%27}$	1.56	.97	
I5	.42	Upper$_{\%27}$	3.45	1.22	9.61**
		Lower$_{\%27}$	1.92	1.05	
I6	.56	Upper$_{\%27}$	3.34	1.10	11.99**
		Lower$_{\%27}$	1.61	.98	
I7	.48	Upper$_{\%27}$	3.33	1.27	9.29**
		Lower$_{\%27}$	1.83	1.02	
I8	.63	Upper$_{\%27}$	2.88	1.24	13.63**
		Lower$_{\%27}$	1.15	.38	
I9	.50	Upper$_{\%27}$	3.37	1.12	11.80**
		Lower$_{\%27}$	1.63	.99	
I10	.58	Upper$_{\%27}$	2.70	1.11	13.96**
		Lower$_{\%27}$	1.12	.32	
I11	.58	Upper$_{\%27}$	3.80	1.00	15.71**
		Lower$_{\%27}$	1.63	.98	
I12	.69	Upper$_{\%27}$	2.80	1.15	14.82**
		Lower$_{\%27}$	1.07	.29	
I13	.54	Upper$_{\%27}$	2.40	1.33	8.87**
		Lower$_{\%27}$	1.15	.52	
I14	.60	Upper$_{\%27}$	3.17	1.25	12.78**
		Lower$_{\%27}$	1.35	.70	
I15	.39	Upper$_{\%27}$	3.63	1.09	7.60**
		Lower$_{\%27}$	2.43	1.17	
I16	.42	Upper$_{\%27}$	2.90	1.20	8.69**
		Lower$_{\%27}$	1.59	.97	
I17	.63	Upper$_{\%27}$	3.49	1.03	14.28**
		Lower$_{\%27}$	1.49	.99	
I18	.56	Upper$_{\%27}$	2.90	1.12	14.10**
		Lower$_{\%27}$	1.21	.50	
I19	.63	Upper$_{\%27}$	3.63	1.10	15.09**
		Lower$_{\%27}$	1.50	.92	
I20	.59	Upper$_{\%27}$	3.74	1.17	13.35**

		Lower %27	1.67	1.06	
I21	.58	Upper %27	3.25	1.10	15.35**
		Lower %27	1.29	.71	

**p<.001

The item-total correlation indicates the relationship between the total score obtained from the scale and the score obtained from the scale items. The item-total correlation must not be negative and must not hold a lower value; items holding a value of .30 and above are stated to be adequate to distinguish the feature to be measured (Büyüköztürk, 2016). According to Table 6, the corrected item-total correlation of scale takes values ranging from .39 to .69 and meets the criterion of a .30 value.

An item analysis was conducted based on the difference of 27% lower-higher group averages of items in the scale. By using this method, the total scores received by the participants were initially calculated and ranked from highest to lowest. Based on ranking, 104 out of 384 people constituting the sample were sorted as a higher group and the other 104 were sorted as a lower group. The difference between the %27 lower-higher group averages established by the independent sample t-test was calculated. As a result of the analysis, it was found that the t-values of differences in the item scores of %27 lower-higher groups varied from 7.60 (p<.001) and 15.71 (p<.001) and proved to be significant.

DISCUSSION

Several measuring instruments were developed in the international literature to measure the body image of individuals and some of them were adapted to Turkish. The Body Cathexis Scale developed by Secord & Jourard (1953) and tested for validity and reliability by Hovardaoğlu (1993) is the most frequently employed measuring instrument in the body image studies carried out in Turkey. The Body Cathexis Scale has comprised of 40 items and each item represents an organ, a part of the body, or a function (Hovardaoğlu, 1993). Although the above-cited measuring instrument is ideal for measuring each dimension of the body separately; the technological developments since the adaptation of scale, varying ideal body dimensions imposed in time, the influence of models presented as ideal body on the meaning attributed by an individual to his/her body, the proliferation of mass media and the further exposure of individuals to the social beauty ideals of today's world through mass media prove the necessity to develop a new measuring instrument. Besides, other adaptation efforts were exerted to bring measuring instruments to the literature in Turkey to measure the body image (Anlı et al., 2015; Bakalım & Taşdelen-Karçkay, 2016; Doğan, 2010; Doğan et al., 2011; Yağmur & Tosun, 2018); however, the use of these measuring instruments was quite limited. On the other side, the adapted measuring instruments bear certain limitations similar to those of the Body Cathexis Scale. For this reason, this study places emphasis on developing a measuring instrument, of which validity and reliability are proven, to measure the body image of adolescents and young adults and bring in a Body Image Scale to the literature in Turkey.

