# A NEW PERSPECTIVE TO LONELINESS AND WELL BEING LEVELS OF THE OLDER ADULTS: ART THERAPY\*

D Ebru KÖSE\*\* Füsun GÖKKAYA\*\*\* Nergis CANBULAT\*\*\*\*

#### **ABSTRACT**

In this study, the effects of art therapy group practices on the loneliness and psychological well-being levels of older adults living in retirement homes were examined using qualitative and quantitative data analyses across intervention and non-intervention groups. For this reason, this study was designed as a quasi-experimental study with a pretest posttest pattern including an intervention (n=18) and non-intervention (n=13) group. 12 sessions of Art Therapy Practice Sessions were administered to the intervention group. A significant difference between the post-test loneliness and psychological well-being levels of the intervention and non-intervention groups was found. As a result, it can be said that art therapy is a significantly effective method in reducing the loneliness level of the elderly living in nursing homes and increasing their psychological well-being. In the qualitative aspect of the research, the views of the elderly on the effectiveness of art therapy practices were gathered in two categories: "Contribution" and "Art Therapy Practices".

Key Words: older adult, art therapy, psychological well-being, loneliness

# Yaşlıların Yalnızlık ve Psikolojik İyi Oluşlarına İlişkin Yeni Bir Bakış Açısı: Sanatla Terapi

#### ÖZET

Bu araştırmayla sanatla terapi grup uygulamalarının huzurevinde kalan yaşlıların yalnızlık ve psikolojik iyi oluş düzeylerine etkisi, deney ve kontrol gruplarında, nitel ve nicel veri analizleri ile incelenmiştir. Bu amaçla gerçekleştirilen araştırma, deney (n=18) ve kontrol (n=13) grubunu içeren iki grupta ön ve son test desenli yarı deneysel araştırma türünde yapılmıştır. Araştırmada 12 oturumluk Sanatla Terapi Oturumları deney grubuna uygulanmıştır. Araştırma sonucunda deney ve kontrol gruplarının yalnızlık ve psikolojik iyi oluş son test puanları arasında anlamlı bir fark bulunmuştur. Sonuç olarak sanatla terapinin, huzur evinde kalan yaşlıların yalnızlık düzeyini azaltmada, psikolojik iyi oluş düzeyini arttırmada önemli ölçüde etkili bir yöntem olduğu söylenebilir. Araştırmanın nitel boyutunda yaşlıların sanatla terapi uygulamalarının etkililiğine ilişkin görüşleri "Katkı", "Sanatla Terapi Uygulamaları" olmak üzere iki kategoride toplanmıştır.

Anahtar Kelimeler: yaşlılık, sanatla terapi, psikolojik iyi oluş, yalnızlık

## Research Article / Araştırma Makalesi

**Cite as** / **Atif**: Köse, E., Gökkaya, F., Canbulat, N. (2024). A new perspective to loneliness and well being levels of the older adults: Art therapy. *Uludağ University Faculty of Arts and Sciences Journal of Social Sciences*, 25(46), 1-18. https://dx.doi.org/10.21550/sosbilder.1340465

Sending Date / Gönderim Tarihi: 10 August / Ağustos 2023 Acceptance Date / Kabul Tarihi: 9 October / Ekim 2023

<sup>\*</sup> This article was produced from the first author's master thesis titled *The Effects of Art Therapy Applications on the Loneliness and Psychological Well Being Levels of Older Adults Living in Retirement Homes*, which she completed at Yakın Doğu University Social Sciences Institute in 2019.

<sup>\*\*</sup> Counselor, The Ministry of National Education, İstanbul / TÜRKİYE, ebru2635@hotmail.com

<sup>\*\*\*</sup> Assoc. Prof. Dr., İzmir Tınaztepe University Graduate School, İzmir / TÜRKİYE, fusun.gokkaya@tinaztepe.edu.tr

<sup>\*\*\*\*</sup> Counselor, PHD, The Ministry of National Education, İzmir / TÜRKİYE, nergistulek@gmail.com

#### Introduction

The older adult population is rapidly increasing, bringing about many care service problems and the necessity to perform studies on how to increase the quality of life of an older adult (Ardahan, 2010; Milligan & Liu, 2015; Rashidi & Mihailidis, 2012). Besides care service related problems, old age is a life stage that brings many difficulties including losses in the social environment, decreasing social support, bodily and cognitive decline, increasing health problems, and negative effects on mental health (Lazarus, 1988; McFadden & Basting, 2010; Nicholson, 2009). According to statistical data from studies, the older adult population and the need for older adult care services can be seen to increase worldwide and also in Turkey (Görgülü et al., 2010; IOAGING, 2012).

The bio-psychosocial support provided to the older adult in nursing homes includes the provision of not only their clinical and physiological needs but also their psychological needs (Ardahan, 2010; Ercan Şahin 2015; Glass, 1991). However, studies conducted with older adults staying at nursing homes have lower quality of life and higher loneliness levels compared to older adults staying at home (Karakaya et al., 2009; Tel et al., 2006). In a study, older adults living in nursing homes were found to have low life satisfaction and high hopelessness level (Ercan Şahin & Üzar Özçetin, 2020; Ertem, 2020). According to Çağlar (2014), older adults staying at nursing homes lose the ability to supervise their environment, causing them to experience loneliness and feelings of worthlessness. In another study, 21 elderly individuals residing in a nursing home were interviewed, focusing on the subjects of relationships with family and relatives, nursing home friendships, and conflicts in nursing home friendships. The research also provided recommendations for reducing the social isolation tendencies of nursing home residents (Taş & Şaldırdak, 2021). In this context, loneliness can be seen to be one of the most important issues to study among the older adults staying at nursing homes.

People who feel old usually focus on negative thoughts. As the loneliness levels of older adult increase, their subjective well-being levels decrease (Eryılmaz & Atak, 2011). Many psychotherapy practices help older adult to express themselves and perform physical activities which affect positively older adults both cognitively and bodily and increase their quality of life (Soyuer & Soyuer, 2008). Among the available practices and studies, visual art therapy could be effective in improving cognitive functions and psychological symptoms in older adults (Masika et al., 2020). Another therapy method utilized among the older adult is music therapy. Music therapy has been found to be affective in decreasing the depression and helplessness levels of the older adult. Older adults who received music therapy were found to exhibit more adaptive behaviors and become more independent in realizing daily life activities (Öcebe et al., 2019). In another study, music therapy decreased the anxiety levels of older adults diagnosed with dementia (Chang et al., 2015).

