

*Full Length Research Paper*

# Developing interest in art scale and determining the relation between personality type of teacher candidates and their interest in art

Taşkesen, Orhan

Erzincan University, Faculty of Education, Department of Fine Arts Education, Erzincan/ Turkey.

Received 12<sup>th</sup> February 2014; Accepted 7<sup>th</sup> April, 2014

The goal of this study is to develop a scale that measures individuals' interest in art and to test if there is a relation between this scale and personality types. For this aim, in the first stage of the study, a scale that can measure university students' interest in art is developed. Draft scale, which is made of 25 items, is conducted on 171 university students (98 female, 73 male) in 2013 to 2014 academic year. The scale is made of 2 sub-scales (Emotion-Perception and Behaviour) and there are 10 items in each sub-scale. At the end of the reliability analysis of the scale, Cronbach alpha coefficient is found to be .84. After the factor analysis of the interest in art scale which is made of 20 items, a structure made of 2 factors, whose eigenvalue is over 4.00 and explains 41% of the total variance, occurred. At the end of the confirmatory factor analysis, which is made for confirming this structure, fit index values are determined to be RMSEA= .052, GFI= .90, CFI= .90, AGFI= .89, NFI= .89, NNFI= .90 and SRMR= .048. In the second stage of the study, data obtained by the scale developed by Bacanlı, İlhan and Aslan is used. In order to determine the relation between university students' personality types and their interest in art, the prediction levels of responsibility, amiableness, being open to experience, extroversion, emotional instability and neuroticism are researched. It is found that, the variables of extroversion and being open to experience are significant predictors of interest in art.

**Key words:** Interest in art, personality, extroversion.

## INTRODUCTION

Today's human being spare more time for cultural and artistic activities. The increasing interest, necessity and desire for awareness about cultural and artistic events can be interpreted as the attempt to escape from the stress of daily life and the state of consciously or unconsciously taking shelter in art. In fact, the topic of 'healthy and balanced education is only possible with increasing interest in different disciplines' was discussed

long time ago. For instance, in the report of the Ministry of National Education, Higher Advisory Committee (MEBİ 1991), it is mentioned that; modern individual who has the goal of having healthy, balanced and satisfied life needs stimulating and using the abilities and potentials, It is stated that, "Science, technique and art", which are the products of this effort, refer to the three basic activities of human being. According to the report, these spheres of

E-mail: [orhantaskesen@erzincan.edu.tr](mailto:orhantaskesen@erzincan.edu.tr). Tel: +90 446 224 00 89

Author(s) agree that this article remain permanently open access under the terms of the Creative Commons Attribution License 4.0 International License

activities are the places for creation and development which are the bases of biologic social and cultural structures. It is the duty of our educational institutes to meet the increasing education demand in different fields of biology, technique and art. Mercin (2006) states that although general education has an important place in preparing individuals for future, formal education is the most significant and efficient institution, especially with its obligation of being planned. Although the place of our formal education institutes in this process is indisputable, in order to lighten the burden of these significant institutions, it is necessary to have space and place for individuals to reinforce and practice what they learn in daily life and to enable them realize their interest and desires. In this context, art education is the most important instrument which will make significant contributions to other disciplines. As mentioned before, education through art, which is the discipline in which creativity is ensured the best, has such a wide field of application and efficiency that, it cannot be reduced to schools as education institutions. "When art education is taken into consideration from this perspective, it can be said that, this education shouldn't be limited to talented students, everybody should take art education; as art education helps spiritual satisfaction of individual besides revealing creativity, and in that sense, it is an inseparable part of general education" (Mercin and Alakuş, 2007:19). Özsoy (2003) emphasizes that art education will continue to be one of the most important education field from preschool until university level, with its feature of being a part of formal training, an assistance in recreation and as a hobby, which can continue for life time. "Life long art education shouldn't be limited to formal education; it should be supported with museums, books, periodicals and every kind of audiovisual communication tools." (Alakuş, 2002: 154).

Besides creative, educational and ability-developing features of education through art, there are some researches stating that it is effective in personality development. "It is known that, feelings that are aroused by art in us have positive effect on emotions, conscious and perception level and they enable healthy personality development besides developing effective interpersonal relations" (Erel, 2012). Ersoy (2002:38, 42) emphasizes this feature of art education and states that when an individual who has an aesthetical attitude, reads novel, listens to music, watches a movie or theatre and looks at a painting, completely focuses on what he/she does, thinks of nothing else at that moment and only feels the existence of that work of art; the one that is interested in art can be more intelligent, tactful and richer in terms of spirituality. Hick (2004) emphasizes this feature of art by saying that "Art is a dynamic process in which an individual can express oneself in different styles about what happens around him in the society he lives".

In the literature of psychology, art and personality discussions occur in different forms such as researching

the thing that forms artistic personality, determining if there is a relation between artistic personality and mental illness, the effect of an artist's personality on his style, similarities between art and personality. Although many art-lovers feel being transformed as a result of an interaction with art, this change is rare, unique, unpredictable and difficult to measure. The interest in art and the potential transformers of its consumers still continues today (Djikić et al., 2009: 24). The structure of art, whose effect on individuals is difficult to measure, has pushed many researchers towards researching this issue.

