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Evaluating the Effect of Painting Therapy on Happiness in the Elderly

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Abstract

Background: Reduced happiness is one of the consequences of aging. Happiness is a component of mental health that leads to life satisfaction and physical well-being.

Aim: This study aimed to evaluate the effect of painting therapy on the happiness of the elderly.

Method: This randomized clinical trial was conducted on 60 elderly in 2017. The subjects were selected from two elderly care centers in Mashhad, Iran, through the convenience sampling method and randomly divided into two groups of intervention (N=30) and control (N=30). The data collection tools included a demographic characteristics form, research unit selection questionnaire, Cognitive Short Questionnaire, and Oxford Happiness Questionnaire. In addition, 12 sessions of painting therapy (three 50-60-minute sessions per week) were performed. At the end of the intervention, the Oxford Happiness Questionnaire was completed again by the subjects of both groups. In addition, data analysis was performed in SPSS, version 21.

Results: In this study, the groups were homogenous in terms of demographic variables. In terms of mean happiness score before the intervention, no significant difference was observed between the intervention and control groups (55.6 ± 2.1 vs. 57.6 ± 5.0 ; $P=0.06$). However, after the intervention, the mean score of happiness was significantly higher in all its dimensions in the intervention group compared to the control group ($P<0.001$).

Implications for Practice: Painting therapy can be used as an effective intervention to increase happiness in elderly care centers and nursing homes.

Keywords: Elderly, Happiness, Painting therapy

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Introduction

Longevity and aging of the world's population are among the important achievements of the 21st century. Currently, the trajectory of population growth has shifted from the explosive growth of children to the explosive presence of the elderly (1). Approximately 13% of the world's population is old, and this rate is expected to rise to 20% by 2030. It is also predicted that more than 10% of Iran's population will be constituted of elderlies by 2024, and 21-25% of the country's population will be old by 2050. The phenomenon of increased elderly population is one of the most important economic, social, and health challenges in the 21st century (2). In all the developed countries, planning for and helping the elderly to maintain health and to meet their needs is considered a social necessity (3). The global increase in the number of elderlies has led researchers and experts to emphasize the importance of focusing on the health of the elderly and providing the necessary facilities for special services in this area. Several psychosocial factors, such as lack of social roles, loss of independence, death of friends and relatives, increased isolation, financial constraints, and reduced physical and mental health, have a negative impact on the health of the elderly (4).

In recent years, researchers and authors have mostly focused on the broader concept of health, in a way that health is not just the absence of diseases now, and it involves mental, physical, social, and spiritual welfare as well. On the other hand, the works of Seligman et al. in the area of mental health created a new movement with the title "positive psychology" (5). In this area of science, the focus is more on the positive aspects of human beings, including talents, abilities, skills, and, especially happiness and how to live happily, which is a fundamental concept in this approach, rather than mental damages and disorders (6). Happiness is considered a positive inner experience and one of the mental health indicators that result from the cognitive and emotional evaluation of individuals from their lives. This area has attracted the attention of many psychologists in the last three decades (7). One of the consequences of aging is decreased happiness. In this regard, the World Health Organization (WHO) has emphasized happiness as a health component. In addition, concepts such as satisfaction with life and oneself and well-being are among the WHO's indicators in defining mental health associated with positive emotions, such as pleasure, peace, joy, and happiness (8).

There are several definitions for happiness; according to Veenhoven (2002), happiness is the degree to which an individual judges the overall quality of his/her own life-as-a-whole favorably (9). Happiness is one of the most important and influential variables in human life and gives meaning to life to some extent (10). The most important personality traits of happy people are having positive emotions and high self-esteem (11). Research shows that happiness, regardless of its acquisition method, can improve physical health. Happy people are those who feel more secure, make decisions more easily, have a more cooperative spirit, and are more satisfied with those who live with them (12). With proper planning, the elderly can enjoy a happy, productive, and enjoyable life. Among the programs that directly relate to the mental health of the elderly, we can refer to a variety of psychotherapy methods that play an effective role in promoting the health of the elderly (13). There are several approaches to control and prevent these problems in the elderly, including painting therapy (14).

