

Research Article

The Effect of Group Art Therapy on Loneliness and Hopelessness Levels of Older Adults Living Alone: A Randomized Controlled Study

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Abstract

AIM: This study was aimed to test group art therapy using clay as a medium as a method to cope with feelings of loneliness and hopelessness in older adults.**METHOD:** This study was a randomized controlled study. A total of 60 older adults who lived alone were enrolled in the study. Thirty subjects were randomly assigned to six 1.5-hour weekly sessions of group art therapy using clay, and interviewed face-to-face twice (intervention group (IG)), and 30 subjects were randomly assigned to be interviewed face-to-face twice (control group (CG)). The effects of interventions were measured using the UCLA Loneliness Scale (UCLA-LS) and the Beck Hopelessness Scale (BHS). Loneliness and hopelessness levels in the IG and CG were measured at the beginning (pre-test) and the end (post-test) of the study. This study was conducted using the CONSORT statement. The group art therapy trial is registered at the US National Institutes of Health (ClinicalTrials.gov) #NCT04295083.**RESULTS:** A statistically significant difference was found between the pre-test and post-test scores of the IG and CG, with respect to the loneliness and hopelessness levels among older adults living alone.**CONCLUSION:** Clay-based group art therapy can contribute toward decreasing the sense of loneliness and hopelessness in older adults. Nurses using group art therapy for older adults will realize the psychological healing aspects and effectiveness of this intervention and recognize it as an effective method for the psychological growth of older adults and the reduction in their levels of loneliness and hopelessness.**Keywords:** Art therapy, hopelessness, loneliness, nurse, older adults

Introduction

The aging global population is one of the most significant social changes in today's world (Gökbunar et al., 2016). It has been estimated that the population of those aged 65 and over will increase from 550 million to 973 million between 2000 and 2030, and the ratio of this age group to the total population will increase from 6.9% to 12.0% (World Health Organization, 2015). The increase in the elderly population will also lead to a serious increase in the number of older individuals living alone. In Turkey, the proportion of older adults living alone is 18.0% (76.4% female and 23.6% male) (Aile, Çalışma ve Sosyal Hizmetler Bakanlığı, 2019).

For older adults, who constitute the risk group in terms of mental health, living alone brings many problems such as despair, insecurity, fear, depression, anxiety about the future, and the longing for a close relationship (Bahar et al., 2009). Therefore, older individuals may experience negative emotions such as feelings of worthlessness, loneliness, and hopelessness.

One of the most common feelings among older adults today is loneliness (Gardiner et al., 2018; Kim et al., 2017b; Tufan et al., 2019). It has been reported that 80% of the adults over the age of 65 experience loneliness, most commonly around the age of 70 (Akgül & Yeşilyaprak, 2018). According

to a report published in the UK in 2017, nine million people felt often or always lonely. In 2018, the Ministry of Loneliness was established, to deal with loneliness in the UK. The projects planned by the Ministry of Loneliness aim to motivate people to socialize and communicate by bringing them together (Dossey, 2020). This UK project is supported by Canada, Australia, New Zealand, and Germany. In Turkey, the year 2019 was declared as the "Senior Year," and accordingly, the Aging Council was held. The main theme of the council was stated as "promoting active aging and strengthening the rights of older adults."

Loneliness occurs more intensely when emotional and social relationships are absent or limited (Dereli et al., 2010). According to Julsing et al. (2016), older adults experience severe loneliness, and loneliness is associated with living alone, being single, and having a low educational level. The feeling of loneliness may cause these individuals to think that their lives are aimless and useless, and experience a sense of emptiness and abandonment (Erol et al., 2016). It can even lead some older adults to commit suicide as their despair increases over time (Eskin, 2001). In a review study by Crewdson (2016), loneliness was found to affect the dimensions of physical, behavioral, and psychiatric health among older adults. Steptoe et al. (2013) argued that loneliness increased mortality, in their study with 6500 older individuals.

Another frequently experienced feeling among older adults is hopelessness (Teranlı & Demir, 2012). According to the definition by the American Psychological Association, hopelessness is a subjective emotional state in which people have no freedom of choice, or their options are limited and, thus, they cannot activate their power (Yıldız & Yıldız, 2016). With hopelessness, the meaning attributed to life begins to disappear, with regret about their past life (Demirel et al., 2015). Individuals feeling hopeless lose the ability to cope with problems and may experience depressive symptoms as they perceive their problems as insoluble (Beck, 1961).

The literature suggests three basic approaches to dealing with loneliness (McWhirter et al., 1996; Rook, 1984; Schoenmakers et al., 2012), as social support groups, social skills training, and cognitive-behavioral approach (Hamamcı & Duy, 2005). Kim et al. (2017b) pointed out that physical activity during

leisure time reduces loneliness and promotes the quality of life and psychological well-being. Garcia and Gomez (2003) conducted a study by assigning 122 older adults to aerobics, handicrafts, computer, and painting groups, and found that these activities reduced the levels of depression and loneliness in this population and increased their life satisfaction.

