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The effect of structured group reminiscence on happiness and life satisfaction among the elderly: A randomized controlled trial

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Abstract

Introduction: Since happiness and life satisfaction can predict the mental health of the elderly, therapeutic interventions such as reminiscence can be useful for these people. This study was conducted to investigate the effect of structured group reminiscence on happiness and life satisfaction of elderly people.
Material and methods: This was a clinical trial study. Among the elderly, 36 people were selected by systematic random sampling according to the inclusion criteria; using randomized blocks, the samples were divided into the intervention and control groups. Then they were divided into 2 groups of 18 people (18 in the intervention group and 18 in the control group). Reminiscence therapy was held in 8 sessions. Participants were asked to complete the Happiness, Life Satisfaction Questionnaire, and a brief psychiatric examination and demographic characteristics in the pre-test phase, immediately after the intervention and one month after the intervention.
Results: The two groups, intervention and control, were similar in terms of age, examination of mental status, gender, education level and marital status ($p > 0.05$). The results of comparing the mean of happiness and life satisfaction variables between the intervention and control groups in the pre-test phase, immediately after the intervention, and one month after the intervention indicated a statistically significant difference.
Conclusions: According to the findings of this study, structured group reminiscence is an effective intervention to improve happiness and life satisfaction in this age group. Therefore, it can be a cost-effective way to increase the vitality of the elderly without complications.

Key words: reminiscence, aged, happiness, personal satisfaction.

Introduction

Today, changes in technology and lifestyle have led to an increase in life expectancy and consequently an increase in the elderly population (Crimmins 2015). Happiness is the degree to which people judge their quality of life (Hart *et al*. 2018) and life satisfaction reflects a positive attitude towards the world in which one lives (Koohbanani *et al*. 2013). Problems experienced during this period such as old age diseases, loss of a spouse, and economic problems reduce the life expectancy and life satisfaction in the elderly (Yousefi *et al*. 2015; Tuohy and Cooney 2019; Lima *et al*. 2016). Meanwhile, nurses can play an important role in increasing happiness and life satisfaction of the elderly with non-pharmacological methods (Yousefi *et al*. 2015; Aydogdu *et al*. 2023; Chen *et al*. 2016). According to Erickson's theory of social psychology, achieving a sense of cohesion in old age is necessary to achieve a sense of life satisfaction, happiness and adaptation to old age, and the elderly in this period can achieve this ability by reviewing their life events (Duru Asiret and Dutkun 2018; Jo and An 2018; Malone *et al*. 2016). Therefore, one of the most common ways to achieve a sense of cohesion in old age is remi-

niscence (Chen *et al*. 2012; Musavi *et al*. 2017a). Reminiscence therapy has been influenced by Erikson's psychosocial theory (1963) and, more importantly, the life review process according to Butler (1963). Butler believes that reviewing life is a natural process that everyone goes through when he/she feels his/her life is coming to an end (Butler 1963). In this method, the person tries to create happiness and better quality of life and adapt to the current situation by using memories of past events, feelings and thoughts (Momeni 2012). Researchers consider reminiscence as an independent nursing intervention (Abdel-Aziz and Ahmed 2021). Reminiscence affects the recalling of memories and past experiences and thus has a positive effect on people. Increasing life expectancy, reducing symptoms of depression and anxiety, boosting self-esteem, and helping people cope with crisis and loss are some of the positive effects of reminiscence (Pishvaei *et al*. 2015; Wu *et al*. 2023). Research shows that among various types of reminiscence, structured reminiscence has a special value in improving the mental condition of elderly patients. Stinson and Kirk first used the term structured reminiscence. They argue that in structured reminiscence, one moves within a predetermined framework by defining specific topics and structures for reviewing memories (Stinson and Kirk 2006). Since group reminiscence is an independent and low-cost intervention, the question for researchers was whether group reminiscence can be used to improve life satisfaction and create a sense of happiness in old age.

In view of the above-mentioned points and the lack of similar experimental studies in Iran on the effect of reminiscence on happiness and life satisfaction of the elderly, researchers decided to conduct a study to determine the effect of group reminiscence on happiness and life satisfaction, so effective measures can be taken to reduce the problems of such people.

Material and methods

Study plan

This is a clinical trial study which was registered in the Iranian Registry of Clinical Trials (IRCT20090304001742N8).

Sample size

To determine the sample size, a similar study (Entezari *et al*. 2019) and the sample size formula to compare the two means were used. Based on this formula and with a 5% error and 80% power, the final sample size was estimated to be 36 people (18 people in each group).