Participation of the elderly in organized art activities in a friendly environment is one of the key elements in improving the quality of life and general health and, consequently, reducing disability in old age. In addition to focusing on the rights of these people, this approach can be beneficial in maintaining social order and improving the quality of life in this population group (15). The concept of quality of life has been considered an important indicator for evaluating individual health, judging the physical and mental health of the elderly, and finding the main problems in various aspects of their lives (16). According to Ghasemi et al. (2017), the implementation of self-management education program improved social performance, role-play, independence, general health, and quality of life in the elderly (17). Those elderlies who require the help of others in their everyday lives have a lower quality of life and, in fact, have many signs that demonstrate their need for care.

Given the fact that the elderly are considered to be among the most vulnerable groups in the society due to their age and reduced abilities, it is crucial to evaluate the factors affecting their quality of life. One of these factors is artistic activity, the purpose of which is to raise the level of quality of life and interpersonal communication (16). Art therapy is one of the methods to treat mental and

psychological problems, and it has taken steps toward the improvement of internal development of individuals and rehabilitation of patients with mental and physical disabilities. In art therapy, an opportunity is provided for individuals to express their thoughts and feelings and communicate with others (18). The first tool of art therapy is painting. In fact, painting opens the door for using other artifacts. Painting therapy is a profession of mental health that uses the creative process of making and producing art in order to improve the physical, mental, and emotional well-being of individuals at all ages.

The process of art therapy can be used to overcome limitations. Psychotherapy may be uncomfortable for a person in need to speak, and people may not be able to express their feelings in this method. Painting therapy is a way through which one can travel inside people without the need for excessive speaking (14). Painting therapy offers a better understanding of oneself, reduces tensions between people, increases self-esteem, and consequently, improves the social abilities and capacities of individuals. Art-related interventions can increase general health and lead to a lower number of referrals to a physician (19). In a research conducted on Korean elderlies residing in America, painting therapy decreased negative emotions, improved self-confidence, and reduced the anxiety of the participants (20).

After review of the literature, it was concluded that reduced happiness in the elderly is one of the challenges of their mental health and a criterion for the decreased quality of life in this period of life. Therefore, it is crucial to find ways to increase happiness, especially in the elderly. It seems that instead of paying attention to depression and pain in the elderly, we can take effective steps toward improving mental health and life satisfaction in this group of people by focusing on increasing their happiness. The level of happiness is low in the elderly, which can play a major role in the lives of these individuals and their relatives. Painting therapy is a proper approach in geriatric nursing, which aims to improve the mental health of these individuals at various prevention, care, and rehabilitation stages as a low-cost and acceptable nursing technique with almost no complications. With this background in mind, we aimed to evaluate the effect of painting therapy on the happiness of the elderly. It is notable that no research has been conducted in this area to this day.

Methods

This randomized clinical trial was conducted on the elderly in a healthcare center and a nursing home in Mashhad, Iran, in 2017. At first, we obtained the approval of the regional ethics committee of Mashhad University of Medical Sciences. The research population constituted of the elderly visiting to the healthcare center of Danesh Amouz and nursing home of Neshat. Subjects were selected through non-randomized convenience sampling and were divided into two control and intervention groups.

The inclusion criteria included age of ≥ 60 years, a minimum score of seven in the abbreviated mental test (AMT), lack of diagnosis of disabling acute or chronic diseases (e.g., renal diseases, cancer, and heart failure), lack of consumption of psychiatric medications, and no drug abuse. The exclusion criteria were unwillingness to participate in the study, more than three absences from the intervention sessions, death, diagnosis of acute diseases, and hospitalization during the research, which prevented the presence of individuals in the sessions.

Data were collected using a demographic characteristics form, research unit selection questionnaire, the Abbreviated Mental Test (AMT), and Oxford Happiness Questionnaire. AMT designed by Hodkinson in 1972 is a 10-item scale for the fast detection of dementia in the elderly. At a cut-off point of seven, this questionnaire makes a distinction between normal and abnormal situations (21). The short version of the Cognitive Disorders Questionnaire was evaluated in 2080 individuals, demonstrating the high sensitivity (0.81) and capability (0.84) of the test in detecting cognitive disorders in those who received scores below seven (22). On the other hand, the Oxford Happiness Questionnaire contains 29 items with four alternatives, each being allocated a score of 0-3. The minimum and maximum scores of the scale are 0 and 87, respectively, with higher scores indicating more happiness.