Considering the stages of scale development, initially, a 30-item draft measuring instrument was developed, and the CVI and CVR were calculated for the content validity of the scale. It was noted that the content validity ratio of four items placed in the draft form was less than the minimum content validity standard value specified as .56 (Lawshe, 1975); thus, these items were corrected and then included in the analysis. The final 30-item draft form was applied to participants in the study group.

Within the scope of the construct validity of the scale, EFA and CFA were conducted. Using EFA, a four-factor structure composed of 21 items and explaining 62% of the total variance was attained. In

contemplation of items gathered under these four factors and the theoretical frame related to their content, the factors were named "Negative Perception of the Body", "Evaluation Sensitivity", "Positive Perception of the Body", and "Body Change". The variance ratio is 30% and above as explained in EFA is accepted as a criterion (Büyüköztürk, 2016) and it is seen that the calculated ratio meets this criterion. The fit indices of the model were analyzed via CFA and it is seen that the fit indices range between the perfect and acceptable fit standards (Hu & Bentler, 1999). The results on fit standards obtained following the CFA demonstrated that the compatibility level of the four-factor model composed of 21 items was adequate. On the grounds of these findings, it can be stated that the construct validity of the Body Image Scale was achieved. Once the construct validity of the scale had been achieved, the Body Appreciation Scale was utilized to assess the convergent validity, and a negative statistically significant correlation was revealed between the two measuring instruments. Because the high scores obtained from the Body Appreciation Scale indicate positive body image whereas the high scores obtained from the Body Image Scale indicate negative body image, a negative correlation was an expected result.

Within the context of reliability analysis, the internal consistency of the scale was tested in data sets on which EFA and CFA had been carried out, and the Cronbach Alpha internal consistency coefficients for two separate samples were calculated as .92 and .88, respectively. In the literature, scales holding Cronbach Alpha coefficients of .80 and above are accepted to possess high reliability (Fornell & Larcker, 1981; Yaşar, 2014; Yıldız & Uzunsakal, 2018). Accordingly, this judgment can be considered as evidence of the reliability of the Body Image Scale. Lastly, as a result of item analysis, it was noted that the corrected item-total correlation of scale varied between the values of .39 and .69, and met the value criterion of .30 (Büyüköztürk, 2016). It was found that the t-values of differences in the item scores of 27% lower-higher groups were proved to be significant for every item on the scale. When these findings are assessed according to the accepted standards, it can be stated that items in the Body Image Scale have high levels of predictive power for total score and distinctiveness.

Based on findings obtained in the study, the Body Image Scale is a valid and reliable measuring instrument that can be employed to measure the body image of adolescents and young adults. The Body Image Scale is a 5-point Likert scale composed of four factors and 21 items. Items 4, 7, 15, 16, and 17 in the scale are reverse coded and the high scores obtained from the scale represent that individuals hold negative body image.

Strong results were attained during the validity and reliability studies conducted on the Body Image Scale. Initially, this study aimed at developing a measuring instrument for the adolescents and young adults to assess their body image; however, only the adolescents became the subjects in all the development stages of the scale. Therefore, it can be stated that reconstructing the validity and reliability works while conducting a study on individuals aged between 18 and 29, who are described as young adults, will ensure more accurate and precise results. On the other side, this study which was carried out with the intent to develop a Body Image Scale was implemented on a sample group of adolescents residing in a province located in the northeast Turkey. Therefore, it will be appropriate to note that the validity and reliability works must be reconstructed when applying this measuring instrument in other regions of Turkey.

REFERENCES

Aliyev, B. & Türkmen A. (2014). Parent, peer and media effect on the perception of body image in preadolescent girls and boys. *Universal Journal of Psychology, 2*(7), 224-230. https://doi.org/10.13189/ujp.2014.020703

Andrew, R., Tiggemann, M., & Clark, L. (2014). Positive body image and young women's health: Implications for sun protection, cancer screening, weight loss and alcohol consumption behaviours. *Journal of Health Psychology, 21*(1), 28-39. https://doi.org/10.1177/1359105314520814