Another interesting approach applied among the older adult is art therapy (Bulduk et al., 2017). Art therapy can be applied to patients of groups, and thus includes the unique benefits of group based psychological counseling. Art therapy provides an opportunity for the expression and sharing of thoughts and emotions, helping the individual feel stronger and more confident, forming sustainable self-perceptions, and attaining psychological well-being (Ellison, 1983; Eracar, 2013; Pelletier, 2004).

Studies have shown that art therapy increases the levels of social connectedness and psychological well-being in older adults (Bennington et al, 2016; Thomson et al., 2017) and has an effect on depression and self-esteem (Ching-Teng et al., 2019; Dunphy et al., 2019; Kim et al., 2016), strengthens the expression of emotions and coping strategies (Dunphy et al., 2019), reduces depression symptoms and improves the function of cognitive skills (Jenabi et al., 2022;

Marco & Redolat, 2022; Masika et al., 2020) and communication skills (Iiuzuka et al., 2019). In Turkey, art therapy with mild dementia was seen as a preventive factor in the progression of dementia. It was emphasized in the study that art therapy is an important benefit for the socialization of older adults with dementia when carried out regularly in small groups (Bulduk et al., 2017). In a compilation study conducted in Turkey, it is noted that the use of art as a therapeutic and treatment tool is steadily increasing (Salman & Akkurnaz, 2022).

Keeping social relations active among the older adult is important to prevent emotions of loneliness, which constitute an indication of lacking social relations, and provide an increase in psychological well-being levels. Social relations can be kept active through the establishment of close relations to the environment or through hobbies and pastimes (Batıgün, 2008; Büker et al., 2010). The aim of this study is thus to examine the effects of art therapy group practices on the loneliness and psychological well-being levels of older adults staying at nursing homes.

This is an original study with regard to being an intervention program towards the loneliness and psychological well-being levels of older adults in Turkey and including art therapy practices as part of this program. When studies performed in Turkey on the subject were examined, studies including the qualitative evaluation of the effect of art therapy on the older adult (Artan et al. 2017) and examining the effect of art therapy on the cognitive condition of older adults with dementia (Bulduk et al. 2015) were found. This study will examine the effect of art therapy on the loneliness and psychological well-being levels of older adults utilizing both qualitative and quantitative data analyses. Additionally, a non-intervention group was used to evaluate the effectiveness of the study. In order to ensure that the older adults did not affect each other, the study was conducted in two different nursing homes. The study was thus predicted to provide important contributions to the literature.

The hypotheses of this study, which aims to examine the effectiveness of group art therapy to reduce the loneliness levels of the elderly and increase their psychological wellbeing, are as follows:

- I) It is expected that the loneliness scale pre-test scores of the elderly who participate in art therapy (intervention group) and those who do not (the group that does not participate) do not differ from each other.
- II) It is expected that the psychological well-being scale pre-test scores of the elderly who participate in art therapy and those who do not, do not differ from each other.

#### **Study Method**

#### Research Design

In this study qualitative and quantitative methods were used together to examine the effectiveness of art therapy sessions towards the elders. Thus, the simultaneous nesting strategy, which is one of the strategies of performing mixed method studies, was selected for this study. In this strategy, qualitative and quantitative data can be included in the other group according to priority and all of the data can be integrated during analysis (Creswell, 2003). The quantitative dimension of this study used a pretest-posttest quasi experimental design with a non-intervention group (Fraenkel & Wallen, 2006). The qualitative dimension of the study used the explanatory study design to obtain richer and deeper data based on the views of the older adult regarding the effectiveness of art therapy sessions (Creswell, 2003).

# Setting and Time

The study was conducted between September and December 2018 through 3-month practice.

## **Participants**

The accessible population of the study consisted of two different nursing homes in the İzmir province, both affiliated with the Ministry of Family and Social Policies, which granted permission for the study and had willing participants. The sample of the study was formed using a paired design. It was determined from the nursing home health unit that the elderly individuals who participated in the study did not have dementia based on the Mini-Mental State Examination. In determining the sample size for the research, inclusion criteria, the number of participants in national and international art therapy applications involving older adults (Bennington et al., 2016; Bulduk et al., 2017; Ching-Teng et al, 2019; Iiuzuka et al, 2019), the existing literature on art therapy (Chang et al., 2015; Öcebe et al., 2019), and group studies in the literature on aging (Ellison, 1983; Pelletier, 2004; Eracar, 2013) were taken into consideration.

Inclusion criteria were being able to verbally communicate, volunteering for constant participation in the practices, and not having any mental disorders such as dementia, mental retardation, or Alzheimer's. 40 older adults meeting inclusion criteria were assigned to the intervention and non-intervention groups. At the beginning of the study, 20 of those older adults stayed at a nursing home, and constituted the intervention group.

**Table 1:** Demographic Information of Participants

			<u> </u>		
			Intervention	Non-intervention	Total
	Female	N	9	13	22
C		%	69.2	72.2	71.0
Sex	Male	N	4	5	9
		%	30.8	27.8	29.0
	Married	N	4	5	9
	Marrieu	%	30.8	27.8	29.0
Marital Status	Divorced	N	5	3	8
Marital Status	Divorceu	%	38.5	16.7	25.8
	Widowed	N	4	10	14
	widowed	%	30.8	55.6	45.2
	Elementary	N	-	1	1
		%	-	5.6%	3.2
	Middle	N	-	1	1
Education level		%	-	5.6	3.2
Education level	IIIah	N	10	11	21
	High	%	76.9	61.1	67.7
	I Imirrougitre	N	3	5	8
	University	%	23.1	27.8	25.8
	Teacher	N	7	1	8
	reacher	%	53.8	5.6	25.8
	Engineer	N	1	1	2
	Engineer	%	7.7	5.6	6.5
Occupation	Soldier	N	1	1	2
Occupation	Soluter	%	7.7	5.6	6.5
	Housewife	N	-	4	4
	Housewife	%	-	22.2	12.9
	Other	N	4	11	15
	Other	%	30.8	61.1	48.4
Total		N	13	18	31
Total		%	100	100	100

<sup>\*</sup>p<.05

The other 20 older adult stayed at another nursing home and constituted the non-intervention group. However, 7 participants left the group in different stages of the group practices, and the study was completed with 13 older adults. Another 2 older adults could not be reached for the final measurements in the non-intervention group. Thus, the study was completed with 18 older adults in the non-intervention group. The reason behind selecting the intervention and non-intervention groups from different nursing homes was to prevent the changes in the intervention group from affecting the non-intervention group. Both nursing homes were public institutions similar with regard to the number of older adults served, physical conditions, and health services provided. According to Table 1, 23 of the older adults participating in the study were female and 10 were male.