The five dimensions of this questionnaire include life satisfaction, self-esteem, subjective well-being, satisfaction, and positive mood. Reliability and validity of the scale have been reported at a favorable level in various studies in Iran. For instance, Alipour and Agah Haris (2007) evaluated the validity of

the questionnaire among 369 individuals. According to their results, all the 29 items of the inventory had a high correlation with the total score. In addition, Cronbach's alpha of the instrument in that study was estimated at 0.91. Convergent and divergent validity of the questionnaire were confirmed as well, and results were indicative of proper reliability and credibility of the test for scoring happiness in the Iranian society (23). Given the fact that the major variables of the research are of quantitative type, the sample size was determined based on comparison of the means of the two societies and using relevant studies. In this regard, the sample size was estimated at 20 cases per group according to the research by Majzoubi et al. (2012) and based on the mean comparison formula with Cronbach's alpha of 0.95 and test power of 80%. However, considering sample loss, 30 subjects were enrolled in each research group (n= 60 participants in total).

For more coordination, the intervention group was divided into 7-10-member groups. Following that, painting subject was determined in the intervention sessions based on the implementation schedule of the painting therapy program (Table 1). In total, twelve 50-60-minute painting therapy sessions were held (three sessions per week). During the first five minutes of each session, the participants discussed the topic and then painted it for a period of 40-50 minutes. At the end of the session, the subjects expressed their feelings about the painting and talked about the selected topic for 15-20 minutes. On the other hand, the control group performed the routine activities, which were implemented by the subjects of the intervention group as well. These activities included monthly check-ups, psychology classes, educational classes for the elderly on a weekly basis, sport, educational and leisure classes, physiotherapy sessions, and speech therapy. Simultaneously, four lectures were held for the subjects of the intervention and control groups in the form of one 30-45-minute session per week to cover the subject of achieving happiness. In the end, the Oxford Happiness Questionnaire was completed by all the participants one more time.

Table 1. Painting therapy sessions

Session	Type of activity	Implementation method
1	Painting and coloring in frame with colored pencils	Participants are asked to draw a frame on a white sheet and each person connect a point from one side of the frame to the other side, and then guess and complete the shapes formed by drawing the lines.
2	Teaching painting to each other on paper and whiteboard	With an example, the participants were asked to teach painting to others (in any desired form).
3	Free painting	The participants were asked to paint freely.
4	Painting with geometric shapes	Geometric shapes were drawn on colored sheets provided for the participants, who were asked to paint the shapes by gluing them to each other.
5	Painting with spray and stereotype	The participants were required to paint something on the sheet, cut it out with scissors, and make it a stereotype. Then, they were asked to paint it on the banners installed on the wall using a spray.
6	Painting the favorite place	The participants were asked to paint their most favorable place and talk about it at the end of the session.
7	Painting the best memory	The participants were required to paint their best and sweetest memory and talk about it at the end of the session.
8	Painting on tools	One clay glass was provided for each participant to paint on it.
9	Painting shadows	The participants were asked to paint the shadow on an object (anything desired) and then guess the object in groups.
10	Painting the nature and storytelling	The participants were required to paint their favorite nature and tell a story about it.
11	Comparing oneself to an object and painting it	The participants were asked to compare themselves to an object and paint it. Then, they were required to explain the comparison.
12	Painting wishes	The participants were asked to paint their wishes and talk about them.

Data analysis was performed in SPSS, version 21, using Kolmogorov–Smirnov and Shapiro–Wilk tests to determine the normal distribution of the variables, as well as Chi-square test, independent t-test, and Mann Whitney-U test to evaluate the homogeneity of the research groups in terms of confounding and qualitative intervening variables and to determine normally and abnormally distributed quantitative variables, respectively. In addition, independent t-test was applied to achieve the main goals of the research (in case of lack of normal distribution in Mann-Whitney U test), and paired t-test was exploited to compare the groups (in case of lack of normal distribution in Wilcoxon test). In the performed tests, reliability was considered at 95%. Some of the ethical considerations of the research included ensuring the participants of the confidentiality terms regarding their personal information and allowing them to withdraw from the research at any time.