Art therapy, which is a supportive method suitable for a biopsychosocial approach, is recommended to cope with feelings of loneliness and hopelessness (Mann et al., 2017). Art therapy, included in the Nursing Intervention Classification (Bulechek et al., 2017), is a supportive method that helps individuals express themselves, gain coping skills, increase resilience, improve interpersonal skills, solve conflicts and problems, reduce stress, manage their behavior, increase self-esteem and self-confidence, and gain insight by using art as a tool (Çam & Altınköprü, 2013; Rubin, 2010). The types of art therapy include drama, music, dance, painting, writing, narrative, photography, and clay therapy (Çam & Altınköprü, 2013).

Art therapy can be either be applied individually or integrated into group work and applied in the form of group artworks. Those participating in group work can also benefit from the mirroring and supporting functions of the group (Çıtakbaşı & Üçok, 2019). As the process progresses, they can feel like an important part of a valuable, useful, and meaningful whole (Yalom, 2018).

Some studies have highlighted the effect of art-related activities on the health of older adults (DiNapoli et al., 2016; Elkis-Abuhoff et al., 2008; Kim et al., 2017a; Ueda et al., 2013). According to the literature, utilizing art in the form of individual or group work for older individuals improves their physical and psychosocial health status (Kim et al., 2017a), reduces functional impairment (Masika et al., 2021), increases life satisfaction and quality (DiNapoli et al., 2016), and improves self-confidence (Ching-Teng et al., 2019).

Owing to its composition, clay is a substance that can be manipulated and deformed many times. A person working with clay can make objects without fear of damaging them, due to the material's plastic and durable structure. It is an appropriate art form for older individuals in neurocognitive decline,

because it has the advantage of being easily manipulated (Kim et al., 2017a).

Studies on this art form have found that clay manipulation helps to transform the emotions into physical shapes through the tactile interventions it involves, revealing emotions within given patterns, and relaxing the individual (Rahmani et al., 2010). Clay can provide concretization and catharsis (Eren, 2019) because of its three-dimensional characteristics (Foster, 1997), along with the added benefit of using physical energy in the creative process. It has been reported that art therapy using clay facilitates the expression and discharge of emotions, reveals subliminal content, improves verbal communication, reveals strong emotions (Sholt & Gavron, 2006), produces healing results through concretization processes and symbolic mechanisms, increases the harmony of treatment (Kar & Toros, 2015), and reduces hopelessness (Akhan et al., 2017). In addition, evidence shows that clay therapy helps to reduce stress (Kimport & Robins, 2012) and anxiety (Kimport & Hartzell, 2015; Morais et al., 2014), enhances personal power, helps release suppressed emotions such as feelings of abandonment or depression, and contributes to physical and mental well-being while guiding reality (Ciasca et al., 2018; Jang & Choi, 2012; Kimport & Robins, 2012). However, to our knowledge, no studies have investigated the effects of clay work as a method to develop social skills and reduce loneliness and hopelessness in older adults.

This study was carried out to determine the effect of clay-based group art therapy on the loneliness and hopelessness levels of older adults living alone.

Research Hypotheses

H1: The loneliness level of older adults living alone who participate in clay-based group art therapy will be lower than that of older adults who do not.

H2: The hopelessness level of older adults living alone who participate in clay-based group art therapy will be lower than that of older adults who do not.

Method

Study Design

This study was a randomized controlled study.

Sample

The study population consisted of individuals over 65 years of age living alone in the Trabzon-Ortahisar district, between May 2018 and November 2018 ($n=4.334$). Power analysis was performed to determine the sample of the research. The power of the test was calculated using the G*Power 3.1 program. No studies have reported the effect of clay and similar interventions on loneliness and hopelessness in older adults living alone. Therefore, the effect size in power calculation was taken as .50, of medium size. It was found that in determining the strength of the study to exceed 95%, a total of at least 42 individuals should be reached in the two groups with 21 participants in each group at a 5% significance level and .50 effect size ($df=1$; $F=4.085$). The data were obtained from 60 older adults over 65 years old living alone in Turkey and who met the inclusion criteria ($n=60$). Of these, 76.4% and 23.6% were women and men, respectively (Engelli ve Yaşlı İstatistik Bülteni, 2019). Accordingly, it was decided that the sample size would represent the population when it was determined to be 60; 47 participants were women (78.0%) and 13 men (22.0%). The inclusion criteria of the study were being 65 years old and above, obtaining a score of 19 or above in the Mini-Mental Status Examination scale, obtaining less than 30 points in the Beck Depression Scale, obtaining 32 points and more in the UCLA Loneliness Scale (UCLA-LS), obtaining four points or more in the Beck Hopelessness Scale (BHS), not having a perception disorder that could prevent communication, not having a neurological or physical condition (e.g., paralysis, or rheumatoid arthritis, among others) that could affect the hands, not having a mental disorder diagnosis, and volunteering to participate in the study.