Anlı, G., Akın, A., Eker, H., & Özçelik, B. (2015). Bedeni Beğenme Ölçeği: Geçerlik ve güvenirlik çalışması [The validity and reliability of Turkish version of the Body Appreciatıon Scale]. *The Journal of Academic Social Science Studies, 36*, 505-511. https://doi.org/10.9761/JASSS2906

Avalos, L., Tylka, T. L. & Wood-Barcolow, N. (2005). The Body Appreciation Scale: Development and psychometric evaluation. *Body Image*, 2, 285-297. https://doi.org/10.1016/j.bodyim.2005.06.002

Bakalım, O., & Taşdelen-Karçkay, A. (2016). Body Appreciation Scale: Evaluation of the factor structure and psychometric properties among male and female Turkish university students. *Mersin Üniversitesi Eğitim Fakültesi Dergisi- Mersin University Journal of the Faculty of Education, 12*(1), 410-422. https://doi.org/10.17860/efd.38032

Barker, E. T., & Galambos, N. L. (2003). Body dissatisfaction in adolescent girls and boys: Risk and resource factors. *Journal of Early Adolescence, 23*(2), 141-165. https://doi.org/10.1177/0272431603251081

Botta, R. A. (1999). Television images and adolescent girls' body image disturbance. *Journal of Communication, 49*(2), 22-41. https://doi.org/10.1111/j.1460-2466.1999.tb02791.x

Büyüköztürk, Ş. (2016). *Sosyal bilimler için veri analizi el kitabı: İstatistik, araştırma deseni, SPSS uygulamaları ve yorum (22. baskı).* Pegem Akademi.

Callaghan, G. M., Sandoz, E. K., Darrow, S. M., & Feeney, T. K. (2015). The Body Image Psychological Inflexibility Scale: Development and psychometric properties. *Psychiatry Research, 226,* 45–52. https://doi.org/10.1016/j.psychres.2014.11.039

Cash, T. F., & Szymanski, M. L. (1995). The development and validation of the body-image ideals questionnaire. *Journal of Personality Assessment, 64*, 466-477. https://doi.org/10.1207/s15327752jpa6403_6

Cash, T. F., Fleming, E. C., Alindogan, J., Steadman, L., & Whitehead, A. (2002). Beyond body image as a trait: The development and validation of the Body Image States Scale. *Eating* Disorders, 10, 103–113. https://doi.org/10.1080/10640260290081678

Cash, T. F., Santos, M. T. & Williams, E. F. (2005). Coping with body-image threats and challenges: Validation of the Body Image Coping Strategies Inventory. *Journal of Psychosomatic Research*, 58, 191-199. https://doi.org/10.1016/j.jpsychores.2004.07.008

Clay, D., Vignoles, V. L., & Dittmar, H. (2005). Body image and self-esteem among adolescents girls: Testing the influence of sociocultural factors. *Journal of Research on Adolescence, 15*(4), 451-477. https://doi.org/10.1111/j.1532-7795.2005.00107.x

Cooper, P. J., Taylor, M. J., Cooper, Z., & Fairburn, C. G. (1987). The development and validation of the body shape questionnaire. *International Journal of Eating Disorders, 6*(4), 485-494. https://doi.org/10.1002/1098-108x(198707)6:4<485::aid-eat2260060405>3.0.co;2-o

Cuzzolaro, M., Vetrone, G., Marano, G., & Garfinkel, P. E. (2006). The Body Uneasiness Test (BUT): Development and validation of a new body image assessment scale. *Eating and Weight Disorders,* 11, 1-13. https://doi.org/10.1007/bf03327738

Çakır, A. (2014). Faktör analizi [Factor Analysis]. İstanbul Ticaret Üniversitesi, İstanbul. https://docplayer.biz.tr/38884504-T-c-istanbul-ticaret-universitesi-sosyal-bilimler-enstitusu-isletme-anabilim-dali-isletme-doktora-programi-faktor-analizi-ayhan-cakir-1250d91213.html

DeVellis, R. F. (2014). *Ölçek geliştirme kuram ve uygulamalar [Scale development theory and applications]* (T. Totan, Çev.). Nobel Yayın Dağıtım.