Results

In total, 60 elderlies participated in the research with the mean age of 72.5 ± 7.2 and 68.3 ± 5.2 years in the intervention and control groups, respectively. According to the results of Mann-Whitney U test, both research groups were homogenous in terms of mean age ($P=0.06$). In addition, 16 subjects in the intervention group (53.3%) and 17 cases in the control group (56.6%) were female. According to the results of Chi-square test, both groups were homogenous regarding gender distribution ($P=0.31$). In the intervention and control groups, 43.1% and 36.1% of the subjects had elementary and junior high school education, respectively. In this regard, the results of Chi-square test were indicative of homogeneity of the research groups ($P=0.21$). Other features, relevant tests, and demographic characteristics of the participants are presented in Table 2. According to the Mann-Whitney U test, no significant difference was observed in the mean happiness score of the intervention and control groups (55.2 ± 6.1 vs. 57.6 ± 5.0 ; $P=0.06$). However, the mean happiness score of the subjects in the intervention group was significantly higher, compared to that in the control group after the intervention (74.5 ± 4.2 vs. 55.2 ± 6.1 ; $P < 0.001$). Moreover, the mean score of happiness was significantly higher in the intervention group before and after the intervention, compared to the control group (18.2 ± 6.0 vs. -6.1 ± 2.2 ; $P < 0.001$).

According to the results of the Wilcoxon test, the mean happiness score of the intervention group was significantly higher after the intervention, compared to before the intervention ($P < 0.001$). On the other hand, there was an insignificant reduction in the mean happiness score of the subjects in the control group during the second estimation after the intervention, compared to the first calculation before the intervention ($P < 0.001$; Table 3). However, the research groups were homogeneous in terms of life satisfaction, self-esteem, subjective well-being, satisfaction, and positive mood before the intervention. At the end of the painting therapy sessions, all the aspects significantly increased in the intervention group, compared to the control group ($P < 0.001$; Table 3).

Table 2. Demographic characteristics of the participants

Variable		Intervention	Control	Test result
Marital status N (%)	Single	1 (3.0)	0 (0.0)	* $P=0.08$
	Married	23 (75.8)	12 (40.2)	
	Widowed	6 (21.2)	17 (56.7)	
	Divorced	0 (0.0)	1 (3)	
Retirement duration (year) (mean \pm standard deviation)		16.5 \pm 3.2	17.4 \pm 3.6	** $P=0.08$
Insurance coverage	Yes	27 (89.9)	26 (84.4)	*** $P=0.08$
	No	3 (10.1)	4 (13.6)	
Ability to perform daily routines independently	Yes	24 (80.2)	27 (90.4)	*** $P=0.46$
	No	6 (19.8)	3 (9.6)	
Living alone	Yes	4 (13.7)	10 (33.4)	*** $P=0.06$
	No	26 (86.3)	20 (66.6)	
Covered by support centers	Yes	12 (40.0)	24 (80.0)	**** $P=0.08$
	No	18 (60.0)	6 (20.0)	
Diagnosis of mental diseases in a first-degree relative	Yes	3 (6.6)	5 (16.3)	**** $P=0.43$
	No	27 (90.4)	25 (83.7)	

*Exact chi-square **Independent t-test ***Fisher's exact test ****Chi-square

Table 3. Means and standard deviations of scores of happiness and its dimensions before and after the intervention in the research groups