A total of 60 older adults who met the inclusion criteria were grouped by the researcher using stratified randomization according to age, gender, and duration of living alone. Then, participants were assigned to the intervention group (IG) and control group (CG) using a block randomization method. It was not possible to blind participants and researchers because of the nature of the interventions.

Data Collection

Research data were collected at the "Senior Assistance Center" in Trabzon, Turkey, between May 2018 and November 2018. The Senior Assistance Center was established in 2018 by the Trabzon

Metropolitan Municipality under the coordination of the Governorship of Trabzon, within the scope of the Senior Assistance Program of the Ministry of Family and Social Policies, to provide social support for people over 65 years of age. The Senior Assistance Center, having two personnel working between 8 a.m. and 5 p.m. on weekdays, is conveniently located, welllit, and easily accessible by the public transportation network.

Data Collection Tools

The data of the study were collected with face-to-face interviews by the researcher, using a questionnaire developed by the researchers, the UCLA-LS, and the BHS.

Questionnaire Form

This form consists of 15 questions prepared by the researchers, in line with the literature, to determine the individual and lifestyle characteristics of older adults (Gardiner et al., 2018; Kim et al., 2017b) such as age, parental status, the number of children, gender, education level, the place where they have lived the longest, occupation, employment status, perception of social-economic level, status of having a chronic disease, and regular use of medication, duration of living alone, frequency of spending time with family members, frequency of spending time with neighbors, and leisure activities.

The UCLA-Loneliness Scale (UCLA-LS)

The UCLA-LS, developed by Russell et al. (1978), is a 20-point total self-assessment scale used to determine the degree of loneliness of an individual. Russell (1996) revised the psychometric properties of the scale and presented its final version, including nine positive and 11 negative items. The scale has a 4-point Likert-type rating. Positive statements (1, 4, 5, 6, 10, 15, 16, 19, and 20) are scored inverted, contrary to negative statements. The highest and lowest scores to be obtained are 80 and 20, respectively. Higher scores indicate that individuals are experiencing a greater degree of loneliness. Scores between 20–31, 32–41, 42–53, 54–67, and 68–80 indicate "Not feeling lonely at all," "Mildly feeling a little lonely," "Feeling a little lonely," "Feeling lonely," and "Feeling completely lonely," respectively. The Turkish validity and reliability study of the scale was conducted by Demir (1989), who determined Cronbach's alpha internal consistency coefficient to be .96. In this study, Cronbach's alpha reliability coefficient was .86.

The Beck Hopelessness Scale (BHS)

Developed by Beck et al. (1974), the BHS is a self-assessment scale comprised of 20 items. The scale is scored between zero and one (0–1) point. In items 2, 4, 7, 9, 11, 12, 14, 16, 17, 18, and 20 of the scale, the "Yes" option gets one point, and in items 1, 3, 5, 6, 8, 10, 13, 15, and 19, the "No" option gets one point. The total score obtained from the scale forms the individual's "hopelessness score." When the score is high, the level of the hopelessness in the individual is assumed to be high (Özmen et al., 2008). Scores between 0–3, 4–8, 9–14, and 15–20 indicate "Not being hopeless," "Low hopelessness," "Moderate hopelessness," and "High hopelessness," respectively. Nine points or more can be an indicator of suicide risk. The Turkish adaptation of the scale was accomplished by Seber et al. (1993), and then Durak and Palabiyikoğlu (1994) obtained detailed information about the validity, reliability, and factor structure of the scale by revising it. Durak and Palabiyikoğlu (1994) conducted a study with two groups (normal group and psychiatric patients), and Cronbach's alpha reliability coefficient was determined to be .85. In the current study, Cronbach's alpha reliability coefficient was .82.

Procedure

A randomized controlled study was conducted using the CONSORT statement (see the schematic flow chart for details, Figure 1). The clay-based group art therapy trial is registered at the US National Institutes of Health (ClinicalTrials.gov) #NCT04295083.

The UCLA-LS and BHS were applied to older adults in the IG and CG by the researcher, using a face-to-face interview method before the clay-based group art therapy (pre-test), and one week after the clay-based group art therapy sessions (post-test).