First of all, it was examined by chi-square analysis whether a total of 31 older adults in the groups (13) who participated in art therapy practices and the control (18) groups without any intervention differed in terms of some socio-demographic variables. According to the analysis; gender (X2=0.033, Sd=1, p>.05), marital status (X2=0.033, Sd=1, p>.05), education level (X2=0.088, Sd=1, p>.05) and no statistically significant difference was found between the experimental and control groups in terms of age (t=-1.809, p>.05). Therefore, it can be said that the groups show similar distribution in terms of some socio-demographic variables.

It was evaluated whether the older adults in the experimental group who participated in art therapy practices and the control group who did not receive any intervention differed from each other in terms of the measurements evaluated in the study before the art therapy group practices started. According to the analysis, there is no significant difference between the experimental and control groups in terms of the UCLA Loneliness Scale pre-test mean scores (t=.550, p>.05). According to this result, it can be said that the loneliness levels of the experimental and control groups before the Art therapy group activity are similar. There is no significant difference between the experimental and control groups in terms of Psychological Well-Being Scale pre-test score averages (t=-1.295, p>.05). According to this result, it can be said that the psychological well-being levels of the experimental and control groups before the art therapy group activity are similar.

## Data collection tools

In this study, Psychological Well Being Scale (PWBS), and the UCLA (University of California, Los Angeles) Loneliness Scale (ULS) for quantitative data; and an Art Therapy Practices Participant Feedback Form for qualitative data were used.

The Personal Information Form

This form was consisted of 10 questions regarding the family structures of the older adult participating in the study, age, sex, and the presence of health problems that could prevent the participants from effectively participating in the study.

The Psychological Well Being Scale (PWBS)

The PWBS was developed between 2009 and 2010 by Diener et al. The scale was adapted to Turkish by Telef (2013). The factor loads of the items in the scale vary between .61 and .77. The Cronbach Alpha internal consistency coefficient of the scale was found to be .87. Cronbach Alpha value for this study was found to be .83.

The UCLA (University of California, Los Angeles) Loneliness Scale (ULS)

The ULS was developed by Russell et al. in 1978 and revised by Russell et al. in 1980. The scale consists of 20 items, 10 of which are reverse coded. A correlation coefficient of .91 was found between the original form of the scale and the form revised through a reliability

study. The reliability coefficients regarding the internal consistency and score invariance were found to be sufficient (Demir, 1989). Cronbach Alpha value for this study was found to be .93.

### The Art Therapy Practices Participant Feedback Form

A form consisting of 6 open ended questions was prepared to better understand the internal dynamics of group members. The form was prepared by the researcher by first forming 15 questions through a review of the literature (Sukamolson, 2007; Thong, 2007; Van Lith et al., 2023). After the literature review, the views of 2 experts in art therapy and 3 psychologists working with the older adult at nursing homes were taken. After the questions were examined regarding clarity, their relation to the sessions, whether the questions could be easily answered, their relation to the variables of the study and whether they served the purpose of the study, 6 items remained in the form. After the form was presented to 2 older adults to improve clarity, its final form was given. At the end of the study, the participants in the intervention group were given the form to fill out.

#### **Procedure**

#### **Ethical Considerations**

First, permissions regarding the use of the scales in the study were taken for the practice efforts of the study. Then, permissions from the Yakın Doğu University Board of Ethics and practice permissions from the Ministry of Family and Social Policies were taken. The accessible universe of the study consisted of two Nursing and Older Adult Care and Rehabilitation Centers tied to the Ministry of Family and Social Policies in the city of Izmir that gave permission for the study. In this study a Notice Form to inform the participants, an Informed Consent Form; a Personal Information Form were used.

#### Experimental Procedure

The art therapy group activities were planned according to the data obtained. The activities planned and organized according to the needs of the group were realized in a total of 12 weekly 180-minute sessions between 02/09/2018-18/11/2018. In the art therapy sessions, group adherence, relationship establishment, and trust building efforts were made first. Then, the loneliness and psychological well-being levels of the older adults were attempted to be improved through methods such as poetry, music, painting, mirroring, sculpture, stories, dancing, and staging plays.

During the art therapy practices provided to the intervention group, no intervention was performed in the non-intervention group. After the 3-month study, the posttest (PWBS) and UCLA Loneliness Scale practices were performed with both the intervention and non-intervention groups. Data was evaluated using the SPSS package program. Additionally, the participants in the intervention group filled out the Art Therapy Practices Participant Feedback Form at the end of the art therapy practice.

### Group Leader and Co-Leader

The art therapy group sessions were managed by the group leader, who was the first author of this study, and a co-leader. The group leader had received theoretical and applied lessons regarding group sessions and art therapy during bachelor's and master's education. Both the group leader and co-leader had additionally completed 400 hours of Art Therapy and Creativity training. Educational materials regarding art therapy such as books, video recordings, and articles were also used.

The researcher especially avoided conditions that could harm the older adult during the experimental process and took written consent after providing necessary information for such

consent. The researcher explained the older adults what the aim of the study was and where and how the results of the study would be used in the processes of both qualitative and quantitative data collection, ensuring a healthy data collection process.

## Art Therapy Practice Sessions

The art therapy practices applied to the intervention group in this study were prepared by the researcher according to the principles and stages of art therapy. Since the study involved a group therapy intervention, all members of the experimental group were enrolled in the program simultaneously. In this process, both individual and group practices based on art therapy were examined. Additionally, older adult psychology, loneliness, and psychological well-being studies were also reviewed.

The aims of the art therapy practices were determined, and evaluations regarding the general structure of the group (number of sessions, session length, frequency, and time, practice location, and number of members) were performed (Chancellor et al., 2014; Kim et al., 2016; Thomson et al., 2017). As a result, the art therapy practices were decided to consist of 12 weeks 180-minute sessions. In order to follow the sessions, observe the activities performed as part of the practices, and increase the effectiveness of the practices, the presence of a co-leader was deemed necessary.