Happiness	Stage	Group		Inter-group test
		Intervention Mean±standard deviation	Control Mean±standard deviation	
Life satisfaction	Before intervention	16.3±8.2	17.2±8.3	*0.001
	After intervention	21.1±2.0	15.2±3.1	*0.001
	Inter-group test	***P<0.001	***P<0.001	
Self-esteem	Before intervention	13.2±0.2	14.2±1.4	*0.001
	After intervention	18.1±9.1	12.1±2.1	*0.001
	Inter-group test	***P<0.001	***P<0.001	
Subjective well-being	Before intervention	8.2±2.0	8.1±6.8	**0.05
	After intervention	12.1±4.0	8.1±3.5	**0.001
	Inter-group test	****P<0.001	****P=0.89	
Satisfaction	Before intervention	8.1±2.4	9.1±2.0	*0.09
	After intervention	10.1±2.0	8.1±4.1	*0.001
	Inter-group test	***P<0.001	***P<0.001	
Positive mood	Before intervention	4.1±6.1	6.1±2.5	*0.001
	After intervention	7.2±6	5.1±3.2	*0.001
	Inter-group test	***P<0.001	***P<0.001	
Total happiness score	Before intervention	55.6±2.1	57.5±6.0	*0.06
	After intervention	74.4±5.2	55.5±0.2	*0.001
	Inter-group test	***P<0.001	***P<0.001	

*Mann-Whitney U **Independent t-test *** Wilcoxon test ****Paired t-test

Discussion

According to the results of the current study, the mean happiness score of the participants in the intervention group increased after painting therapy, which is in line with the results of some studies. For instance, Karami et al. (2012) demonstrated the positive effect of painting therapy on reduced aggressive behaviors of female students with dyslexia, which is in congruence with our findings (24). Painting therapy is an expression of affection through art that has taken steps toward improving the internal development of individuals and the rehabilitation of patients and individuals with mental and physical disabilities. Studies have also shown that the subcategories of art therapy, such as painting therapy, can be used to control and treat aggression. Art therapists consider the use of art process significantly beneficial in helping the proper growth of interactions and reducing aggressive tendencies (25). Painting is an attractive and distinctly expressive tool that can exert significant impacts on intelligent evolution, increased capabilities, and growth of creative power. Using this tool, individuals can spiritually connect with one another. Therefore, we can understand the moods, tendencies, and characteristics of these individuals through this approach (24). In a review by Geue et al. (2010), painting therapy intervention in various studies on cancer patients reduced anxiety and depression, increased the quality of life and collaboration, had positive impacts on character growth, and enhanced self-expression, social reactions, and conditions to deal with the disease.

In this regard, our findings are consistent with the results of the mentioned study since they were indicative of the improved mental health of the participants after painting therapy (26). The point that one can understand from painting is to get the influence of the external environment and the effect of the inner and subjective issues in individuals. In other words, the effect of the external environment on the painting of an individual demonstrates their mental health (27). Participation in painting therapy sessions created the opportunity for individuals to identify, give meaning, and experience dreams and excitements in life. In addition, these classes help individuals to express their thoughts and feelings through projection, thereby establishing emotional and social compatibility (28). According to the results of Zaghimi et al. (2011), who conducted a research to determine the role of painting therapy in reduced anxiety of patients with chronic mental disorders in Qazvin, Iran, painting therapy had no significant impact on the decrease of anxiety in these individuals.

In this regard, our findings were inconsistent with the results of the mentioned study, which might be due to the use of different tools and performing interventions on those with mental problems (29). In 2010, Mimi et al. conducted a research on 70 elderlies in the nursing homes of Hong Kong, China, to evaluate the effect of humor therapy on alleviating pain and increasing happiness in participants. According to their results, humor therapy increased happiness in the elderly (30). In this respect, our findings were in accordance with the results of the mentioned study. One of the causes of this similarity might be the mutual impact of humor and painting therapy on the reduction of anxiety.

According to the evaluations, painting therapy increases flexibility in dealing with anxiety and plays a significant role in neutralizing negative emotions. In a research by Panah Ali et al. (2016), narrative therapy sessions increased life expectancy and happiness in the elderly of their test group, compared to their control group. These results demonstrated that group narrative therapy exerted positive impacts on life expectancy and happiness of the elderly (31). Our findings are in line with the results of the mentioned study regarding the specific role of reflection in narrative therapy, which also exists in painting therapy. Another cause of this similarity in results might be performing the two studies in groups. Performing group activities has been widely accepted, where constructive interactions between members and interventions of a trained leader are applied to help members understand their responsibility toward their own feelings and encourage them to focus on the reality and think about the consequences of their current behavior. In group therapy, members of the group find their feeling of social solidarity by comprehending their similarities. In group training, pouring out negative emotions is essential since mental discharge is a group and social phenomenon and only occurs in the presence of others, and in turn, increases the effectiveness of group training (32).