The IG was divided into three subgroups of 10 participants (group 1: 5 men, 5 women; group 2: 2 men, 8 women; group 3: 10 women), and weekly clay-based group art therapy sessions of 60–90 minutes were carried out for six weeks. The application was completed after 6 weeks, with one session every week. Before the clay-based group art therapy started, the individuals were offered tea, coffee, and snacks, and the sessions started by asking how they spent the last week. Each session was structured as opening, interaction, clay study, verbal expression, and closing, respectively. The clay study was carried out in the clay workshop prepared for this study at

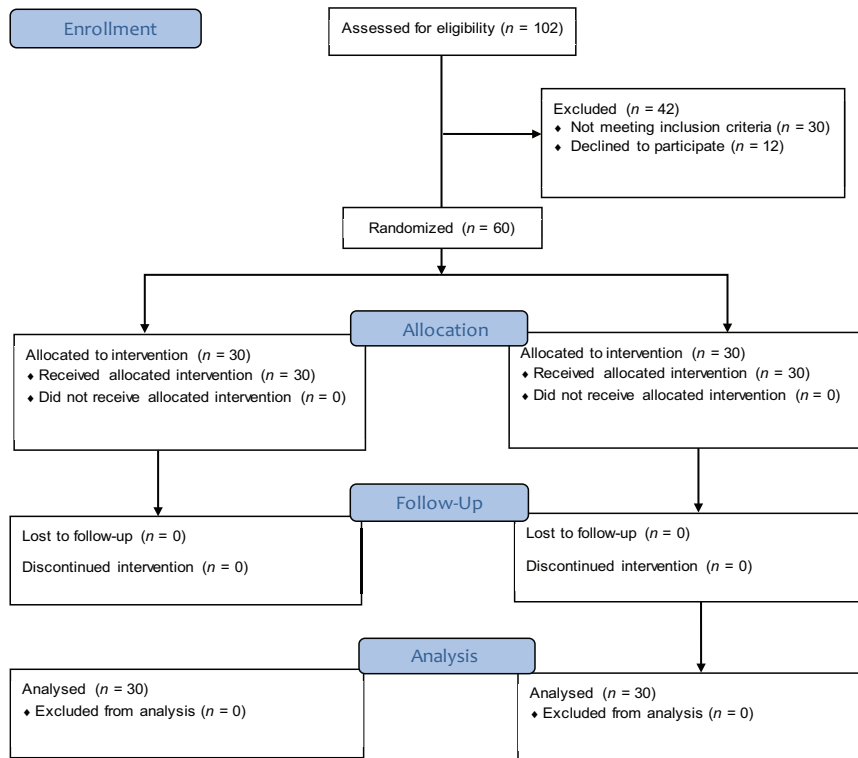


Figure 1.
CONSORT Flow Diagram.

the Senior Assistance Center. The necessary materials for the session were provided before the session. The sessions were held using the “Clay Work Activity Booklet for Older Adults,” including structured and semi-structured activities prepared by the researcher, in line with the literature, to help individuals aged 65 and over who experience loneliness and hopelessness gain new solutions and life skills to reduce their levels of loneliness and hopelessness and share their feelings, thoughts, and memories with other individuals (Altundağ et al., 2017; Eratay et al., 2017; Maral, 2018; Morais et al., 2014; Rahmani & Moheb, 2010; Sherwood, 2004). Four experts were consulted to develop the booklet. In the activity program, methods such as narration, sharing experiences, group practice, question–answer, learning by doing, and imagining were used.

The physical, psychological, social, and mental characteristics of older adults were considered when selecting these methods. The duration of the activity program was determined by taking into account that art therapy using clay intervention programs had been carried out for 5–8 weeks, as described in the literature (Kim et al., 2017a; Morais et al., 2014).

The group leader received regular supervision from an experienced ceramic (clay) artist. The content and objectives of each session in the clay-based group art therapy program were as follows;

Session 1

The first session started with the activity called “Introduce yourself, familiarize with clay” to enable group members to get to know each other and meet, using clay. Group members were first asked to identify themselves by setting a nickname. The dry, plastic, and baked stages of clay were then shown, and the stages of transformation into ceramic were explained. Later, clay was given to each participant and they were asked to make objects suitable for their nicknames.

Session 2

This session was conducted with the title “I know my feelings” for the participants to recognize and express their emotions and realize the effects of their emotions on their behavior. They were informed about positive and negative emotions and asked to give examples of their feelings. Participants were enabled to transform the emotions they experienced the most into objects through clay. At the end of the

activity, the volunteer participants were encouraged to think about this issue by asking questions such as "How did you act because of this feeling? What did you do? What would you do now? What do you think would be better to do? Did you tell the other person about your feeling? How can you express your feeling to the other person?"

Session 3

The third session was conducted under the name of "My Emotion Flowers" for the participants to recognize and express their feelings. Participants were asked how they felt that day. Their emotions were matched with colors based on their responses (For example, blue for sadness, red for anger, yellow for happiness, etc.). Different colored clays were given to the participants. The participants were asked to choose a color suitable for their mood of that day and make flowers. When they were completed, the objects were removed for drying.