**Table 2:** The Content of the Art Therapy Practices

Activity	Aim	Art Therapy Module
Well of trust	Provide information on group activities, therapists, and art therapy practices.  Introduce group members to each other and form a safe group environment	Introduction
Writing poetry together	Increasing group interaction and attachment. Contributing to aspects of psychological well-being such as expressing emotions, taking responsibility, decision making, and interaction.	Literature/poetry
Walk of trust	Helping the expression of thoughts and emotions, increasing awareness.	Music
Painting pictures together	Increasing awareness on binary relation patterns, decreasing loneliness, encouraging action and creativity.	Painting
Intergroup prejudices	Breaking prejudices regarding group attachment and strengthening communication between groups	Dance/Movement
Group mirroring	Strengthening communication through sharing positive and negative experiences.	Music
Symbols	Increasing ego integrity and self-esteem through expressing emotions through art and sharing them with the group.	
Sculpture	Increasing group attachment and raising awareness on attitudes regarding relationships.	Sculpture
Story	Increasing awareness through the expression of past experiences. Decreasing loneliness through sharing with the group and creating group attachment.	Ceramic/ Sculpture
Staging a play	Staging a play Creating together to get rid of emotions of loneliness. Emotion transformation and trust building.	
Dance	Dance Mirroring each other in relationships to increase relaxation, socialization, and emotional awareness. Decreasing loneliness.	
Group healing	Supporting psychological well-being and decreasing loneliness	

Information on the contents of the art therapy practices and the activities applied in the sessions were given in Table 2.

### **Data Analysis**

The analyses of the quantitative data of the study were performed using the SPSS 25.0 statistics package program. The level of significance was taken as .05 in all analyses. Before data analysis, the normality of the data was tested using the Kolmogorov Smirnov test to decide the statistical technique to be used. In separate analyses performed for the intervention and non-intervention groups, data was found to exhibit normal distribution with a p value above .05. Since data was distributed normally, parametric tests were used in data analysis. In the comparison of the pretest and posttest mean scores of the intervention and non-intervention groups, the independent groups t-test was used. In the separate comparison of the pretest and posttest mean scores of the intervention and non-intervention groups, the dependent groups t-test was used. Alongside those methods, mean values, standard deviation, frequencies, and percentages were also used in defining data.

#### **Results**

### **Preliminary Analyses**

Whether the older adults in the intervention group receiving art therapy practices and the non-intervention group receiving no intervention showed differences from one another with regard to the measurements performed within the context of the study was evaluated before starting the art therapy group practices.

**Table 3:** The Comparison of the Mean Scores Taken by the Intervention and Non-intervention Groups from the ULS and PWBS Pretests

Pretest	Group	N	Mean	Sd.	t	р
UCLA Loneliness	Intervention	13	41.07	8.30		
Scale Scale	Non- intervention	18	38,88	12.47	.550	.587
Psychological well	Intervention	13	45.84	2.73		
being scale	Non-	18	47.88	5.87	-1.295	.207
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	intervention					

<sup>\*</sup>p<.05

According to the findings in Table 3, no statistically significant difference between the intervention and non-intervention groups could be found with regard to ULS (t=.550, p>.05) and Psychological Well Being Scale (t=-1.295, p>.05) pretest mean scores. Accordingly, the loneliness and psychological well-being levels of the intervention and non-intervention groups before the art therapy group activity can be said to be similar.

# Quantitative results on the loneliness and psychological well-being levels of the participants

The comparison of the ULS and PWBS pretest posttest scores of the intervention and non-intervention groups

Accordingly Table 4, there was a statistically significant difference between the ULS pretest ( $\overline{X} = 38.88$ ) and posttest ( $\overline{X} = 46.16$ ) scores of the intervention group (t=-3,197, p<.05).

There was a statistically significant difference between the PWBS pretest ( $\overline{X}$  =45.84) and posttest ( $\overline{X}$  =51.07) mean scores of the intervention group (t=-7.195, p<.05). The effect size was calculated as d=1.99 (d>1) through Cohen d, showing a large effect size.

**Table 4:** The Comparison of the ULS and PWBS Pretest Posttest Scores of the Intervention and Non-intervention Groups

Loneliness								
Group	Practice	n	Mean	sd	Difference	sd	t	р
Intervention	Pretest	13	41.07	8.30	7.31	7.55	3.488	.004*
	Posttest	13	33.76	6.66				
Non-	Pretest	18	38.88	12.47	-12.08	2.47	-3.197	.005*
intervention	Posttest	18	46.16	14.68				
			P	sychologica	l well being			
Group	Practice	n	Mean	sd	Difference	sd	t	р
Intervention	Pretest	13	45.84	2.73	-5.76	2.89	-7.195	.000*
	Posttest	13	51.61	3.37				
Non-	Pretest	18	47.88	5.87	1.98	8.79	3.341	.004*
intervention								
	Posttest	18	42.50	8.87				

<sup>\*</sup>p<.05

There was also a statistically significant difference between the PWBS pretest ( $\overline{X}$  =47.94) and posttest ( $\overline{X}$  =42.50) mean scores of the non-intervention group (t=3.341, p<.05). The psychological well-being levels in the non-intervention group can be seen to decrease in the three-month period.

The comparison of the ULS and PWBS posttest scores of the intervention and non-intervention groups

A statistically significant difference between the intervention and non-intervention groups with regard to their mean ULS posttest scores was found (t=-3.159, p<.05) (Table 5).

**Table 5:** The Comparison of the ULS and PWBS Posttest Scores of the Intervention and Non-intervention Groups

Posttest		Group	n	Mean	Sd.	T	p
LICIA	Lonalinass	Intervention	13	33.76	6.66		
UCLA Scale	Loneliness	Non-	18	46.16	14.68	-3.159	.004*
Scarc		intervention					

<sup>\*</sup>p<.05

The effect size was calculated as d=1.85 (d>1) through Cohen d, showing a large effect size. Accordingly, the art therapy group practices can be said to have an important effect in decreasing loneliness levels.

The comparison of the PWBS posttest mean scores of the intervention and non-intervention groups can be seen in Table 5. Accordingly, there was a statistically significant difference between the PWBS posttest mean scores of the intervention and non-intervention groups (t=3.509, p<.05) (Table 6). The effect size was calculated as d=2.28 (d>1) through Cohen d, showing a very large effect size. The mean score of the intervention group was  $\overline{X}$  =51.6, while the mean score of the non-intervention group was  $\overline{X}$  =42.50.

Table 6: The Comparison of the PWBS Posttest Mean Scores of the Intervention and Non-intervention Groups

Posttest	Group	n	Mean	Sd	t	р
Psychological well-	Intervention	13	51.61	3.37	3.509	.001*
being scale	Non-intervention	18	42.50	8.87	3.309	.001

<sup>\*</sup>p<.05

The views of the participants regarding the effectiveness of the art therapy practices

The relationships between the categories, themes, and codes obtained were given in Table 7.