Doğan, T. (2010). Sosyal Görünüş Kaygısı Ölçeğinin (SGKÖ) Türkçe uyarlaması: Geçerlik ve güvenirlik çalışması [Adaptation of the Social Appearance Anxiety Scale (SAAS) to Turkish: A validity and reliability study]. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi- Hacettepe University Journal of Education,* 39, 151-159. http://www.efdergi.hacettepe.edu.tr/yonetim/icerik/makaleler/467-published.pdf

Doğan, T., Sapmaz, F., & Totan, T. (2011). Beden İmgesi Baş Etme Stratejileri Ölçeğinin Türkçe uyarlaması: Geçerlilik ve güvenilirlik çalışması [Adaptation of the Body Image Coping Strategies Inventory to Turkish: A validity and reliability study]. *Anadolu Psikiyatri Dergisi- Anatolian Journal of Psychiatry,* 12, 121-129. https://toad.halileksi.net/sites/default/files/pdf/beden-imgesi-bas-etme-stratejileri-olcegi-toad.pdf

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50. https://doi.org/10.2307/3151312

Grogan, S. (2016). *Understanding body image in men, women and children.* Routledge.

Hargreaves, D. A., & Tiggemann, M. (2004). Idealized media images and adolescent body image: 'Comparing' boys and girls. *Body Image, 1,* 351–361. https://doi.org/10.1016/j.bodyim.2004.10.002

Helfert, S., & Warschburger, P. (2011). A prospective study on the impact of peer and parental pressure on body dissatisfaction in adolescent girls and boys. *Body Image, 8,* 101-109. https://doi.org/10.1016/j.bodyim.2011.01.004

Hormes, J. M., Lytle, L. A., Gross, C. R., Ahmed, R. L., Troxel, A. B., & Schmitz, K. H. (2008). The Body Image And Relationships Scale: Development and validation of a measure of body image in female breast cancer survivors. *Journal of Clinical Oncology, 26*(8), 1269–1274. https://doi.org/10.1200/jco.2007.14.2661

Hovardaoğlu, S. (1993). Vücut Algısı Ölçeği [Body-cathexis scale]. *Psikiyatri, Psikoloji, Psikofarmakoloji Dergisi-Journal of Psychiatry Psychology Psychopharmacology, 1,* 26.

Hu, L. T., & Bentler, P. M. (1999). Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6,* 1-55. https://doi.org/10.1080/10705519909540118

Jones, D. C. (2002). Social comparison and body image: Attractiveness comparisons to models and peers among adolescent girls and boys. *Sex Roles, 45,* 645–664. https://doi.org/10.1023/A:1014815725852

Jones, D. C. (2004). Body image among adolescent girls and boys: A longitudinal study. *Developmental Psychology, 40*(5), 823-835. https://doi.org/10.1037/0012-1649.40.5.823

Karakoç, F. Y., & Dönmez, L. (2014). Ölçek geliştirme çalışmalarında temel ilkeler [Basic principles of scale development]. *Tıp Eğitimi Dünyası- The World of Medical Education, 40,* 39-49. https://dergipark.org.tr/tr/download/article-file/199275

Karaman, H. (2015). *Açımlayıcı faktör analizinde kullanılan faktör çıkartma yöntemlerinin karşılaştırılması [The comparison of factor extraction methods used in exploratory factor analysis].* Yayınlanmamış yüksek lisans tezi, Hacettepe Üniversitesi, Ankara.

Kılıç, S. (2016). Cronbach'ın alfa güvenirlik katsayısı [Cronbach's alpha reliability coefficient]. *Journal of Mood Disorders, 6*(1), 47-48. https://doi.org/10.5455/jmood.20160307122823

Kulaksızoğlu, A. (2015). *Ergenlik psikolojisi [Adolescent psychology].* İstanbul: Remzi Kitabevi.

Lawler, M., & Nixon, E. (2011). Body dissatisfaction among adolescent boys and girls: The effects of body mass, peer appearance culture and internalization of appearance ideals. *Journal of Youth and Adolescence, 40*(1), 59-71. https://doi.org/10.1007/s10964-009-9500-2

Maezono, J., Hamada, S., Sillanmäki, L., Kaneko, H., Ogura, M., Lempinen, L., & Sourander, A. (2019) Cross-cultural, population-based study on adolescent body image and eating distress in Japan and Finland. *Scandinavian Journal of Psychology,* 60, 67–76. https://doi.org/10.1111/sjop.12485

McCabe, M., & Ricciardelli, L. (2004). A longitudinal study of pubertal timing and extreme body change behaviors among adolescent boys and girl. *Adolescence, 39*(153), 145-166.