Session 4

This session was conducted under the title of "My Past Life and My Feelings." The participant was asked to remember his feelings about his "past" life. Later, the whole group was asked to make an object out of clay about the emotion that most affected them in the past. The session ended after the elders were asked if they had anything to ask about the activity.

Session 5

The fifth session was conducted under the title of "My Life and Feelings Today" to increase the emotional awareness of the individual and to enable them to express their feelings of "today." Participants were helped to realize their feelings about "home, work, me and my loved ones," the most important areas of life. For this purpose, they were asked to close their eyes during the application and think about their home, their work-life, themselves, and finally their loved ones, and the emotions that all of these aroused in them. After making sure that everyone completed the activity, they were asked to reflect on the emotion regarding each area of life and project it into an object using clay.

Session 6

This session was conducted under the title of "My Future Life and Feelings" to enable the participants to express their feelings about their "future" life. Participants were asked to express their goals and hopes for the future with the help of clay. In addition,

a "love bombing" activity was performed to end the group process and receive feedback. Finally, the participants shared their feelings for the group work and the study was concluded.

The CG was also divided into three subgroups of 10 participants (group 1: 3 men, 7 women; group 2: 3 men, 7 women; group 3: 10 women). During the 6 weeks, two 30-minute face-to-face interviews were conducted with the older adults in the CG. In the face-to-face interviews with the CG, health, social life, and financial issues were discussed with older adults. After the research findings were reported to the CG members, the group art therapy using clay was performed.

Statistical Analysis

All analyses were conducted using Statistical Package for the Social Sciences statistical software, Version 23 (IBM SPSS Corp., Armonk, NY, USA). Cronbach's alpha was used to assess the internal consistency of the scales. For the analysis of individual characteristics, descriptive statistics (percentile, arithmetic mean, standard deviation, min-max), nominal values in the intergroup comparison, and chi-square test were used. In addition, independent *t*-tests and paired series *t*-tests were used to compare the measurement values and scale scores, and ANOVA analysis was used to determine the effectiveness of the intervention. In the study, all findings were tested at a significance level of $p = .05$.

Ethical Considerations

Ethics committee approval was received for this study from the ethics committee of Karadeniz Technical University (Date: April 16, 2018 No: 2018/51). Participants were informed of the study objectives, duration, content, group processes, and other ethical considerations before signing the consent forms for joining this study. Written consent included the agreement that allowed the researchers to use the demographic data of participants, scores obtained from the outcome measures, and digital copies of the artworks created by participants during the treatment process, for research purposes.

Results

The individual characteristics of the IG and CG are shown in Table 1 and, both groups were found to be similar ($p > .05$, Table 1). The lifestyle characteristics of the IG and CG are shown in Table 3 and were also found to be similar ($p > .05$, Table 2).

Table 1.
Individual Characteristics of Older Adults (N = 60)

Characteristics	Total (n=60)		IG (n=30)		CG (n=30)		Test and p
	X ± SD	Min–Max	X ± SD	Min–Max	X ± SD	Min–Max	
Age	72.56 ± 1.01	65–95	72.60 ± 8.10	65–95	72.53 ± 7.75	65–95	.033* >.05
Number of children	3.23 ± .15	1–6	3.39 ± 1.10	2–6	3.07 ± 1.20	1–5	1.025* >.05
	n	%	n	%	n	%	
Gender							
Female	47	78.3	23	76.7	24	80.0	.001** >.05
Male	13	21.7	7	23.3	6	20.0	
Education level							
Illiterate	13	21.7	5	16.7	8	26.7	.910** >.05
Literate	17	28.3	9	30.0	8	26.7	
Elementary school	21	35.0	11	36.7	10	33.3	
High school	9	15.0	5	16.7	4	13.3	
The place where you have lived the longest							
Village	15	25.0	9	30.0	6	20	.910** >.05
District	16	26.7	8	26.7	8	26.7	
City	29	48.3	13	43.3	16	53.3	
Occupation							
Housewife	43	71.7	21	70.0	22	73.3	.134** >.05
Civil servant	9	15.0	5	16.7	4	13.3	
Worker	4	6.7	2	6.7	2	6.7	
Self-employed	4	6.7	2	6.7	2	6.7	
Employment status							
Retired	14	23.3	8	26.7	6	20.0	.642** >.05
Still employed	3	5.0	1	3.3	2	6.7	
No job experience	43	71.7	21	70.0	22	73.3	
Having children							
Yes	55	91.7	28	93.3	27	90.0	.218** p>.05
No	5	8.3	2	6.7	3	10.0	
Perception of social-economic level							
Low	18	30.0	8	26.7	10	33.3	1.748** >.05
Moderate	27	45.0	16	53.3	11	36.7	

Table 1.
Individual Characteristics of Older Adults (N = 60) (Continued)