Most of the art and personality researches have been taken into consideration abroad, but there are few researches about the issue in Turkey. The definition of personality is "Personality is a concept that includes a person's interest, attitude, abilities, physical appearance and his adaptation to environment" (Per and Beyoğlu, 2011:247). In their studies, Bacanlı et al. (2009: 262) stated that, studies about personality can be collected as five factors which are confirmed by many international studies. These are extroversion, emotional stability/neuroticism, amiableness, responsibility and being open to experience/culture. Studies that question the relation between art and personality types generally focus on personality and creativity (Rump, 1982, Perinne and Brodersen, 2005), personality and art performance or preferences (Chamorro-Premuzic et al., 2009, Giannini et al., 2013, Dreger and Moffett, 1975, Furnham and Bunyam, 1988, Rosenbluh, et al., 1972, McManus, and Furnham, 2006). For instance in the research of Zonash and Naqvi(2011), which is directly related with this issue, they attempted to explain learning styles and personality traits among mathematics, architecture and fine arts students. In their study titled "Extroversion Personality Traits and Awareness of Works of Art", Alkan et al. (2007:317) sought for an answer to the question "Is there a relation between extroversion personality trait of students and awareness of the works of art?" and they found that art awareness and extroversion can affect art awareness. Per and Beyoğlu (2010) made a research on the personality traits of students in fine arts, verbal and numerical departments, and found that there are similarities among the students in verbal and numerical departments while there are significant differences between students in fine arts department and students in other departments. Furnham and Chamorro-Premuzic (2003: 705) made a study titled "Personality, intelligence and art" and tested the relations between participants' personality, intelligence, art experience (interest in art, activities and knowledge) and attitude towards art. On the other hand, Furnham and Bachtiar (2008: 613) carried out a study titled "Personality and intelligence as predictors of creativity"; they conducted the Big Five NEO-FFI (Costa and McCrae, 1992) as a personality measure, the Wonderlic Personnel Test (Wonderlic, 1992) as an intelligence measure, and four measures of creativity. Furnham and Crump, in their study (2013), discovered

that art students out scored science students in coziness, sensibility, openness to change, awareness and GMA scores (verbal). In the light of the findings above, it can be said that, art students are more emotional and they are more open to different experiences. Also, this study shows that art students use their intelligence more effectively and they have a better perception of abstract concepts. Studies regarding creativity and personality traits (personally being artistic, analytical, social, realistic and entrepreneur) examined the relationship between different types of personality and arts and found a positive association between creativity and openness to experiences (Kaufman et al., 2013, King et al., 1996).

When the researches in the literature are analyzed in details, it can be seen that these researches generally focus on comparing individuals who take art education and students in other departments. On the other hand, as most of the researches on personality and art interest are made in America and Europe, it is obvious that there is a necessity of doing such researches in Turkey. So, the goal of this research is to develop an art interest scale for determining individuals who study in different fields but have art interest, and to compare personality traits according to individuals' art interest. For this aim, the answers to the below mentioned questions are searched:

- 1- Is it possible to develop a valid and reliable scale that measures the Interest in Art in Turkish culture?
- 2- How much do the personality traits such as extroversion, emotional stability/neuroticism, amiableness, responsibility and being open to experience, predict interest in art on the basis of five factor personality theory?

## METHOD

This study is a general survey study, aiming at developing a scale and practicing it. Survey studies are a research approach whose goal is to describe a past or present situation, event, individual, society or object within its conditions and as the way it is (Karasar, 2002). For this purpose, in the 1<sup>st</sup> stage of this study, a scale that can measure students' interest in art was developed. In the 2<sup>nd</sup> stage of the study data obtained by the scale that was developed by Bacanlı et al (2009) was used and the prediction level of university students' personality types on art interest was researched.

### Study group

The sample group of the research is made of a total of 171 university students; these students are 98 female (57%), 73 male students (43%) studying at the department of Painting Teaching (n=29), Psychological Counseling and Guidance (n=24), Mathematics teaching (n=33), department of Physical Education teaching (n=38), Music Education teaching (n=23) and department of Turkish teaching (n=24) in Education Faculty, Erzincan University.

### Developing of Interest in Art Scale

#### *Preparing of Scale Items*

During the process of developing the scale, literature review was

done in terms of periodicals, books and similar scales and based on this review, items about the necessity of taking art education were written down and an item pool was created. On the other hand, two (2) lecturers from Erzincan University, Education Faculty, Department of Psychological Counseling and Guidance made contributions to forming the item pool. There were 34 items in the first item pool. As a result of the first evaluation, including processes such as removing similar items in order to ensure content validity, reviewing statements, items were decreased to 24. In order to test the understandability of this 24 items form, it was conducted on 50 students in Erzincan University, Education Faculty. During application, feedbacks about the items that were determined to be difficult to understand were noted, necessary changes were done and the scale was finalized.

For content validity based on expert opinion, the prepared 24 items scale form was presented to 4 lecturers in Erzincan University, Education Faculty, Department of Educational Sciences. After experts made an analysis on the issue, they evaluated the understand ability of each item and items' corresponding to the need of taking art education. In addition to these, experts were required to give information about the items that should be removed from the scale, and items that should be added. In accordance with the suggestions of experts, some small changes were done and necessary arrangements were carried out. According to the expert views, after making necessary reorganizations, this new form of the scale was used for validity and reliability studies. Cronbach alpha coefficient was calculated for determining internal consistency of the scale made of 24 items, and this calculation is presented in Table 1.