Table 7: The Views of the Participants Regarding the Effectiveness of the Art Therapy Practices

Categories	Themes	Codes	N
	Loneliness	Emotional experiences	4
		Social relationship experiences	5
		Self-acceptance	4
		Positive relations to others	11
		Environmental control	3
Contribution	Psychological well	Autonomy	1
	being	Life goals	2
		Personal development	6
Art therapy	Activities		8
practices	Group effect		3

#### Contribution

In this study, two themes regarding the contributions of art therapy practices to the older adults were obtained, namely loneliness and psychological well-being. Older adults participating in the group sessions mentioned that art therapy practices caused a decrease in their emotions of loneliness. They also stated that the practices relaxed them and made them happier.

Talking about loneliness helped me relax. I saw that everybody had huge loneliness problems. It felt good to communicate and share. [P2, Male]

I felt very good producing something together. I understood the importance of being together. [P1, Female]

I feel that I got rid of loneliness and started to see life more positively. [P4, Female]

It helped me to see my problems in a calmer way and to become more solution oriented. It also helped me to be more objective, more successful in empathy, and less lonely and helpless. [P8, Male]

I fought loneliness a lot. I was always stuck between staying and leaving. I now nurture the fighter in me and fight life. I hold on to the streets, the sea, and my love for children. [P10, Male]

Lately, everyone noticed I always smile, and they told me so. I really feel like smiling and talking all the time. [P13, Female]

The older adults participating in the group sessions stated that art therapy practices contributed to their psychological well-being in the fields of self-acceptance (n=4), positive relations to others (n=11), environmental control (n=3), individuality (n=1), life goals (n=2), and personal development (n=6).

I love my life and now I accept the natural flow of my life process and choose to share my pain. I did not worry about what others would say. I stand tall by keeping my childish side alive. [P1, Female]

During therapy, I realized that there was a reason behind the aggressive and negative behaviors of people. [P3, Female]

I know my own value and treat myself better. [P4, Female]

I saw that bonds of friendship could form in the group with close and sincere feelings. [P5, Female]

I started to believe I could form sincere relationships. [P7, Female]

I was an introvert but now I have very loving relationships. [P8, Male]

Lately everyone noticed I always smile, and they told me so. I really feel like smiling and talking all the time. [P11, Female]

It helped me to see my problems in a calmer way and to become more solution oriented. It also helped me to be more objective, more successful in empathy, and less lonely and helpless. [P9, Female]

I started to share more in my social life. I can easily share my thoughts and feelings with the people in the group and listen to theirs too. [P12, Female]

Group practices increased my trust in myself and others. [P1, Female]

I became more social and outgoing. I found a new friend that could understand me or at least listen to me. [P13, Female]

## Art Therapy Practices

Two themes were found under this category, namely techniques and group effect. The older adults participating in the art therapy practices mentioned the effects and benefits of the activities applied by the group leader throughout the sessions. These activities were stories (stone session) (n=7), writing poetry together (n=5), painting pictures together (n=4), and staging a play (n=3).

I was impressed during the stone session. The paths I took in life and my life experiences were like those stones and this helped me realize the changes in me. [P2, Male]

Since they helped me get closer with my friends, the stone session and walking together with music drew my attention. [P3, Female]

The stone choosing session affected me. Being able to have a heart to heart with my stone was both interesting and relaxing. [P4, Female]

There was a stone choosing session. I saw a stone and took it. It had eyes and a mouth. It became my lucky stone. [P7, Female]

After the dual painting study, one participant stated that they were lonely, and sharing felt good. [P8, Male]

I was keeping myself lonely for a long time. I even had my meals in my room and not in the common area, and I talked to nobody. Today, we staged a play together, talked, and put on a show. Today, for the first time I told myself I was not alone even if I wasn't close to anyone. I decided that I wanted to go out and talk to them. I even invite my friends to my room for tea after therapy. [P9, Female]

I thought that I wasn't alone when writing poems together. Producing something together and helping each other out made me feel trust for myself and others. [P10, Male]

I was very touched by the session when we choose a picture, wrote a poem about it, and showed it together. I was very sad before writing a poem together but producing something together made me feel very good. I understood the importance of being together even more. [P12, Female]

The participants stated that the most effective sessions were the story and poetry sessions, and mentioned their emotions and thoughts regarding those sessions. Additionally, the older adults mentioned that these activities contributed to them in the fields of sincerity and closeness, overcoming adversity, sharing and fun, developing tolerance, overcoming prejudices, accepting people, trust and unification, and being natural and open.

The group effect theme was mentioned in the fields of relaxing and socializing (n=12), decreased loneliness (n=7), and happiness (n=7).

I became more social and outgoing. I found a new friend that could understand me or at least listen to me. [P1, Female]

Sharing felt good. It relaxed me. Maybe my problems are still the same, but I just felt lighter when I shared them. [P2, Male]

I feel that I got rid of loneliness and started to see life more positively. [P4, Female]

First, we got to know each other, and then we shared our thoughts and feelings, our good and bad memories. I used to be more distant but then I started to get closer to people. [P5, Female]

At first, I was curious, excited and a bit nervous. Then I felt very positive emotions like warmth, goodwill, and compassion. [P7, Female]

#### **Discussion**

Finally, a significant difference between the post-test loneliness and psychological wellbeing levels of the intervention and non-intervention groups was found. The strengths of this study include qualitative and quantitative methods being used together to evaluate art therapy group practices among the older adults and having both an intervention and a non-intervention group. The structure of the sessions, their frequency and duration, and characteristics regarding the materials used in the sessions were similar to other such studies in the field (Ching-Teng et al., 2019; Iiuzuka et al., 2019; Jenabi et al., 2022; Kim et al., 2016; Marco & Redolat, 2022; Masika et al., 2020; Perry et al., 2008; Thomson et al., 2017). Studies in the literature have suggested keeping the frequency of group sessions high, with an ideal duration of two weeks between each session (Thomson et al., 2017). Another study has suggested weekly sessions for group efforts with the older adults while stressing that making sessions more frequent if needed is important (Arkin, 2003; Sterritt & Pokorny, 1994). A study suggests that art therapy is effectively used in the treatment of mental disorders, particularly in schizophrenia, traumarelated disorders, major depression, and bipolar disorder, with the utilization of various techniques. An important emphasis in this research is the absence of standardized methods for each mental disorder, which complicates the assessment of interventions. Therefore, this study recommends standardizing and measuring art therapy interventions (Chiang et al., 2019).