Characteristics	Total (n=60)		IG (n=30)		CG (n=30)		Test and p
	X ± SD	Min–Max	X ± SD	Min–Max	X ± SD	Min–Max	
High	15	25.0	6	20	9	30	
Having a chronic disease							
Yes	42	70.0	19	63.3	23	76.7	.714** >.05
No	18	30.0	11	36.7	7	23.3	
Use of regular medication							
Yes	42	70.0	19	63.3	23	76.7	.714** >.05
No	18	30.0	11	36.7	7	23.3	

Note: *Independent Samples t-tests; **Chi-Square test statistics

Table 2.
Lifestyle Characteristics of Older Adults (N = 60)

Characteristics	Total (n=60)		IG (n=30)		CG (n=30)		Test and p
	X ± SD	Min–Max	X ± SD	Min–Max	X ± SD	Min–Max	
Duration of living alone (months)	94.80 ± 108.06	5–420	84.1 ± 102.5	5–420	105.5 ± 114.0	5–420	.764* >.05
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
Frequency of spending time with family members							
Everyday	12	20.0	6	20.0	6	20.0	.083** >.05
Once or several times a week	25	41.7	12	40.0	13	43.3	
Once or several times a month	23	38.3	12	40.0	11	36.7	
Frequency of spending time with neighbors							
Everyday	17	28.3	11	36.7	6	20.0	3.511** >.05
Once or several times a week	25	41.7	13	43.3	12	40.0	
Once or several times a month	18	30.0	6	20.0	12	40.0	
Leisure activities							
Relaxing	11	18.3	7	23.3	4	13.3	---
Gardening	19	31.7	9	30.0	10	33.3	
Doing knitting/handicraft	9	15.0	4	13.3	5	16.7	
Watching TV	11	18.3	5	16.7	6	20.0	
Solving puzzles	1	1.7	1	3.3	0	0	
Performing religious practices	9	15.0	4	13.3	5	16.7	

Note: *Independent samples t-tests; **Chi-square test statistics.

Table 3.

Comparison of Sociodemographic Characteristics of Older Adults with the UCLA-LS and BHS Pre-test Scores (N = 60)

Characteristics	UCLA-LS				BHS			
	X ± SD	Min–Max	Test	p	X±SD	Min–Max	Test	p
Gender								
Female	55.29 ± 11.21	33–75	.58*	>.05	11.46 ± 2.59	5–16	1.58*	>.05
Male	53.30 ± 9.17	34–67			10.15 ± 2.85	6–14		
Education level								
Illiterate	51.92 ± 12.01	33–73	1.64**	>.05	10.46 ± 3.07	5–16	1.005**	>.05
Literate	59.47 ± 8.84	43–75			12.00 ± 2.06	8–16		
Elementary school	52.90 ± 11.44	33–70			11.23 ± 2.71	6–16		
High school	55.00 ± 9.20	45–72			10.55 ± 3.04	6–16		
Place of residence								
Village	56.33 ± 8.68	43–70	.19**	>.05	12.13 ± 2.13	8–16	2.34**	>.05
District	54.68 ± 11.06	33–75			11.62 ± 2.65	6–16		
City	54.20 ± 11.80	33–73			10.44±2.82	5–16		
Occupation								
Housewife	55.37 ± 11.17	33–75	.16**	>.05	11.60±2.55	5–16	1.47**	>.05
Civil servant	52.88 ± 11.81	34–72			9.88±2.71	6–14		
Worker	53.25 ± 8.30	43–60			11.00±3.46	6–14		
Self-employed	55.50 ± 8.42	43–61			9.75±2.87	8–14		
Employment status								
Retired	53.07 ± 10.66	34–71	.25**	>.05	10.64 ± 2.73	6–14	3.69**	<.05
Still employed	56.00 ± 5.29	50–60			7.66 ± 1.52	6–9		
No job experience	55.37 ± 11.17	33–75			11.60 ± 2.55	5–16		
Having children								
Yes	55.94 ± 10.33	33–75	2.70*	<.05	11.23 ± 2.58	5–16	.50*	>.05
No	43.00 ± 8.77	34–56			10.60 ± 3.97	6–16		
Perception of Socio-economic level								
Low	55.72 ± 9.88	33–73	2.98**	>.05	11.38 ± 2.00	8–16	.11**	>.05
Moderate	54.14 ± 11.76	33–75			11.81 ± 2.64	6–16		
High	55.13 ± 10.52	36–72			9.80 ± 3.09	5–16		
Having a chronic disease								
Yes	53.80 ± 11.03	33–75	1.16*	>.05	11.35 ± 2.79	5–16	.76*	>.05
No	57.33 ± 9.95	33–73			10.77 ± 2.43	6–14		
Use of regular medication								
Yes	53.80 ± 11.03	33–75	1.16*	>.05	11.35 ± 2.79	5–16	.76*	>.05
No	57.33 ± 9.95	33–73			10.77 ± 2.43	6–14		

Note: *Independent samples t-test; **Variance analysis.

