



## Original Article

# The combination of occupational art therapy improves the quality of life for elderly in nursing homes

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### Abstract

**Objectives:** This study aimed to investigate the effect of the combination between occupational therapy and art therapy on quality of life (QoL) among the elderly in nursing homes.

**Methods:** This study was conducted between January and June 2022. A quasi-experimental pre- and post-test research design with a control group was conducted among 60 elderly in nursing homes located in Surakarta, Central Java, Indonesia. The study participants were divided into two groups, which consisted of 30 participants in the control group and 30 participants in the intervention group. A purposive sampling technique was used to enroll the study participants. Data were collected using the validated Indonesian version of the Older People's Quality of Life Questionnaire (OPQOL-brief), which consists of 13 questions. The paired t-test was used to investigate the difference in the OPQOL-brief score before and after the occupational art therapy intervention had been given for each group, while the unpaired t-test was used to determine the differences in the OPQOL-brief score between the intervention group and the control group.

**Results:** The majority of the participants were between the ages of 61 and 65 years (43%), mostly women (78%), widow/widower (68%), and had primary school education (33%). Occupational art therapy effectively improves the QoL of the elderly living in nursing homes ( $p=0.001$ ).

**Conclusion:** Occupational art therapy significantly improves the QoL of the elderly and can be recommended as an alternative therapy for the elderly who live in health-care services, nursing homes, and in the community.

**Keywords:** Elderly; occupational art therapy; quality of life.

The increase in life expectancy and death is one of the impacts of the increase in science and technology in the health sector. The impact of this condition is the increasing number of elderly people in Indonesia. In 2019, there were 703 million people aged over 65 years, and it is projected that by 2050, it is estimated to double to 1.5 billion.<sup>[1]</sup> Eastern and South-Eastern Asia were home to the largest share (37%) of the world's older population in 2019, and this is expected to remain so in 2050. Indonesia's population is now undergoing a transition and gradually becoming an aging society, as evidenced by the national population that has reached 9.6% or approximately 26 million people.<sup>[2]</sup>

The increase in life expectancy and the decrease in illness prevalence among the elderly can result in health problems.<sup>[3]</sup> Decreased physiological, cognitive, and psychosocial functions are health problems that are often experienced by the elderly.<sup>[4]</sup> Psychological changes experienced can result in the elderly slowly withdrawing from relationships with the surrounding community, which can affect social interaction. If left unchecked, the elderly can experience depression and even commit suicide. Conditions like this can affect the QoL of the elderly.<sup>[5]</sup> QoL is a condition of physical, emotional, and social well-being so that they can carry out daily activities. Therefore, it is important for health workers to pay special attention to

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maintaining the QoL of the elderly. QoL can be used as a measure of the success of certain actions. Various treatments that can be made to improve the QoL of the elderly include counseling on elderly nutrition, physical activity training, cognitive function stimulation exercises, and empowering the elderly in groups. QoL can also be used as a reference in the formulation of appropriate diagnoses or interventions for patients.<sup>[6]</sup> This QoL can be perceived by the condition of the extent to which the elderly feel fit and active or suffer from physical, mental, and cognitive disorders.<sup>[6]</sup>

Various efforts have been developed to improve the QoL of the elderly, and one of them is occupational art therapy. Art as therapy within occupational therapy focuses on improving specific skills or components such as attention span, spatial processing, executive functions, social interaction, emotional expression, and functional upper extremity use. Activity options in occupational art therapy will be provided more supportive, enjoyable, and constructive experiences. Art therapy is a therapeutic technique using the medium of art, the creative process and the results of art to explore feelings, emotional conflicts, and increase self-awareness.<sup>[7]</sup> Various studies have shown the benefits of art therapy, including perceived improvement in emotional and social well-being (QoL), and statistically significant increases were found for improved emotional well-being, QoL, understanding of singing, and a marginally significant increase in self-confidence.<sup>[8,9]</sup> Another study showed a similar result in the Netherland. The results of this study indicate that art therapy has succeeded in minimizing anxiety symptoms, improving coping mechanisms, and improving a person's QoL.<sup>[10]</sup> Although many studies have implemented art therapy, there are still few that combine it with occupational therapy. Several studies have shown that occupational therapy is effective in improving QoL, self-efficacy, and independence in carrying out daily activities.<sup>[11-13]</sup> Occupational therapy is defined as any type of meaningful activity in which one engages to "occupy" one's time. These occupations can be goal directed, task oriented, purposeful, culturally relevant, role specific, individually tailored, or community oriented, depending on one's values, beliefs, context, and environment. Occupational art therapy is art within occupational therapy that manages the artistic activity, creativity, and exercise activities that aim to overcome physical, psychological, and social problems and increase the client's independence.