Another important issue is the materials used in art therapy practices. In the research, the importance of the materials chosen by the therapist in the work with the elderly is noteworthy (Johnson & Sullivan-Marx, 2006; Thomson et al., 2017). The importance of which materials the therapist choses and how those materials are used in art therapy practices for the older adult has been stressed. In this study, the older adults participating in art therapy sessions mentioned the effect and benefit of the activities applied by the group leader throughout the sessions such as the story (stone) session, writing poetry together, painting pictures together, and staging plays. The older adults, stated that these activities contributed to them in the fields of sincerity, overcoming adversity, being fun and open, developing tolerance, overcoming prejudice, accepting people, trust, and solidarity, and being themselves. When those contributions are considered, the group leader can be said to have positively contributed to the loneliness and psychological well-being levels of the intervention group through the activities chosen.

Art therapy can be said to help older adult of every age give meaning to their thoughts and emotions, reach insight, find release from difficult emotions and traumas that could not be previously managed, solve conflicts and problems, make daily life richer, and increase their psychological well-being levels. Our study has similar results with other studies in the literature (Bennington et al., 2016; Buchalter, 2011; Bulduk et al., 2017; Ching-Teng et al., 2019; Malchiodi, 2006; Masika et al., 2020; Thomson et al., 2017; Yavuz & Yavuz, 2018). Art therapy practices can be said that these have an important effect in decreasing loneliness levels in the intervention group, and this provides a similar result to other studies showing art therapy practices with the older adult increasing communication with others (Artan et al., 2017; Buchhalter, 2011; Bulduk et al., 2017; Kim et al., 2016; Kurt, 2014; Oyan & Sağlamtimur, 2016; Sutipan et al., 2017). Similarly, there are studies conducted in recent years stating that art

therapy techniques are effective in reducing the depression of older adults and increasing their cognitive skills (Jenabi et al., 2022; Marco & Redolat, 2022).

According to another finding of our study, the psychological well-being levels in the non-intervention group was observed to decrease significantly over time, with a significant increase in loneliness levels in the same time interval. Psychological well-being is a structure that is affected by a multitude of factors such as social environment, cultural structure, physical characteristics, and psychological characteristics. Thus, the psychological well-being of an individual is a mutable dynamic characteristic that can be affected by such factors over time (Lavalekar & Karmalkar, 2017). There are many factors that affect loneliness, especially during old age, such as loss of a spouse, chronic diseases, physical insufficiencies, a lack of sincerity in relations with the social environment, and personality characteristics (Bilgili et al., 2012; Büker et al., 2010; Eryılmaz & Atak, 2011; Kurt, 2014; Öz, 2010; Yaşar, 2007). In this context, the decrease in the psychological well-being and increase in loneliness levels in the nonintervention group can be explained to the dynamic structure of those variables. Additionally, this finding has shown us that even in a short time interval like three months, negative changes can occur in the loneliness and psychological well-being levels of the older adult without the practice of certain intervention methods. All those factors negatively affect the well-being of older adult (Kılavuz, 2005). The rise in the loneliness levels of the non-intervention group within three months may be related to conditional loneliness factors tied to life events such as loss of loved ones or divorces, or transient loneliness experienced by everyone from time to time. However, although two of the members of the intervention group got divorced from their spouses during art therapy practices and one experienced a spousal loss, a decrease in the loneliness levels of the intervention group was seen. In the light of this information, art therapy can be said to have a protective role among the older adult even if they face stressors that may affect emotions of loneliness. When the negative change in the non-intervention group and positive change in the intervention group are considered together, it can be seen that psychotherapy is a supportive method that must definitely be present alongside medication when the mental and physical health of older adults is in question.

#### Limitations

This study also has several limitations. One of those is the limited sample of the study. Future studies are recommended to be performed with wider samples consisting of a larger number of groups. Additionally, the study was conducted only with older adults staying at nursing homes.

Another limitation of this study is a lack of a placebo group. In order to evaluate the effectiveness of future studies, the inclusion of a placebo control group is recommended. The art therapy group sessions were performed in 12 sessions. Although statistically significant differences were obtained, in order to examine and discuss the problems of older adults more deeply, longer group practices can be developed. Additionally, no repeated measurements were taken to examine the continuity and persistence of the effects of art therapy. Thus, additional measurements are recommended to follow the conditions of the older adults after therapy practices and to determine whether their effects are spread over time. The study was conducted with older adults staying at nursing homes. No additional studies were performed to determine the importance of institutional climate and relations to institution employees. Future studies can perform two separate art therapy group practices for older adults and institutional employees and end the study with a single large group effort including both the older adult and employees.

The personal and occupational experiences of the therapist constitute another issue that may create difficulties in art therapy efforts. The development of standardized measurement tools to measure art therapy efforts is highly recommended (Betts, 2005; Ulman, 2001).

### **Conclusions and Recommendations**

Nursing home residents who received art therapy group activities (intervention group) were seen to have higher psychological well-being levels at the end of the practice period. Thus, the art therapy group activity can be said to be effective in increasing psychological well-being levels. When all of the findings were evaluated together, nursing home residents who received art therapy group activities (intervention group) were found to have lower loneliness levels at the end of the practice period. Thus, the art therapy group activity can be said to be effective in decreasing loneliness levels. This mixed method study was applied in the form of art therapy group sessions with the elderly. This study has many strengths such as having an intervention and a non-intervention group, using qualitative and quantitative measurement tools together, examining comprehensive variables within the life cycle of older adults such as loneliness and psychological well-being, and the frequency, number, and materials of the group sessions being in compliance with the literature.

This study is thought to possibly guide many studies on art therapy group efforts and older adults. By prioritizing group efforts in applied mental health studies performed with the elderly, new and systematic group therapy models can be formed. Factors such as material use and group structure can be enriched in art therapy practices, and new group structures can be tried. Through studies using those practices, important contributions can be made to the fields of old age psychology, art therapy, and group therapy.

A study suggests that art therapy is effectively used in the treatment of mental disorders, particularly in schizophrenia, trauma-related disorders, major depression, and bipolar disorder, with the utilization of various techniques. An important emphasis in this research is the absence of standardized methods for each mental disorder, which complicates the assessment of interventions. Therefore, this study recommends standardizing and measuring art therapy interventions (Chiang et al., 2019). In this study, the effects of the personal and occupational characteristics of the therapist were not included in evaluation. Future studies should develop standardized measurement tools to measure the contribution and effect of the personal and occupational characteristics of the group leader.