When Table 1 is analyzed, it can be seen that the scale's corrected item-total correlation of 10<sup>th</sup> and 17<sup>th</sup> items is very low and in these items' section of "Cronbach Alpha coefficient if the item is removed", Cronbach alpha coefficient value increases. Based on this finding, these two items were removed from the scale; cronbach Alpha value was calculated again and presented in Table 2.

When Table 2 is analyzed, it can be seen that Interest in Art scale's 23<sup>rd</sup> item corrected Item-Total correlation was very low, so in these item section of "Cronbach Alpha coefficient if the item is deleted", Cronbach alpha coefficient value increases. Based on this finding, these item were deleted from the scale and scale's cronbach Alpha value was analyzed again. The result is presented in Table 3.

When Table 3 is analyzed, it can be seen that a total of 3 items were removed from the scale during reliability studies. At the end of this, it was determined that corrected Item-Total score correlation of the other items in the scale were as expected. In reliability studies of the scale, it was found that cronbach alpha coefficient was .87. At the end of these studies, items whose representation ability were low, were removed from the scale and validity studies of the scale form including 21 items, were carried out.

### Validity studies of interest in art scale

Structural validity was used in the validity studies of Interest in Art Scale. For structural validity, in order to determine scale's factor structure and sub-scales, explanatory and confirmatory factor analyses were carried out.

### Structural Validity of Interest in Art Scale

Explanatory factor analysis was made in order to analyze the factor structure of Interest in Art scale. Principal components technique and varimax rotation were used and factor number were analyzed; it was seen that items were grouped in 2 factors. The rotation was used in order to ensure independence, to be meaningful and clear

**Table 1.** Cronbach alpha coefficient of Interest in Art Scale.

Item No	Scale mean if the item is deleted	Scale variance if item is deleted	Corrected Item-Total correlation	Scale's Cronbach alpha coefficient if item is deleted
Art1	77,8063	201,163	,738	,848
Art2	77,5563	221,745	,349	,862
Art3	77,7000	219,633	,342	,862
Art4	78,1813	215,294	,405	,860
Art5	77,4813	217,547	,369	,861
Art6	78,4750	212,716	,471	,858
Art7	77,8625	211,629	,496	,857
Art8	77,2563	212,733	,500	,857
Art9	77,9000	216,644	,355	,862
<b>Art10</b>	<b>79,1438</b>	<b>230,526</b>	<b>,045</b>	<b>,871</b>
Art11	78,7250	218,553	,389	,861
Art12	77,1813	222,225	,297	,863
Art13	78,2625	207,239	,609	,853
Art14	77,5563	215,053	,471	,858
Art15	77,5625	216,160	,437	,859
Art16	77,2813	208,505	,651	,852
Art17	77,7875	231,665	,003	,873
Art18	77,3688	211,391	,576	,855
Art19	77,5625	214,160	,452	,859
Art20	77,4125	208,068	,671	,852
Art21	77,3563	220,218	,351	,862
Art22	77,6000	215,814	,457	,859
Art23	77,8188	223,156	,221	,866
Art24	77,7563	210,035	,589	,854

**Table 2.** Alpha coefficient of Interest in art scale (2<sup>nd</sup> application).

Item No	Scale mean if the item is deleted	Scale variance if item is deleted	Corrected Item-Total correlation	Scale's Cronbach alpha coefficient if item is deleted
Art2	71,5688	207,039	,349	,867
Art3	71,7125	205,640	,324	,868
Art4	72,1938	200,761	,407	,865
Art5	71,4938	203,119	,365	,866
Art6	72,4875	198,264	,472	,863
Art7	71,8750	196,940	,505	,862
Art8	71,2688	198,072	,508	,862
Art9	71,9125	201,992	,358	,867
Art11	72,7375	204,472	,373	,866
Art12	71,8000	216,664	,316	,879
Art13	72,2750	193,496	,596	,858
Art14	71,5688	200,360	,478	,863
Art15	71,5750	201,856	,431	,864
Art16	71,2938	194,008	,659	,857
Art18	71,3813	196,942	,580	,860
Art19	71,5750	199,655	,454	,864
Art20	71,4250	193,944	,668	,857
Art21	71,3688	205,329	,359	,866
Art22	71,6125	200,830	,472	,863
<b>Art23</b>	<b>71,8313</b>	<b>209,286</b>	<b>,198</b>	<b>,872</b>
Art24	71,7688	195,374	,600	,859

**Table 3.** Cronbach Alpha coefficient of Interest in Art Scale (3<sup>rd</sup> application).

Item No	Scale mean if the item is deleted	Scale variance if item is deleted	Corrected Item-Total correlation	Scale's Cronbach alpha coefficient if item is deleted
Art1	65,1801	175,361	,771	,866
Art2	64,9441	196,528	,327	,881
Art3	65,0745	194,269	,330	,881
Art4	65,5528	188,386	,442	,878
Art5	64,8571	191,511	,380	,880
Art6	65,8447	187,232	,471	,877
Art7	65,2484	185,625	,518	,876
Art8	64,6398	186,869	,518	,876
Art9	65,2733	190,950	,356	,881
Art10	66,1056	193,283	,377	,880
Art11	71,8000	216,664	,316	,879
Art12	65,6398	182,857	,592	,873
Art13	64,9317	189,264	,480	,877
Art14	64,9379	190,259	,448	,878
Art15	64,6646	182,837	,672	,871
Art16	64,7453	185,903	,584	,874
Art17	64,9565	189,429	,431	,879
Art18	64,7950	183,064	,673	,871
Art19	64,7391	194,557	,349	,881
Art20	65,0000	190,287	,452	,878
Art21	65,1366	184,706	,596	,873