This method is a type of therapy that is specifically used to help people with various health conditions to live independently. Therefore, it is necessary to conduct research to identify the effectiveness of art therapy and occupational therapy in improving the QoL of the elderly. The hypothesis of this study was that an effect of occupational art therapy improves the QoL for the elderly in nursing homes.

#### What is presently known on this subject?

- Art therapy has been approved to be one beneficial therapy which can be used to improve quality of life (QoL) among the elderly. The occupation therapy has also been investigated to give a positive impact on increasing QoL among the elderly, particularly in the capability to perform activities in daily life. Therefore, it is important to develop a study to investigate the effect of a combination of these two types of therapy on QoL among the elderly.

#### What does this article add to the existing knowledge?

- To the best of our knowledge, this is the first study which investigated the effect of a combination between occupation therapy and art therapy on QoL among the elderly.

#### What are the implications for practice?

- Occupational art therapy can improve the QoL of the elderly living in nursing homes. Therefore, it can be recommended as an alternative therapy for the elderly who live in health-care services, nursing homes, and in the community.

## Materials and Method

### Study Design and Sampling Procedure

A quasi-experimental pre- and post-test research design with a control group was conducted among 60 elderlies in nursing homes located in Surakarta, Central Java, Indonesia. This study was conducted from January 2022 to June 2022. A purposive sampling technique was used to enroll the study participants. The sample size was obtained using a paired numerical formula. The sampling technique was purposive sampling by considering the inclusion and exclusion criteria. The inclusion criteria were as follows: All the elderly who have lived in nursing homes and are able to give their consent; an age of at least 55 years old; and a willingness to participate. Those elderly who were unable to give their consent and unable to participate in the study due to physical limitations were excluded. The participants were divided into two groups, which were the intervention group and the control group. All elderly people who fulfilled the inclusion criteria were purposively included in the study. The subject group determination was carried out using a random allocation procedure. The procedure results obtained 30 respondents as the control group and 30 respondents as the intervention group.

### Occupational and Art Therapy Process

Occupational art therapy is carried out once a week for 3 weeks, each meeting consisting of 6 sessions with a duration of 45–60 min. Session 1 (pre-session) is preparation and introduction before starting therapy; session 2 (screening) is an assessment made on whether the patient has a limited condition and identifies a given need. This also includes identifying patients' abilities and assessing their interest in participating in occupational therapy interventions. In session 3 (evaluation), the next stage was completed after gathering information about the patient's functional capacity, interest in participating in the intervention, and motivation to take action. During this phase, data collection is carried out to understand the overall impact of the intervention. This phase also addresses the patient's ability to respond to the intervention.

Session 4 (intervention) involves the activity of making works and discussing the exploration of meaning and things that are felt through the work made by making handcrafts to decorate sandals according to the creations of each elderly person and then doing the physical activity of walking. Session 5 (outcome) draws conclusions from the discussion and exploration seen based on the OPQOL-brief instrument, which consists of health, independence, control over life, freedom, home and neighborhood, psychological and emotional well-being, financial circumstances, leisure, and activities.

### Data Collection Tools

The validated Indonesian version of the Older People's Quality of Life Questionnaire (OPQOL-brief) was used to measure the QoL of participants. The OPQOL-brief questionnaire assessed life quality in eight aspects. It involves life overall; health; independence; control over life; freedom; home and neighborhood; psychological and emotional well-being; financial circumstances; and leisure and activities. The OPQOL-brief shows adequate reliability (Cronbach's alpha: 0.88). This self-administered tool is a valid construct instrument that consists of 13 questions with a preliminary single item on the global OPQOL-brief. Items on the OPQOL-brief instrument are coded with a score of 1–5, where a score of 1 indicates very good condition. Each question component was given a score of 1 (strongly agree), 2 (agree), 3 (good), 4 (disagree), and 5 (strongly disagree). The final result of this score is based on the sum of each question score. On the positive items, the score is coded inversely, so a higher score represents a better QoL.

### Data Collection Process

The intervention group was given occupational art therapy, which was carried out once a week for 3 weeks. Each meeting consists of six sessions with a duration of 45–60 min. Occupational art therapy was done by decorating sandals with colorful flowers according to the creativity of each participant in this study.

On the other hand, participants in the control group were given art-drawing therapy. Art drawing therapy is an activity in which respondents were asked to draw a certain object on paper using watercolor pencils that represent their feelings. Art drawing therapy was also carried out once a week for 3 weeks. Each meeting consists of six sessions with a duration of 45–60 min.

Both occupational and art drawing therapy consist of six sessions. Session 1 (pre-session) is the preparation and introduction before starting therapy. Session 2 (the start session) is an activity in which the researcher tries to identify the participant's problem. Session 3 (art activity) is an activity of creating art using the medium prepared by the researcher. Session 4 (process art) is a discussion activity in which researchers attempt to explore meanings and feelings for each participant through the creations they make in Session 3. Session 5 (close session) is carried out by drawing conclusions and discussions

as well as exploring the feelings of participants. Session 6 (post-session) is the last session, which is carried out by planning a follow-up for each participant.