#### **Information Note**

The article has been prepared in accordance with research and publication ethics. The research data were collected with the permission of the Scientific Research Ethics Board of Neat East University with dated 26.06.2018. The authors contributed jointly to the study and there is no conflict of interest between the authors.

## References

Ardahan, M. (2010). Aging and nursing home [in Turkish]. *Journal of Social Policy Studies*, 11(5), 25-32.

Arkin, S. M. (2003). Student-led exercise sessions yield significant fitness gains for Alzheimer's patients. *American Journal of Alzheimer's Disease & Other Dementias*, 18(3), 159-170.

Artan, T., Arıcı, A., Çiçek, M., Özbek, Y. (2017). Evaluation of the effect of art therapy on elders [in Turkish]. *Journal of Strategic Research in Social Science*, *3*(4), 131-146.

- Batıgün, D. A. (2008). Suicide probability and gender: An evaluation of suicide in respect to interpersonal relationship style, reasons for living, loneliness, and hopelessness [in Turkish]. *Turkish Journal of Psychology*, 23(62), 65-75.
- Bennington, R., Backos, A., Harrison, J., Reader, A. E., Carolan, R. (2016). Art therapy in art museums: Promoting social connectedness and psychological well-being of older adults. *The Arts in Psychotherapy*, 49, 34-43.
- Betts, D. J. (2005). A systematic analysis of art therapy assessment and rating instrument literature. (Unpublised doctoral dissertation). Florida: The Florida State University The Graduate School.
- Bilgili, N., Kitiş, Y., Ayaz, S. (2012). Assessment of loneliness, quality of sleep and affecting factors in elders [in Turkish]. *Turkish Journal of Geriatrics*, 15(1), 81-88.
- Buchalter, S. I. (2011). Art Therapy and creative coping techniques for older adults. Jessica Kingsley Publishers.
- Bulduk, S., Dinçer, Y., Usta, E., Bayram, S. (2017). Investigation of the impact of art therapy methodology applied to the elderly individuals with dementia on cognitive state [in Turkish]. *Journal of Contemporary Medicine*, 7(1), 36-41.
- Büker, N., Altuğ, F., Kavlak, E., Kitiş, A. (2010). Investigation of the effects of morale status and depression level on functional status in aged people living at home and community [in Turkish]. *Elderly Issues Research Journal*, 1, 44-53.
- Chancellor, B., Duncan, A., Chatterjee, A. (2014). Art therapy for Alzheimer's disease and other dementias. *Journal of Alzheimer's Disease*, 39(1), 1-11.
- Chang, S., Chu, H., Yang, Y., Tsai, J. C., Chung, M. H., Liao, Y. M., Chi, M. J., Liu, M. F., Choui K. R. (2015). The efficacy of music therapy for people with dementia: A meta analysis of randomised controlled trials. *Journal of Clinical Nursing*, 24(23-24), 3425-3440.
- Chiang, M., Reid-Varley, W. B., Fan, X. (2019). Creative art therapy for mental illness. *Psychiatry Research*, 275, 129-136.
- Ching-Teng, Y., Ya-Ping, Y., Yu-Chia, C. (2019). Positive effects of art therapy on depression and self-esteem of older adults in nursing homes. *Social Work in Health Care*, 58(3), 324-338.
- Creswell, J. W. (2003). Research design: Qualitative, quantitative, and mixed methods approaches. Sage Publications.
- Çağlar, T. (2014). Elderliness and social work: The example of life support centre [in Turkish]. *Community and Social Work*, 25(2), 145-162.
- Demir, A. (1989). U.C.L.A. The validity and reliability of the Loneliness Scale [in Turkish] *Journal of Psychology*, 7(23), 14-18.
- Diener, E., Wirtz, D., Biswas-Diener, R., Tov, W., Kim-Prieto, C., Choi, D., Oishi, S. (2009). New measures of well-being. In E. Diener (Ed.), *Assessing well-being: The collected works of Ed Diener*, 247-266.

Dunphy, K., Baker, F.A., Dumaresq, E., Carroll-Haskins, K., Eickholt, J., Ercole, M., Kaimal, G., Meyer, K., Sajnani, N., Shamir, O.P., Wosch, T. (2019). Creative arts interventions to address depression in older adults: a systematic review of outcomes, processes, and mechanisms. *Psychology for Clinical Settings*, *9*(18), 1-24.

Ellison, C. W. (1983). Spiritual well-being: Conceptualization and measurement. *Journal of Psychology and Theology*, 11(4), 330-340.

Eracar, N. (2013). Beyond the word [in Turkish]. 3P Publishing.

Ercan Şahin, N. (2015). The effect of reminiscence therapy applied to the older adultliving in a nursing home on the quality of life of the elderly [in Turkish]. (Unpublished master's thesis). Ankara: Hacettepe University Social Sciences Institute.

Ercan Şahin, N. & Üzar Özçetin, Y. S. (2020). Level of life satisfaction and hopelessness among nursing home residents [in Turkish]. *Journal of Mersin University Health Science*, 13(2), 167-176.

Ertem, M. (2020). Evaluation of the psychosocial and physical functions of individuals living in nursing home [in Turkish]. *Journal of İzmir Kâtip Çelebi University Health Sciences*, 6(1), 113-120.

Eryılmaz, A. & Atak, H. (2011). Happiness model of happiness for older adults living with their families [in Turkish]. *Archives of Neuropsychiatry*, 48(4), 227-233.

Fraenkel, J. & Wallen, N. (2006). *How to design and evaluate research in education*. McGraw-HillCompanies.

Glass, A. (1991). Nursing home quality: A framework for analysis. *Journal of Applied Gerontology*, 10(1), 5-18.

Görgülü, Ü., Akyar, İ., Akdemir, N., Sun Kapucu, S. (2010). Social policies regarding elderly people in Turkey and in the world [in Turkish]. *Turkish Journal of Physical Medicine Rehabilitation*, 56(1), 30-56.

IOAGING [Institue On Aging]. (2012). Read How IOA Views Aging in America, 2010.

Iiuzuka, A., Suzuki, H., Ogawa, S., Kobayashi-Cuya, K. E., Kobayashi, M., Takebayashi, T., Fujiwara, Y. (2019). Can cognitive leisure activity prevent cognitive decline in older adults? A systematic review of intervention studies. *International Geriatric Gerontology*, 19(6), 469-482.