**Table 4.** Variance Explanation ratios of the Items and Factors in the Interest in Art Scale.

Principal Components	Initial Eigenvalues			Extraction Sums of Squared Loadings			Extraction Sums of Squared Loadings after Varimax Rotation			
	S/N	Total	% of the explained variance	Cumulative %	Total	% of the explained variance	Cumulative %	Total	% of the explained variance	Total
1	6,509	30,995	30,995	30,995	6,509	30,995	30,995	4,515	21,502	21,502
2	2,304	10,970	41,965	41,965	2,304	10,970	41,965	4,297	20,463	41,965

increase conceptual meaningfulness, factor structure, on which varimax rotation was conducted, was analyzed. Findings of the analysis are presented in Table 4.

As can be seen in Table 4, after the factor analysis on 21 items of Interest in Art Scale, a 2 factor structure was obtained, whose eigenvalue, which explains 41 of total variance was over 4.00. Another method that was used in order to determine factor number is ScreePlot test. After ScreePlot test, it was seen that, the sudden change in the graphic curve's slope, occurred in the 2<sup>nd</sup> factor.

This data supports the 2 factors structure of data. In Figure 1, the result of ScreePlot test is presented in factor analysis, .40 or higher factor loads are acceptable (Kline, 2005). After Varimaxrotation method, distributions of items in 2 factors are presented in Table 5.

When Table 5 is analyzed, it can be seen that item 11 in 2<sup>nd</sup> factor was low and affected this factor negatively. In order to delete this effect, 11<sup>th</sup> item was deleted from the scale and factor analysis was repeated. Results are presented in Table 6.

When Table 6 is analyzed, it can be seen that after removing 11<sup>th</sup> item in 2<sup>nd</sup> factor, factor loads of the items in the scale became

acceptable. Components which formed the 2 factors structure of Interest in Art Scale, including 20 items, were analyzed and these names were suggested for them: 1<sup>st</sup> Factor is made of ten items including 1, 3, 5, 6, 9, 11, 13, 14, 16 and 17. This factor can be called Emotion and Reasoning Dimension. The 2<sup>nd</sup> factor is made of 10 items including 2, 4, 7, 8, 10, 12, 15, 18, 19 and 20. This factor can be called Behavior Dimension.

#### Confirmatory factor analysis

After forming and creating the 2 factors structure including 20 items on theoretical basis, results of Explanatory Factor Analysis was taken into consideration and the model of the scale was tested with Confirmatory Factor Analysis. Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Comparative Fit Index (CFI), Normed Fit Index (NFI), Non-Normed Fit Index (NNFI), Root-Mean-Square Error of Approximation (RMSEA) and Standardized Root-Mean-Square Residual (S-RMR), obtained at the end of Confirmatory

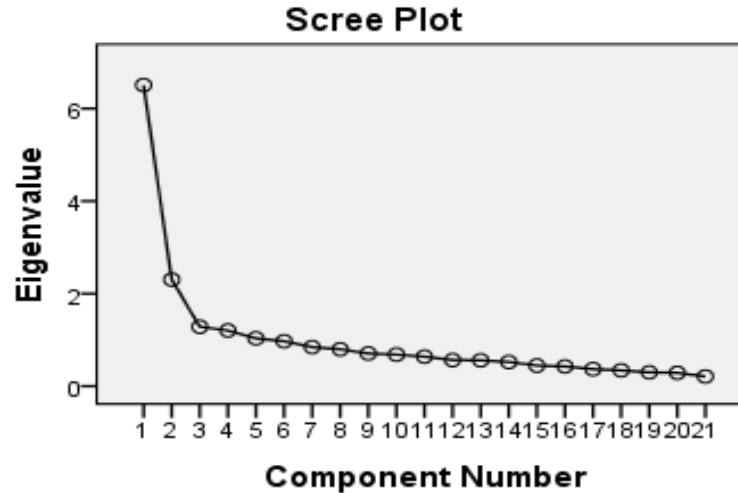


Figure 1. ScreePlot test result of Interest in Art Scale.

Table 5. Matrix of Factor loads after Varimax Rotation method.

Item no	Factor load	Factor load
art1	,821	-,195
art 18	,736	-,090
art 15	,735	-,218
art 12	,661	-,014
art 21	,656	,138
art 16	,654	,228
art 8	,590	,059
art 7	,576	,518
art 13	,542	,196
art14	,533	-,405
art 6	,527	-,069
art4	,520	,128
art20	,502	,430
art17	,498	-,289
art5	,442	-,418
art10	,429	,126
art3	,393	-,364
art19	,403	,628
art2	,385	,514
art9	,434	500
art11	,244	-,280

Factor Analysis, were analyzed and it was determined that Chi-Square value was at an acceptable level ( $\chi^2 = 570.29$ ,  $N=171$ ,  $sd=168$ ,  $\chi^2 / Sd$  ratio=3.39,  $p=0.00$ ). It was found that Fit Index values were RMSEA= .052, GFI= .90, CFI= .90, AGFI= .89, NFI= .89, NNFI= .90 and SRMR= .048. In fit indexes, for GFI, CFI, AGFI, NFI, NNFI: > .90 was taken as the criterion while for RMSEA and SRMR: < .05 was taken as the criterion (Hu and Bentler, 1999; Sümer, 2000). Based on these fit indexes, it was found that, there was coherence between the model and observed data and the

suggested model is reasonably coherent. Path diagram and factor loads of the model are presented in Figure 2. On the other hand, relations between sub scales of Interest in Art Scale and the relations between sub scales and total scores were analyzed by calculating the Paerson Product Moment Correlation Coefficient and results are presented in Table 7.