When the individual characteristics of participants (n=60) and the mean scores of the UCLA-LS and BHS pre-test were compared, a significant

difference was found between the parental status (t=2.70, p < .05) and the mean scores of the UCLA-LS pre-test. A significant difference was also

found between working status ($t=3.69, p < .05$) and the BHS pre-test mean scores (Table 3).

The comparison of the pre-test and post-test total scores of the UCLA-LS and BHS in the IG and CGs are shown in Table 4. While there was no significant difference between the IG and CG ($t=.765, p > .05$ and $t=.239, p > .05$, respectively) before the group art therapy using clay, a significant difference was found between the groups after the group art therapy using clay, in favor of the IG ($t=-3.579, p < .05$; $t=-7.919, p < .05$).

There was a significant difference between the UCLA-LS pre-test and post-test in the IG ($t=23.468, p < .05$). Similarly, there was a significant difference between the UCLA-LS pre-test and post-test in the CG ($t=5.889, p < .05$). In the IG, a significant difference was also found between the BHS pre-test and post-test ($t=30.245, p < .05$). Similarly, a significant difference was seen between the BHS pre-test and post-test in the CG ($t=7.899, p < .05$) (Table 4). According to these results, H1 and H2 were confirmed.

Discussion

When the individual characteristics of participants and the UCLA-LS and BHS scores were compared before the intervention, the UCLA-LS total scores of older adults having children were found to be higher, whereas the BHS total scores of employed older adults were lower ($p < .05$). According to the Disabled and Elderly Statistics Bulletin published by the General Directorate of Disabled and Elderly Services (2019),

14.4% of older adults considered their children as a source of happiness, and 51.3% reported that they wanted to live with their children. In Turkish society, having children has three values: economic, psychological, and social. The economic value indicates "the financial benefit of children when they are both young and adults, and the assurance of care at old age." The psychological value indicates "happiness, joy, friendship, and pride," and social value refers to "being socially accepted by society and the continuation of surname and family traditions when having a boy" (Erol & Aloğlu, 2017). The fact that these older adults of Trabzon province had to live alone despite having children in Trabzon province, which is not consistent with the traditional social structure, is likely to increase their sense of loneliness. In this study, there were also statistically significant differences between the BHS mean scores according to the employment status of older adults. The average BHS score of employed older adults was lower than that of unemployed ones. Consistent with this study, Akdemir and Açıkan (2017) found that employed individuals have higher levels of hope. Aydin and Karaoğlu (2012) reported that employed older adults have a higher ability to live on their own and a better quality of life, are more open to social interaction and communication, and have lower anxiety about death and dying than the others. The reasons for this may be that employed older individuals can still use their talents and potentials, feel that they have a place in society, and are able to express their presence as individuals.

After comparing the UCLA-LS and BHS pre-test scores of the IG and CG, the difference between

Table 4.

Intragroup and Intergroup Comparison of Older Adults' UCLA-LS and BHS Pre-test–Post-test Mean Scores (N = 60)

	IG (n = 30)	CG (n = 30)	Test Statistics	p
The UCLA-LS				
Pre-test	55.93 ± 10.84	53.80 ± 10.77	.765**	.448
Post-test	41.03 ± 10.33	50.87 ± 10.94	-3.579**	<.001
Test statistics	23.468*	5.889*		
p	<.001	<.001		
The BHS				
Pre-test	11.27 ± 2.77	11.10 ± 2.64	.239**	.812
Post-test	5.10 ± 2.32	10.03 ± 2.50	-7.919**	<.001
Test statistics	30.245*	7.899*		
p	<.001	<.001		

Note: *Paired samples t-test; **Independent samples t-test.

them was not found to be statistically significant ($p > .05$). This result shows that this research sample was suitable for interventional research.

The comparison of the UCLA-LS post-test mean scores between the IG and CG revealed that the difference was statistically significant, and the mean scores for loneliness decreased significantly in the IG compared to the CG ($p < .001$). The fact that this decrease in loneliness score averages was higher and statistically significant in the IG in this study may indicate that the group art therapy using clay was effective. No studies have examined the effect of group art therapy using clay on loneliness among older adults living alone. However, some studies have demonstrated the effects of art activities on the health of older adults (DiNapoli et al., 2016; Elkis-Abuhoff et al., 2008; Kim et al., 2017a; Martinec, 2018; Ueda et al., 2013). According to the literature and current research results, engaging in art promotes better physical and psychosocial health status (Kim et al., 2017a), reduces functional impairment (Masika et al., 2021), increases life satisfaction and quality of life (DiNapoli et al., 2016), and improves self-confidence (Ching-Teng et al., 2019). Kim et al. (2017b) highlighted that physical activity as a leisure activity reduces loneliness and increases life quality and psychological well-being. Garcia et al. (2004), in their study with 122 older adults who were assigned into groups for aerobics, handicrafts, computers, and painting, noted that these activities reduced levels of depression and loneliness, besides improving life satisfaction in this population. Doric-Henry (1997) found a decrease in the depression and anxiety levels of the participants and an increase in their self-esteem, in the clay art therapy study which they conducted with the older adults living in a nursing home.