In a study by Majzoobi et al. (2012), structured reminiscence had no significant effect on the quality of life score of the elderly. Nevertheless, there was a significant increase in the happiness score of these individuals, which was maintained during a one-month follow up (33). In this regard, our findings were in congruence with the results of the mentioned study. The similarity between painting therapy and reminiscence is mental imagination. According to studies, imagination increases happiness in people. Moreover, Majzoobi concluded that happiness improves faster compared to the quality of life, thereby introducing it as an intermediating factor. Mental imagination restores positive emotions in the elderly. Bryant (2005) and other researchers believed that imagination and memories cause positive emotions in people. According to these scholars, mental imagination increases imagination about memories. In fact, a person remembers things about a memory that are often not the negative aspects of the event, which significantly increases positive emotions and happiness in the elderly (34).

According to the results of the present study, a significant enhancement was observed in the dimension of life satisfaction in the intervention group after painting therapy, which is in line with the results obtained by Rezaei et al. (2017). Their results were indicative of improvement of mental state and life satisfaction in the subjects by having an active leisure time (35). Regarding the dimension of self-esteem, our findings were consistent with the results obtained by Nasiri et al. (2013). In the present research, painting therapy significantly increased self-esteem in the subjects. Nasiri et al. also showed that being happy led to enhanced self-esteem in the participants (36). In the current study, one of the aspects of happiness is subjective well-being. In this respect, our findings were consistent with the results obtained by Salehi et al. (2016), who proved that improving hope and having goals in life led to increased subjective well-being. In fact, subjective well-being implies the emotional assessment of individuals from their lives and includes pleasant feelings. It could be stated that painting therapy in the current research caused pleasant feelings in the subjects, which resulted in improved subjective well-being of the subjects (37).

No research has been conducted on satisfaction. Nevertheless, painting therapy can promote satisfaction in the elderly as an active and purposeful function since satisfaction is a deep internal happiness caused by individual experiences (38). Another dimension of happiness is a positive mood, regarding which no specific research has been carried out. However, results of previous studies have demonstrated that positive mood can be formed by watching movies, reading stories, designing and painting, listening to music, giving gifts, improving imagination, giving feedback, and building social interactions (39). According to the results, the mean score of happiness significantly decreased in the control group in the second assessment. In addition, there was a reduction in all dimensions of happiness in the control group, with the exception of subjective well-being, which implies the

emotional evaluation of life by a person. This evaluation is internal, personal, and mental and includes pleasant feelings (40). The satisfaction dimension, which had the most level of reduction in the control group, is a general feeling of happiness caused by individual experiences (38).

It could be stated that the dimensions that imply internal feelings are more stable and less volatile over time. In addition, some of the happiness dimensions are seriously affected by external factors. In the control group, the mean score of happiness decreased after the intervention (about 4.5%). Given the fact that the necessary measures were taken to prevent the change of condition in all the elderly in the control group, this change might be due to usual fluctuations of happiness at different times. On the other hand, the mean score of happiness changed by 35% in the intervention group (seven times more than the control group) after painting therapy sessions. Therefore, the change in the intervention group was greater than that in the control group, thereby confirming the effectiveness of the intervention. Nevertheless, this change could be due to various factors and requires further research. Therefore, it is recommended that further studies be conducted on the factors affecting happiness and its various dimensions in the elderly. In addition, our findings demonstrated that painting therapy increased happiness in the elderly. Given the increased population of the elderly, most of whom deal with situations that demoralize them and exert negative impacts on their mental health, this therapeutic technique can be used as an easy and low-cost technique to prevent mental and emotional problems of this group of people in the community. It is recommended that the elderly residing in nursing homes be evaluated in future studies. With regards to the results, it seems that the effect of happiness on the quality of life can be assessed in further studies as well.

Implications for Practice

According to the results of the current study, painting therapy significantly increased happiness in the elderly. Given the fact that this approach is non-pharmaceutical, simple, and in the area of nursing performance, it could be used as an effective intervention in nursing homes and health care and rehabilitation centers for the elderly to improve their happiness.

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Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this article.

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