When Table 6 is analyzed, it can be seen that there is a positive correlation between .56 and .90 between sub scales of the Interest in Art Scale and sub scales and total score.

According to the Confirmatory Factor Analysis result in Figure 2, item factor loads varied between .38 and .79. On the other hand, it was seen that, Error Variance values of the items was between .38 and .86. At the end of CFA (confirmatory factor analysis), the scale with 2 dimensions and 20 items, was shaped. Based on these data, we can say that all of the items in the model are coherent with the model.

#### Interest in art scale item analysis

In order to test the item discrimination of Interest in Art Scale, 27% sub-super group comparison was made. It was seen that, t values about the differences between the scores of items in 27% subgroup and super group ranged between 3.96 ( $p<.01$ ) and 18.33 ( $p<.01$ ). These findings are presented in Table 8.

When Table 8 is analyzed, it can be seen that t values of every item in Interest in Art scale and total scores was found to be meaningful at  $p<.01$  significance level. These findings show that items and subscales of Interest in Art Scale discriminates the ones whose attitude about Art Interest is high and the ones whose attitude is low.

When Table 9 is analyzed, it can be seen that, internal consistency and test-retest reliability coefficients of total score and subscale scores are meaningful and high. It can also be seen that, the lowest coefficient in internal consistency is .81 while the lowest correlation in test-retest is .65. These findings can be interpreted as an indicator of reliability.

#### Evaluation of interest in art scale scores

The scale is a likert type scale including 20 items that are developed in order to evaluate individuals' interest in art. Individuals

**Table 6.** Matrix of Factor loads after Varimax Rotation Method (II. Application).

Item No	1 Factor load	2 Factor load
1-Whenever I see a poster related art I check it out	,740	,411
14- I think that art is necessary for individual development.	,710	,331
9- I don't like reading book promotions of newspaper supplements.	,666	,058
13- I don't like following artistic events on internet. (R)	,646	,086
5- I am not interested in painting exhibitions (R)	,612	,000
17- I have positive thoughts about artistic activities.	,594	,447
16- I don't like buying music albums (R)	,567	,114
3- I don't like talking about art with my friends (R)	,512	,021
11- I believe that I should spare some money for artistic activities.	,480	,435
6- I read information about the musician inside music albums.	,468	,287
7- I take the informing about instruments in concerts into consideration.	,062	,762
18- I take the informing about music in concerts into consideration.	,138	,739
2- I read culture and art pages of newspapers.	,094	,660
19- I like making researches about artists and their works on internet.	,086	,653
15- I watch carefully when there is news on TV about art.	,303	,627
20- I go to exhibitions with a friend who can have knowledge and experience.	,386	,541
12- When I see a beautiful photograph, I want to obtain information about it.	,253	,528
8- I think that individuals who deal with art are more creative.	,391	,448
4- I am interested in a branch of art unprofessionally.	,282	,445
10- We talk and make discussions about art events in my family.	,227	,382

**Table 7.** Correlation among Sub Scales (N=171).

		art	Emotion-Reasoning
Art	Pearson Correlation		
	Sig. (2-tailed)		
	N	171	
Emotion-Reasoning	Pearson Correlation	,903**	
	Sig. (2-tailed)	0	
	N	171	171
Behavior	Pearson Correlation	,861**	,567**
	Sig. (2-tailed)	0	0
	N	171	171

\*\* p &lt; .01

are required to show how much each item in the scale fits them by scoring the scale between 1 and 5. Answers to the items are ranked as: 5= I Definitely Agree, 4= I agree, 3=I am indecisive, 2= I don't agree and 1= I definitely don't agree. The scale is made of 2 subscales and there are 10 items in each subscale. 5 items in the scale are reverse scored. The lowest score is 20 while the highest score is 100 in the scale. Getting low point from the scale means that the individual has no interest in art; getting high point means that the individual is interested in art. The scale can be conducted both on groups and individuals; standard answering time of the scale is 30 minutes.

## FINDINGS

In the second stage of the study, the answer to the

question of "How much do the personality traits such as Extroversion, Emotional stability/Neuroticism, Amiability, Responsibility and Being open to Experience, predict interest in art, on the basis of five factor personality theory?" was searched. In this context, regression analysis of the data obtained from the study group was carried out. Analysis results are presented below. ANOVA test results of the regression model about the question of Extroversion, Emotional stability/ Neuroticism, Amiability, responsibility and being open to experience, predict an individual's interest in art, are presented in Table 10.