After comparing the BHS post-test mean scores of the IG and CG, it was determined that the difference between them was statistically significant and that the mean BHS score in the IG decreased significantly compared to the CG ($p < .001$). In this study, the fact that the decrease in BHS mean scores were higher and statistically significant in the IG showed that the group art therapy using clay was effective. In the literature, no studies investigating the effect of group art therapy using clay on hopelessness have been carried out with older adults living alone. "Instillation of hope," included in the category of nursing interventions, is recommended for alleviating

hopelessness. Instillation of hope is an initiative comprised of activities to increase self-esteem, talk about past achievements, remember loved ones, ensure life review, and join support groups (Bulechek et al., 2017). Thus, clay-based group art therapy with this approach aimed at providing emotional expression and reducing hopelessness levels in older adults by helping them express their past, present, and future experiences verbally and transform them into objects through clay.

Group art therapy practices are reported to be more effective than individual practices (Davidson & Rossall, 2014). Those participating in group work can benefit from the mirroring and supporting functions of the group (Çitakbaş & Üçok, 2019), and as the process progresses, they can feel like an important part of a valuable, useful, and meaningful whole (Yalom, 2018). Gardiner et al. (2018) pointed out that group activities can be effective in alleviating loneliness and social isolation in older adults, and further evidence-based studies are required in this regard. Results from this randomized controlled study suggest that the participation of older adults in the group art therapy using clay enhances interaction, offers the opportunity to verbally express emotions and thoughts, and introduces an art form that reduces loneliness. Mishra et al. (2021) reported that expressive group art therapy increases subjective happiness and decreases the feeling of loneliness in older women. In their synthesis studies in which they reviewed 119 group artworks, Gabel and Robb (2017) argued that participating in group art therapy provided a therapeutic effect, with self-awareness and psychosocial growth. During the clay-based group work in this study, it was observed that older adults were shy and hesitant to speak in the first sessions. However, in the following sessions, they started to express themselves, and they liked being with the group. For individuals living alone, meeting new people can be challenging due to feelings such as shyness or fear. However, in art activities with the group, it may be easier for them to make eye contact, have verbal communication, and start friendships (Crockett, 2020). Some of the statements of the individuals participating in this study about belonging to a group are as follows; "... I never went to school, but I really wanted to. This workshop has become my school, and the people here are my classmates..." "... It is very nice to be with my peers, apparently, they feel what I feel. It relieved me to see that others also have similar feelings..." "... If they

compare loneliness and death, loneliness will be worse. I look forward to coming here..." Depending on the statements of the elderly individuals, it can be said that they are happy to belong to a group. Social acceptance and being a member of a group facilitates adaptation to the environment and provides a normative basis for an individual's behavior (Aydın et al., 2013). The sense of belonging meets the individual's needs of belonging to a group, being important to each other, and having a shared purpose, and unity. It also has a protective function for the possible pain and loneliness that may be experienced due the alienation, social isolation, and the lack of a sense of belonging, (Ersanlı & Koçyiğit, 2013). In this study, in addition to the positive effects of the clay art therapy method by itself, on the loneliness and hopelessness levels when applied to the older adults living alone, it is thought that performing the therapy together with the group was even more effective.

Conclusion and Recommendations

After the clay-based group art therapy, a significant decrease was seen in the loneliness and hopelessness levels of older adults in the IG, compared to those in the CG, when the outcomes of the face-to-face interviews of both groups were compared. Therefore, it can be concluded that intervention with group art therapy using clay was effective in reducing the levels of loneliness and hopelessness in older adults living alone.

Loneliness and hopelessness are negative emotions that affect millions of older adults. Short-term, cost-effective, and community-based treatments are urgently needed. Clay-based group art therapy has emerged as an interventional art therapy model that achieved a rapid reduction in the loneliness and hopelessness levels of older adults living alone, within a short period. However, the study has some limitations. One of the major limitations was that the assessment of the intervention outcomes included only self-report measures. Besides, most of the participants in the present study were women (71.6%), which may affect the generalizability of the study findings. Finally, the long-term effect of clay-based group art therapy is yet unknown. It is recommended that further comprehensive research is conducted to evaluate the effects of clay-based group art therapy on the levels of loneliness and hopelessness of older adults living alone, through follow-up studies.

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