McCabe, M. P., & Ricciardelli, L. A. (2003). Sociocultural influences on body image and body changes among adolescent boys and girls. *The Journal of Social Psychology, 143*(1), 5-26. https://doi.org/10.1080/00224540309598428

McCabe, M. P., Ricciardelli, L. A., & Finemore, J. (2002). The role of puberty, media and popularity with peers on strategies to increase weight, decrease weight and increase muscle tone among adolescent boys and girls. *Journal of Psychosomatic Research, 52*, 145–154. https://doi.org/10.1016/s0022-3999(01)00272-0

McKinley, N. M., & Hyde, J. S. (1996). The Objectified Body Consciousness Scale: Development and validation. *Psychology of Women Quarterly, 20,* 181–215. https://doi.org/10.1111/j.1471-6402.1996.tb00467.x

Mendelson, B., Mendelson, M., & White, D. (2001). Body-Esteem Scale for adolescents and adults. *Journal of Personality Assessment, 76*(1), 90-106. https://doi.org/10.1207/s15327752jpa7601_6

Murray, K. M., Bryne, D. G., & Rieger, E. (2011). Investigating adolescent stress and body image. *Journal of Adolescence, 34*, 269–278. https://doi.org/10.1016/j.adolescence.2010.05.004

Oktan, V. (2012). Beden imajı ve reddedilme duyarlılığının öznel iyi oluşu yordama gücü [The predictive power of body image and rejection sensitivity on subjective well-being]. *Eğitim Bilimleri ve Uygulama, 11*(22), 119-134. https://www.idealonline.com.tr/IdealOnline/pdfViewer/index.xhtml?uId=8952&ioM=Paper&preview=true&isViewer=true#pagemode=bookmarks

Oktan, V., & Şahin, M. (2010). Kız ergenlerde beden imajı ile benlik saygısı arasındaki ilişkinin incelenmesi [Examination of the relationship between the body image and self-esteem of female adolescents]. *Uluslararası İnsan Bilimleri Dergisi- International Journal of Human Science, 7*(2), 553-556. http://www.insanbilimleri.com/

Orçan, F. (2018). Açımlayıcı ve doğrulayıcı faktör analizi: İlk hangisi kullanılmalı? [Exploratory and confirmatory factor analysis: Which one to use first?] *Eğitimde ve Psikolojide Ölçme ve Değerlendirme Dergisi- Journal of Measurement and Evaluation in Education and Psychology, 9*(4), 413-421. https://doi.org/10.21031/epod.394323

Pesa, J. A., Syre, T. R., & Jones, E. J. (2000). Psychosocial differences associated with body weight among female adolescents: The importance of body image. *Journal of Adolescent Health, 26,* 330–337. https://doi.org/10.1016/s1054-139x(99)00118-4

Rucker, C. E., & Cash, T. F. (1992). Body images, body-size perceptions, and eating behaviors among African American and White college women. *International journal of Eating Disorders, 12*(3), 291-299. https://doi.org/10.1002/1098-108x(199211)12:3<291::aid-eat2260120309>3.0.co;2-a

Rust J., & Golombok S. (1997). *Modern Psychometrics: The science of psychological assessment.* New York: Routledge.

Secord, P. F., & Jourard, S. M. (1953). The appraisal of body-cathexis: Body-cathexis and the self. *Journal of Counsulting Psychology, 17*(5), 343-347. https://doi.org/10.1037/h0060689

Şahin, M. G., & Boztunç-Öztürk, N. (2018). Eğitim alanında ölçek geliştirme süreci: Bir içerik analizi çalışması [Scale development process in educational field: A content analysis research]. *Kastamonu Eğitim Dergisi- Kastamonu Education Journal, 26*(1), 191-199. https://doi.org/10.24106/kefdergi.375863

Tabachnick, B. G., & Fidel, L. S. (2015). *Çok değişkenli istatistiklerin kullanımı [Using Multivariate Statistics]* (M. Baloğlu, Çev.). Nobel Yayın Dağıtım.