Results of the ANOVA test, which tested the meaningfulness of the regression model established on the prediction power of responsibility, amiableness, being

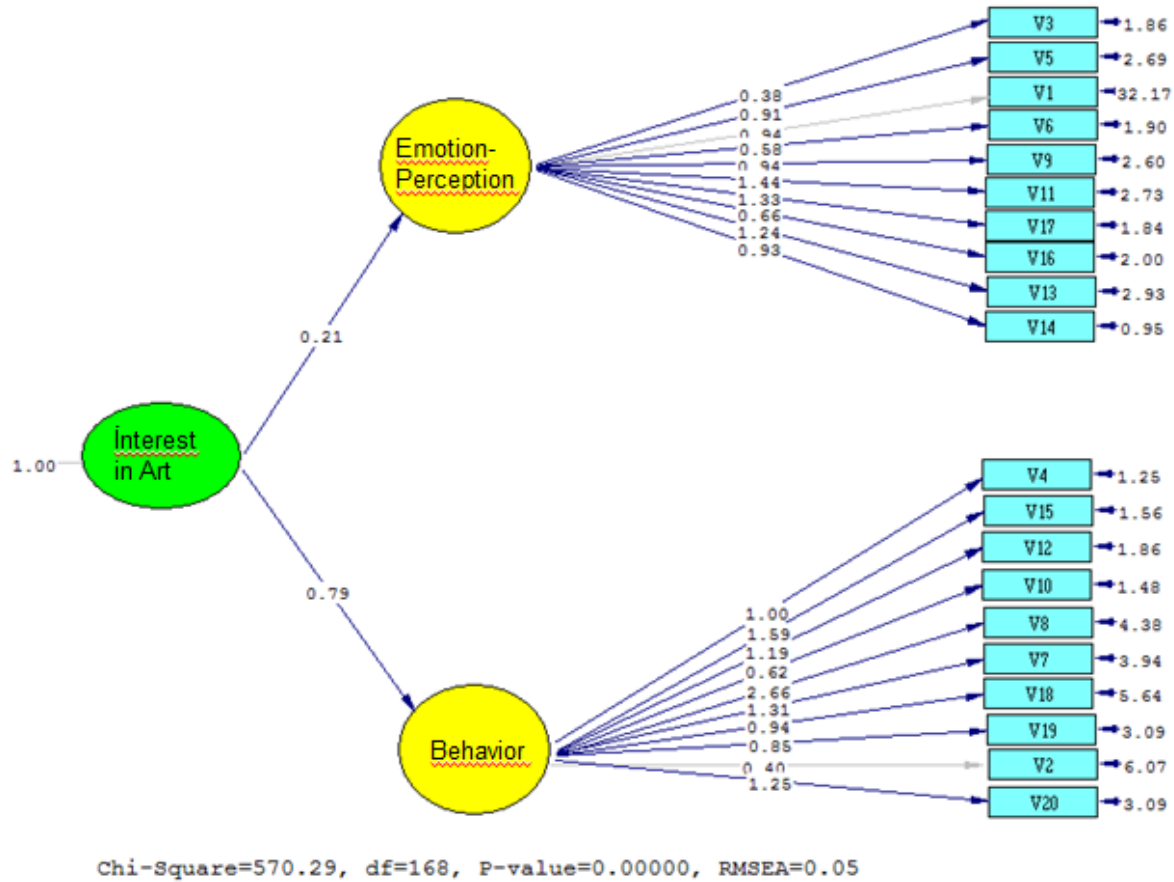


Figure 2. Path diagram and Factor loads of Interest in Art Scale.

Table 8. T values of the differences between the scores of items in 27% subgroup and super groups, determined according to the total scores of Interest in Art Scale.

Factor	Item No	t	Factor	Item No	t
Emotion and Reasoning	1	18,33	Behavior	2	3,96
	3	5,38		4	6,99
	5	5,77		7	9,73
	6	7,05		8	8,80
	9	6,23		10	5,40
	11	8,91		12	6,89
	13	6,89		15	9,68
	14	12,18		18	5,13
	16	6,09		19	6,02
	17	11,44		20	9,62

open to experience, extroversion, emotional instability/neuroticism, which are the subscales of personality scale based on the attributions developed according to five factor personality theory, are presented in Table 10. According to the test results, it can be said that, the model is generally meaningful ( $F_{5-171}: 10,962; p < .001$ ). Regression equality (mathematical model) about the

prediction of Interest in Art according to regression analysis, is presented below.

$$\text{Art Interest} = 38.441 + \text{Being open to Experience} \cdot 197 + \text{Extroversion} \cdot 229$$

When Table 11 is analyzed, it can be seen that being open to experience and extroversion have significant



**Table 9.** Internal Consistency and Test-Retest Reliability Coefficient of Interest in Art Scale (N: 50).

Interest in Art Scale	Internal Consistency N=171	Test-Retest Test N=171
Total Scale Score	.84**	.70*
Emotion Reasoning (ER)	.82**	.68*
Behavior	.81**	.65*

\*\*p&lt; .01

**Table 10.** One Way ANOVA Test Results of the Regression model about Art Interest and Personality Type.

	Sum of squares	df	Total square	F
Regression	8596,301007	5	1719,260	10,962*
Residual	23054,757816	166	156,835	
Total	31651,058824	171		

\*p&lt; .001

**Table 11.** Regression Analysis results about the Personality Types of Individuals who have high Interest in Art.

Independent Variables	B	Standard Error	$\beta$	t	p
Constant	38,441	7,726		4,976	,000*
Responsibility	-,068	,071	-,079	-,958	,34
Amiability	,156	,092	,151	1,693	,093
Being open to Experience	,197	,098	,194	2	,047*
Extroversion	,229	,076	,279	3,013	,003*
E. Neuroticism	-,097	,055	-,128	-1,763	,80
R = .521 R <sup>2</sup> = .272					
F (3,16) = .962 p=.05					

\*p&lt; .001

relation with individuals' interest in Art ( $R = .52$ ,  $R^2 = .27$ ,  $p < .001$ ). Being open to experience and extroversion together explain 27% of total variance of interest in Art Scale. Relative significance order of predictive variables in Art Interest, according to the standardized regression co-efficient ( $\beta$ ) is Extroversion and Being open to Experience. When t test results about the meaningfulness of regression coefficients are analyzed, it can be seen that, variables of extroversion and being open to experience are meaningful predictors of Art Interest.