### Ethical Responsibilities

This study was approved by the Research Ethics Committee of Faculty Medicine, University of Sebelas Maret (No. 58/UN27.06.11/KEP/EC/2022). Before collecting data, each respondent had signed informed consent and was informed about their voluntary participation; their identities were anonymous; and no personally identifiable information was taken to ensure confidentiality. The data are permanently deleted after data collection is completed.

### Data Analysis

The paired t-test was used to investigate the difference in the OPQOL-brief score before and after the occupational art therapy intervention was given for each group, while the unpaired t-test was used to determine the differences in the OPQOL-brief score between the intervention group and the control group.

## Results

A total of 60 participants were included in this study. The majority of the participants were between the ages of 61 and –65 (43%), mostly women (78%), widow/widower (68%), and had primary school education (33%). The participant's characteristics for the intervention and control groups can be seen in Table 1.

Table 2 shows that both groups had the same improvement in QoL, but the intervention group had a greater improvement with a mean difference of 1.2 (2.28±3.48) in the pre-test and 3.48±1.19 in the post-test, while in the control group, there was difference of 0.57 (2.17±1.96) in the pre-test and 2.74±0.97 in the post-test.

Table 3 shows the significant difference in QoL scores before and after the application of occupational art therapy. This is evidenced by the p-value in the intervention group of 0.000, while the control group shows that there is no significant difference before and after the application of art therapy with a p-value of 0.78. These results indicate that there are differences in the QoL scores in the intervention group and the control group.

Table 4 shows that there are significant differences in QoL values after the implementation of occupational art therapy. This is evidenced by the p-value of the unpaired t-test of 0.000. The mean of OPQOL-brief in the occupational art therapy group was 2 times higher than the mean of OPQOL-brief in the art therapy group, which means that occupational art therapy effectively improves the QoL of the elderly living in nursing homes.

**Table 1. Participants’ characteristics between intervention group and control group**

Characteristic	Control group		Intervention group	
	Total	%	Total	%
1. Gender				
Man	8	26.7	5	16.7
Women	22	73.3	25	83.3
2. Age				
55-60	6	20	1	33.3
61-65	10	33.3	16	53.3
66-70	12	40	9	30
>70	2	66.7	4	13.3
3. Marital status				
Married	7	23.3	12	20
Widow/widower	23	76.7	18	60
4. Education				
No school	9	30	6	20
Elementary school	9	30	11	36.7
Junior high school	8	26.7	7	23.3
Senior high school	4	13.3	6	20

**Table 2. Score quality of life**

Group	Pre-test		Post-test	
	M±SD	Min-max	M±SD	Min-max
Control	2.17±1.96	1.0-4.4	2.74±0.97	1.0-5.0
Experiment	2.28±3.48		3.48±1.19	

M: Mean, SD: Standard Deviation

**Table 4. Differences in OPQOL-brief scores between the intervention group and the control group**

Group	Mean	Mean difference	p-value
Control	0.57	0.63	0.000*
Intervention	1.2		

\*Unpaired t-test<0.05

**Table 3. The difference in the mean of quality of life scores before and after treatment (n=60)**

Group	Pre-test	Post-test	Delta score mean	
	M±SD	M±SD		
Control	2.17±1.96	2.74±0.97	0.57	0.78*
Intervention	2.28±3.48	3.48±1.19	1.2	0.000**

\*Paired t-Test, p value>0.05, \*\*Paired t-Test<0.05

## Discussion

The majority of respondents in the intervention and control groups were women. Male older adults reported a better QoL than female older adults in all countries.<sup>[14]</sup> There have been reports of worse health-related QoL among women in developed countries.<sup>[15]</sup> Female participants’ overall social status was lower than that of their male counterparts, and they were

likely to have a more limited income, more barriers concerning access to health care, and more responsibilities regarding household chores. All of these factors could affect their perceived QoL.<sup>[14]</sup> In most societies, women are more responsible and active than men. The emotional nature of the female sex can be another cause of their vulnerability to them.<sup>[16]</sup> The majority of respondents in the intervention and control groups were 61–65 years old. The body’s resistance to the elderly is

getting decreased so that it is infected with various diseases. This decline in physical ability can cause the elderly to become stressed, which used to be all work done alone. Now, they sometimes have to take help from others. The mechanisms or pathways by which these stressors have a prolonged impact on health are stressor exposure and stressor reactivity. Stressful life events consume limited resources in aging, which can weaken a person's resilience to manage environmental challenges and affect their life quality.<sup>[17]</sup>