Jenabi, E., Bashirian, S., Ayubi, E., Rafiee, M., Bashirian, M. (2022). The effect of the art therapy interventions on depression symptoms among older adults: A meta-analysis of controlled clinical trials. *Journal of Geriatric Psychiatry and Neurology*, 36(3), 185-192.

Johnson, C. M. & Sullivan-Marx, E. M. (2006). Art therapy: Using the creative process for healing and hope among African American older adults. *Geriatric Nursing*, 27(5), 309-316.

Karakaya, M. E., Çuvalcı Bilgin, S., Ekici, G., Köse, N., Otman, A. S. (2009). Functional mobility, depressive symptoms, level of independence, and quality of life of the older adultliving at home and in the nursing home [in Turkish]. *Journal of The American Medical Director Association*, 10(9), 662-666.

Kılavuz, M. A. (2005). The importance of the religious activities in aging from the point of diminution the solitude and friendship relation in western culture [in Turkish]. *Journal of Uludağ University Faculty of Theology*, 2(14), 25-39.

Kim, H. K., Kim, K. M., Nomura, S. (2016). The effect of group art therapy on older Korean adults with neurocognitive disordes. *The Arts in Psychotherapy*, 47, 48-54.

Kurt, D. (2014). The effect of music therapy on the feeling of loneliness of the older adultliving in nursing homes [in Turkish]. (Unpublished master's thesis). Istanbul: Marmara University Social Sciences Institute.

Lavalekar, A. & Karmalkar, S. (2017). From youth to elderly: A study of quality of life and psychological well-being. *Indian Journal of Health and Well-being*, 8(9), 1083-1086.

Lazarus, L. W. (1988). Essentials of geriatric psychiatry: A guide for healthy professionals. Springer Publishing.

Malchiodi, C. A. (2006). The art therapy sourcebook. McGraw-Hill.

Masika, G., Yu, D., Li, P. (2020). Visual art therapy as a treatment option for cognitive decline among older adults. A systematic review and meta-analysis. *Nursing and Health Sciences*, 76(8), 1892-1910.

Marco, P. & Redolat, R. (2022). Art therapy approaches in alzheimer's disease: A systematic review. *Activities, Adaptation & Aging, 47*(1), 75-106.

McFadden, S. H. & Basting, A. D. (2010). Healthy aging persons and their brains: Promoting resilience through creative engagement. *Clinics in Geriatric Medicine*, 26(1), 149-161.

Milligan, C. & Liu, Y. (2015). Place and informal care in an ageing society: Reviewing the state of the art in geographical gerontology. *Progress in Geography*, *34*(12), 1558-1576.

Nicholson, J. (2009). Social isolation in older adults: An evolutionary concept analysis. *Journal of Advanced Nursing*, 65(6), 1342-1352.

Oyan, S. & Sağlamtimur, B. (2016). Evaluation of the effects of music on humans and various living creatures [in Turkish]. *İnönü University Journal of Culture and Art, 2*(1), 77-82.

Öcebe, D. K., Kolcu, M., Uzun, K. (2019). Music therapy and elderly health [in Turkish]. *University off Helath Sciences Journal of Nursing*, 1(2), 44-48.

Öz, F. (2010). *Basic concepts in health* [in Turkish]. Mattek Printing House.

Pelletier, C. L. (2004). The effect of music on decreasing arousal due to stress: A meta analysis. *Journal of Music Therapy*, 41(3), 192-214.

Perry, C., Thurston, M., Osborn, T. (2008). Time for me: The arts as therapy in postnatal depression. *Complementary Therapies in Clinical Practice*, 14(1), 38-45.

Rashidi, P. & Mihailidis, A. (2012). A survey on ambient-assisted living tools for older adults. *IEEE Journal of Biomedical and Health Informatics*, 17(3), 579-590.

Russell, D., Peplau, L. A., Cutrona, C. E. (1980). The Revised UCLA Loneliness scale: Concurrent and discriminant validity evidence. *Journal of Personality and Social Psychology*, 39(3), 472-480.

Salman, F. & Akkurnaz, G. (2022). The use of photography as a therapy method in geriatrics [in Turkish]. *Journal of İzmir Kâtip Çelebi University Health Sciences*, 7(2), 427-433.

Soyuer, F. & Soyuer, A. (2008). Aging and physical activity [in Turkish]. *Journal of İnönü University Faculty of Medicine*, 15(3), 219-224.

Sukamolson, S. (2007). Fundamentals of quantitative research. *Language Institute Chulalongkorn University*, *1*(3), 1-20.

Sterritt, P. F. & Pokorny, M. E. (1994). Art activities for patients with Alzheimer's and related disorders. *Geriatric Nursing*, 15(3), 155-159.

- Sutipan, P., Intarakamhang, U., Macaskill, A. (2017). The impact of positive psychological interventions on well-being in healthy elderly people. *Journal of Happiness Studies*, (18), 269-291.
- Taş, L. & Şaldırdak, G. A. (2021). The social isolation experiences of elderly residents in nursing homes. *Journal of Istanbul University Sociology*, (41), 351-379.
- Tel, H., Tel, H., Sabancıoğulları, S. (2006). Status of maintenance of activities of daily living and experience of loneliness in elder than 60 years old living at home and in institutions [in Turkish]. *Turkish Journal of Geriatrics*, 9(1), 34-40.
- Telef, B.B. (2013). Psychological well-being scale: Turkish adaptation, validity and reliability study [in Turkish]. *Hacettepe University Journal of Faculty Education*, 28(3), 374-384.
- Thomson, L. J., Lockyer, B., Camic, P. M., Chatterjee, H. J. (2017). Effects of a museum-based social prescription intervention on quantitative measures of psychological wellbeing in older adults. *Perspectives in Public Health*, 10(20), 1-11.
- Thong, S. A. (2007). Redefining the tools of art therapy. Art Therapy, 24(2), 52-58.
- Ulman, E. (2001). A new use of art in psychiatric diagnosis. Art therapy: *American Journal of Art Therapy*, 30, 16-26.
- Van Lith, T., Gerber, N., Centracchio, M. (2023). Preliminary modelling for strategic planning in art therapy research: A multi-phase sequential mixed methods study. *The Arts in Psychotherapy*, 85, 102055.
- Yaşar, M. R. (2007). Loneliness [in Turkish]. Fırat University Journal of Social Sciences, 17(1), 237-260.
- Yavuz, O. & Yavuz, Y. (2018). The effect of the intelligence game played on elderly people in the elderly on cognitive skills, loneliness, and psychological well-being of elderly in the nursing home [in Turkish]. *Life Skills Journal of Psychology*, 2(3), 127-14.