## DISCUSSION

The research is made of two sections. The first section is developing of Interest in Art Scale. The second section is evaluating the prediction power of the scores of responsibility, amiableness, being open to experience, extro-

version and emotional instability and neuroticism, which are the subscales of personality scale based on the attributions developed according to five factor personality theory.

It was seen that, ANOVA test, which tested the meaningfulness of the regression model established on the prediction power of responsibility, amiableness, being open to experience, extroversion, emotional instability/neuroticism, which are the subscales of personality scale based on the attributions developed according to five factor personality theory, was meaningful. According to the regression analysis, it was determined that the variables of Extroversion and Being open to Experience significantly predicted Art Interest. Furham and Chamorro-Premuzic (2003: 705) made a study titled "Personality, intelligence and art" and they tested the relations between personality, intelligence, art experience (interest in art, activities and knowledge) and attitudes towards art. In the

research, it was found that the relation between being open to experience and art experience was meaningful while the relation between being open to experience and attitude towards art was not meaningful. It is known that having different experiences and being open to these experiences develop an individual's creative side (Feist, 1998). In this context, if we say that art is the expression of an individual's creative tendencies, the study by Furham et al. (2003) shows that individuals' being open to experience is a personality trait that is necessary for showing, expressing artistic side. It is known that there is a positive relation between expressing oneself and having extroversion personality trait (Allida and Vyhmeister, 2004). So, an individual's expressing oneself correctly, clearly and straightly is connected with being extrovert. In the study by Furham and Bachtiar (2008: 613), it was found that extroversion was the predictor of creativity, but intelligence didn't predict the scores of creativity. This finding obtained by Furham and Bachtiar is in parallel with our research. Creativity's relation with extroversion means that there is an indirect relation between creativity and art. The finding about intelligence is also in parallel with the present literature. Based on the study of Furham and Bachtiar (2008), it can be said that creativity has features independent from intelligence and it varies according to the personality traits of individuals. Other researches about the issue show that there is a relation between personality traits and thoughts, emotions and behaviors about art (Kaufman et al., 2013, Zonash and Naqvi, 2011, Alkan et al., 2007). Another significant study that shows the effect of art on personality traits was made by Djikic et al. who conducted a research on 166 university students. In this study, Djikic et al. used the story of "The Lady with the Dog" by Anton Chekhov. They formed two groups of participants as experiment and control; members of the experiment group read the story. After that, tests that evaluated personality structures and the intensity of emotions, that had been conducted at the beginning of the process were conducted again. At the end of the tests, it was determined that, compared to the Control, the group that had read the artistic and fictional story (the story by Chekhov) had more changes in basic personality traits (extroversion, emotional balance, being open to new ideas, responsibility and adaptability features). On the other hand, it was seen that people who had read Chekhov's story, went through more emotional changes. These results show that art affect personality in terms of the features of extroversion and being open to new experiences. These personality traits of individuals are the ones that support social harmony and development. In this context, it can be said that, giving place to activities that develop individuals' artistic sides in order to ensure that individuals are more creative and outgoing, will make positive and significant contributions to one's life completely in a positive way. This study attempted to reveal the relationships between arts and personality by analyzing the quantitative data obtained from interval scales. However it's not merely possible to reduce the

personality of an individual into a context related to data obtained that way. Therefore, it is thought that further studies with mixed model design, with the help of interval scales and semi-structured interview forms developed for this study can and will be very beneficial in gaining a clearer and deeper understanding of the subject in Turkey as a country which has a communitarian culture.

## Results and suggestions

Interest in art scale, which was developed for this study, can be considered as a valid and reliable tool in measuring individuals' levels of interest in arts within the context of their thoughts and behaviors. Also, in the second part of the study, a relationship between individuals' levels of interest in art and their types of personality in the context of big five factors of personality. Openness to experience and extroversion are the predictors of level of interest in art. From this aspect, the scale developed can be considered as a useful tool in detecting the individuals who were interested in art. At the same time it is possible to form an opinion about type of relationship between individuals and art by evaluating their personality traits. Screening methods can be used to select students for high schools of fine arts and departments of fine arts in universities by considering these traits. Thus, it will be easier to direct individuals with undiscovered potentials towards this field more effectively.

## Conflict of Interests

The author(s) have not declared any conflict of interests.