Tiggemann, M., & Slater, A. (2017). Facebook and body image concern in adolescent girls: A prospective study. *International Journal of Eating Disorders, 50*(1), 80–83. https://doi.org/10.1002/eat.22640

Tylka, T. L., & Wood-Barcalow, N. L. (2015). The Body Appreciation Scale-2: Item refinement and psychometric evaluation. *Body Image, 12*, 53–67. https://doi.org/10.1016/j.bodyim.2014.09.006

Tylka, T. L. Bergeron, D., & Schwartz, J. P. (2005). Development and psychometric evaluation of the Male Body Attitudes Scale. *Body Image*, 2, 161-175. https://doi.org/10.1016/j.bodyim.2005.03.001

Wolff, G. E., & Clark, M. (2001). Changes in eating self- efficacy and body image following cognitive behavioral group therapy for baring eating disorder: A clinical study. *Eating Behaviors, 2*(2), 97-104. https://doi.org/10.1016/S1471-0153(01)00021-6

Wood, K. Becker, J., & Thompson, J. (1996). Body image dissatisfaction in pre-adolescent children. *Journal of Applied Developmental Psychology, 17*(1), 85-100. https://doi.org/10.1016/S0193-3973(96)90007-6

Yağmurcu, Y., & Tosun, L.P. (2018). Nesneleştirilmiş Beden Bilinci Ölçeğinin Türkçeye uyarlanması ve psikometrik özelliklerinin incelenmesi [Adaptation of the Objectified Body Consciousness Scale to Turkish and analysis of its psychometric characteristics]. *Nesne Psikoloji Dergisi, 6*(13), 225-255. https://doi.org/10.7816/nesne-06-13-01

Yaşar, M. (2014). İstatistiğe Yönelik Tutum Ölçeği: Geçerlilik ve güvenirlik çalışması [Attitudes Toward Statistics Scale: Validity and reliability study]. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi-Pamukkale University Journal of Education,* 36, 59-75. https://doi.org/10.9779/PUJE640

Yeşilyurt, S., & Çapraz, C. (2018). Ölçek geliştirme çalışmalarında kullanılan kapsam geçerliği için bir yol haritası [A road map for the content validity used in scale development studies]. *Erzincan Üniversitesi Eğitim Fakültesi Dergisi- Erzincan University Journal of Education Faculty, 20*(1), 251-264. https://doi.org/10.17556/erziefd.297741

Yıldız, D., & Uzunsakal, E. (2018). Alan araştırmalarında güvenilirlik testlerinin karşılaştırılması ve tarımsal veriler üzerine bir uygulama [A comparison of reliability tests in field researches and an application on agricultural data]. *Uygulamalı Sosyal Bilimler Dergisi- Applied Social Sciences Journal of Istanbul University-Cerrahpasa, 1,* 14-28. https://dergipark.org.tr/tr/download/article-file/507218

Yurdugül, H. (2005, Eylül 28-30). Ölçek geliştirme çalışmalarında kapsam geçerliği için kapsam geçerlik indekslerinin kullanılması [Using content validity indexes for content validity in instrument development studies]. *XIV. Ulusal Eğitim Bilimleri Kongresi,* Pamukkale Üniversitesi Eğitim Fakültesi, Denizli, Türkiye. https://yunus.hacettepe.edu.tr/~yurdugul/3/indir/PamukkaleBildiri.pdf

About Authors

Ezgi Saylan. She completed her undergraduate education at Karadeniz Technical University, Faculty of Education, Department of Psychological Counseling and Guidance. Afterward, she completed her master's degree in 2020 at Trabzon University. The author, who is still pursuing her doctorate at Trabzon University is working as a research assistant at Artvin Coruh University, Psychological Counseling and Guidance Department. She is interested in body image, and adolescence.

Vesile Soyyiğit. She completed her undergraduate education at Karadeniz Technical University, Faculty of Education, Department of Psychological Counseling and Guidance. She received her Master's and doctorate degrees in the field of Psychological Counseling and Guidance at Karadeniz Technical University. She is still working as a professor at Trabzon University, Psychological Counseling and Guidance Department. She is interested in self-injury, body image, and trauma.

Author Contributions

This study was conducted by all the authors working together and cooperatively. All of the authors substantially contributed to this work in each step of the study.

Conflict of Interest

It has been reported by the authors that there is no conflict of interest.

Funding

Note

This study was produced from the first author's master's dissertation, which was supervised by the second author.

Ethical Statement

This study was completed in accordance with the Helsinki Declaration. Accordingly, the research was reviewed by Trabzon University Social and Human Sciences Scientific Research and Publication Ethics Committee was given permission.
Ethics Committee Name: Trabzon University Social and Human Sciences Scientific Research and Publication Ethics Committee
Approval Date: 17/12/2019
Approval Document Number: 81614018-000-E.1300