The majority of marital status in the intervention and control groups was widows and widowers. Loneliness in the elderly is when elderly people feel alone, feel isolated, feel they have no one to run away from when needed, and lack of time to relate to their environment (social environment) either in their family or around their place of residence.<sup>[18]</sup> The majority of respondents in the intervention and control groups have a primary school education level. There is a difference in the psychology of a person based on their education level. Education is a conscious and planned effort to create an atmosphere of learning so that students actively develop their potential to have spiritual strength, religion, self-control, personality, intelligence, noble character, and skills needed by themselves and society.<sup>[19]</sup> Education can affect a person's mindset, especially toward achieving a good QoL.<sup>[20]</sup>

The results of this study indicate that occupational arts therapy can significantly improve the QoL of the elderly. This is evidenced by the p-value of the unpaired t-test, <0.001. Occupational arts therapy is an approach to enhancing overall physical, mental, and emotional well-being through the production of creative arts. The application of art therapy in occupational therapy allows a person to increase self-awareness and be able to verbally express thoughts and feelings, increasing individual cognitive processes. The results of previous research stated that the choices of adults with mental illness at the beginning of art activities will motivate them to do something optimally and be able to express their feelings more.<sup>[21]</sup> This finding is also in line with the statement that one of the goals of providing occupational art therapy techniques is to help individuals achieve goals, such as expressing what they feel, as a cathartic medium, or increasing self-esteem in individuals.<sup>[22]</sup>

During the intervention process, the patient must pass six sessions. The advantages of occupational art therapy are that there are sessions where the patient has to express and explore feelings using the media that have been prepared. Through the approach taken, it is hoped that patients will be able to learn to understand and be aware of their past and present experiences. So that, all individuals can learn through experience and be able to adapt and carry out activities optimally. This is also in line with other research, which states that the use of art media will help individuals understand their perceptions and feelings. The OPQOL-brief instrument assesses the patient's QoL based on five domains: health, social relations, independence, control of life and freedom, and psychological

and emotional well-being. Previous studies found that QoL is higher in older adults than in younger, middle-aged adults.<sup>[23]</sup> Although health problems can threaten the QoL of older adults, when older adults can maintain good physical health, they might as well be associated with higher life satisfaction and reduced depression.

Art brings a pleasant experience of the relationship between the materials used and the work of art. The art process requires clients to touch the world and imagine their everyday world.<sup>[24]</sup> The emotional aspect of art therapy activities for all respondents can be seen through the line pressure on the object drawn by the subject, the proportion of object size, and color selection. In each session, it was seen that the respondents made changes ranging from choosing an increasingly regular pattern to a combination of proportional flower sizes and choosing colors that gave a calming and pleasant feel to all respondents. This also affects the mood of the respondents and the emotional control that the elderly have toward themselves and the environment. Through the visible emotional aspect, the feelings of all respondents seemed to be more open in each intervention session and were able to recognize the emotions and they felt based on the work of occupational and art therapy. Respondents become more aware of their own capacity. This is in line with the other study, which states that occupational and art therapy are self-expressions that can help individuals to overcome conflicts they experience, improve interpersonal skills, reduce stress, and increase self-esteem.<sup>[25]</sup>

QoL is the extent to which a person can feel and enjoy the occurrence of all important events in his life so that his life becomes prosperous.<sup>[16]</sup> If a person can achieve a high QoL, then the individual's life leads to a state of well-being; otherwise, if a person achieves a low QoL, then the individual's life leads to a state of ill-being.<sup>[26]</sup> This is in accordance with the other study, which states that welfare is one of the parameters for the high QoL of the elderly so that they can enjoy life. Complementary occupational art therapy can significantly improve the QoL of the elderly.<sup>[27]</sup> Through occupational art therapy, the elderly can face physical, emotional, and environmental improvements in new ways to increase their QoL, so they can enjoy a prosperous life.

Occupational art therapy can improve the patient's social relations. This intervention can strengthen the sense of belonging among the elderly who are in elderly care homes. In QoL, social contact is seen as important to help them avoid loneliness. This is especially in the elderly. These interventions also increase patient freedom and improve control. When the elderly can organize and choose what they want, the autonomy they feel is important, then their QoL will be good. Previous studies have suggested that older adults feel proud and satisfied with their independence.<sup>[28]</sup> Therefore, the elderly can perform daily routines and activities independently and have more control and a better QoL.

## Conclusion

Occupational art therapy can improve the QoL of the elderly living in nursing homes. Therefore, it can be recommended as an alternative therapy for the elderly who live in health-care services, nursing homes, and in the community.

### Limitations of the Study and Future Recommendation

The application of quasi-experimental research design in this study yields some biases in the study result. In addition, the sampling technique was not random. Therefore, it is recommended for future researchers to reduce possible biases by selecting a rigorous research design and sampling technique.

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