## REFERENCES

- Alakuş AO (2002). İlköğretim Okulları 6.Sınıf Resim-İş Dersi Öğretim Programındaki Grafik Tasarım Konularının Çok Alanlı Sanat Eğitimi Yöntemiyle Bu Yönteme Uygun Düzenlenmiş Ortamda Uygulanması. Gazi Üniversitesi. Sosyal Bilimler Enstitüsü. Yayınlanmamış Doktora Tezi. Ankara.
- Allida EM, Vyhmeister CN (2004). The psychology of sex differences. Stanford. California: Stanford University Press.
- Alkan S, Ordulu MZ, Sezer Y, Soyer E, Aslan D, Sayer İ (2007). Extroversion Personality Characteristics and Awareness of Works of Art. Turk. J. Med. Sci. 37(5):311-317.
- Bacanlı H, İlhan T, Aslan S (2009). Beş faktör kuramına dayalı bir kişilik ölçeğinin geliştirilmesi: sıfatlara dayalı kişilik testi (SDKT), Türk Eğitim Bilimleri Dergisi, 7(2):261-279.
- CPremuzic T, Reimers S, Hsu A, Ahmetoğlu G (2009). Who art thou? Personality predictors of artistic preferences in a large UK sample: The importance of openness. Br. J. Psychol. 100:501-516.
- Costa PT, McCrae Jr. RR, Holland JL (1984). Personality and vocational interests in an adult sample. J. Appl. Psychol. 69:390-400.
- Dreger RM, Moffett AL (1972). Sculpture preferences and personality traits. J. Pers. Assess. 39:1.
- Erel Ö (2012). Sanat Kişilik Özelliklerimizi Etkiliyor. <http://ajanspsikoloji.com/sanat-kisilik-ozelliklerimizi-etkiliyor>
- Ersoy A (2002). Sanat Kavramlarına Giriş. İstanbul: Yorum Sanat Yayıncılık.
- Feist GJ (1998). A Meta-Analysis of Personality in Scientific and Artistic Creativity. Pers. Soc. Psychol. Rev. 2(4):290-309 doi: 10.1207/s15327957pspr0204\_5

- Furnham A, Bunyan M (1988). Personality and art preferences. *Eur. J. Pers.* 2:67-74.
- Furnham A, Chamorro-Premuzic T (2004). Personality, intelligence, and art. *Pers. Individ. Diff.* 36:705-715.
- Furnham A, Bachtar V (2008). Personality and intelligence as predictor of creativity. *Pers. Individ. Diff.* 45:613-617
- Furnham A, Crump J (2013). The sensitive, imaginative, articulate art student and conservative, cool, numerate science student: Individual differences in art and science students. 25:150-155
- Giannini AM, Tizzani E, Baralla F, Gurrieri G (2013). What I like is How I Am: Impact of Alexithymia on Aesthetic Preference. *Creativity Research Journal.* 25:3, 312-316
- Hicks LE (2004). Infinite and Finite Games: Play and Visual Culture. *Studies in Art Education. J. Issues Res.* 45(4):285-297
- Kaufman JC, Pumacahua TT, Holt ER (2013). Personality and creativity in realistic, investigative, artistic, social, and enterprising college majors. *Pers. Individ. Diff.* 54:913-917
- King L, Walker L, Broyles S. (1996). Creativity and the five factor model. *J. Res. Pers.* 30:189-203.
- Kline, RB (2005). *Principles and Practice of Structural Equation Modeling* (2nd ed.). New York: Guilford J. Behav. Sci. 21(1):92-104.
- Kogan N (2002). Careers in the performing art: a psychological perspective. *Creativity Res. J.* 14:1-16.
- McManus IC, Furnham A. (2006). Aesthetic activities and aesthetic attitudes: Influences of education, background and personality on interest and involvement in the arts. *Br. J. Psychol.* 97:555-587. Doi 10.1348/000712606X101088.
- MEB (1991). Türkiye'de Güzel Sanatlar Eğitimi Geliştirme Özel İhtisas Komisyonu Raporu. Yüksek Danışma Kurulu Başkanlığı. Ankara.
- Mercin L (2006). Resim Dersini Müze Kaynaklı Oluşturmacı Öğrenme Yaklaşımı Etkinliklerine Göre Uygulamanın Erişiyeye, Kalıcılığa ve Tutuma Etkisi. Gazi Üniversitesi, Eğitim Bilimleri Enstitüsü. Yayınlanmamış Doktora Tezi.
- Mercin L, Alakuş AO (2007). Bireyve Toplum İçin Sanat Eğitiminin Gerekliliği, D.Ü. Ziya Gökalp Eğitim Fakültesi Dergisi 9:14-20
- Özsoy V (2003). Görsel Sanatlar Eğitimi. Ankara. Gündüz Eğitim ve Yayıncılık. <http://www.pandora.com.tr/urun/gorsel-sanatlar-egitimi/204191>
- Per M, Beyoğlu A (2011). Personality Types of Students Who Study at the Departments of Numeric, Verbal and Fine Arts in Education Faculties. *Procedia Soc. Behav. Sci.* 12:242-247
- Prinne NE, Brodersen RM (2005) Artistic and Scientific Creative Behavior: Openness and the Mediating Role of Interests. *J. Creative Behav.* 39(4):217-236
- Rosenbluh ES, Owens GB, Pohler, MJ (1972). Art Preference and Personality. *Br. J. Psychol.* 63:441-443. doi: 10.1111/j.2044-8295.1972.tb01293.x
- Rump EE (1982). Relationship between creativity arts-orientations and esthetic preference variables. *J. Psychol.* 110:11-22.
- Wonderlic E (1992). Wonderlic personnel test. IL: Libertyville.
- Zonash R, Naqvi I (2011) Personality Traits and Learning Styles Among Students of Mathematics, Architecture and Fine Arts. *J. Behav. Sci.* 21(1):92. <http://connection.ebscohost.com/c/articles/63021789/personality-traits-learning-styles-among-students-mathematics-architecture-fine-arts>