Randomization

Researchers in this study selected the elderly people by referring to health centers and using a systematic sampling method. First, a list of all elderly people who referred to the relevant centers for periodic examination and met the inclusion criteria was prepared, and then their names were written on a piece of paper, and 36 elderly people were selected using systematic random sampling. In the next step, using randomized blocks, the samples were divided into the intervention and control groups. Finally, 18 elderly people were in the intervention group and 18 in the control group.

Participants

The study population in this study comprised elderly persons who referred to comprehensive health centers in Larestan.

Inclusion criteria

1. Willingness to participate in the research voluntarily.
2. Age over 60 years.
3. No similar treatment recently.
4. Familiarity with the Persian language.
5. A moderate level of cognition (obtaining a minimum score of 21 in the short mental status examination test).

Exclusion criteria

1. Occurrence of any social or family crisis during the study for volunteers.
2. Hospitalization of volunteers or those of acute and chronic diseases which interfere with the research procedure.
3. Absence of volunteers for more than one session in the meetings.
4. Reluctance of the subjects to continue participating in the research.

Intervention

After obtaining the approval and a letter of introduction from Larestan University of Medical Sciences, the researcher referred to the research environment and by explaining the objectives in detail, she obtained the consent of the samples to conduct the research. Then, the participants completed the questionnaires (Oxford Happiness Questionnaire, Life Satisfaction Question-

naire, a brief examination of mental status and demographic characteristics). Afterward, the reminiscence protocol was implemented for the intervention group. Finally, the questionnaires were completed again immediately after the intervention and one month after the intervention.

Group structured reminiscence protocol

This protocol was developed by Stinson and Kirk (2006) and has been used by researchers in Iran (Yousefi *et al*. 2015; Musavi *et al*. 2017a; Sahragard *et al*. 2020; Noghani *et al*. 2018). In this program, eight topics are discussed in 8 sessions (about an hour and 30 minutes). In each of these sessions, stimuli are used to recall memories related to the topic of the session, which, depending on the topic of the session, may include photos, work tools, childhood toys, and so on. The protocol in this study was implemented by the researchers themselves.

Outcome

In this study, the Oxford Happiness Questionnaire, Life Satisfaction Questionnaire, a brief examination of mental status and demographic characteristics were completed by the participants in three stages (the pre-test phase, immediately after the intervention, and one month after the intervention).

Data collection tools

1. Happiness Questionnaire: The Oxford Happiness Questionnaire was developed in 1990 with inverse Beck Depression Scale materials. This scale has 29 items that are graded based on a four-point scale from 1 to 4. Therefore, the minimum score of each subject is 29 and the maximum is 116. The higher the subject's score, the higher his happiness level will be, and vice versa (Hills and Argyle 2002). Argyle *et al*. (1989) obtained an α coefficient of 90% and Francis *et al*. (1998) reported a Cronbach's α of 92%. In another study conducted by Alipoor and Noorbala (1999) on 101 students of Tehran universities, the internal consistency coefficient for men and women was 94% and 90%, respectively.
2. Life Satisfaction Questionnaire: This tool has several short forms, which are called the Z index. In 1969, this version was revised by Wood, Wylie, and Sheafor. This 13-item questionnaire has been a measure applied in many related studies and is used to measure life satisfaction in old age. The scoring is as follows: I do not know = zero; in positive questions, agree = 2, disagree = 1. As to negative questions, disagree = 2 and agree = 1. The total life satisfaction score is expressed on a scale of 0 to 26. Scores from 0 to 12 indicate low life satisfaction, 13 to 21 indicate moderate life satisfaction, and 22 to 26 indicate high life satisfaction (Wood *et al*. 1969). In Iran, Tagharrobi *et al*. (2011) confirmed the validity and reliability of this scale.
3. Mini-Mental State Examination (MMSE): It was developed by Folstein *et al*. (1975) and is one of the most common cognitive screening tools in the world. The questionnaire consists of 30 questions and 6 cognitive areas including orientation to time and place (5 points each), registration (3 points), attention and calculation (5 points), reminders (3 points), language tests (8 points), and evaluation of the construction (copy) (1 point). Total scores 0-10 show severe impairment, 11-20 moderate impairment, 21-25 mild impairment, and 26-30 without significant problems. In a study conducted in Iran, the validity of the test was found to be 0.73. The results also showed that with a sensitivity of 0.95 and a specificity of 0.97, it is able to differentiate patients with dementia from normal individuals (Bohiraie 2002).

Data analysis

Descriptive statistics in this study included mean, standard deviation, and the frequency distribution table. In this study, non-parametric tests were used for data analysis due to the fact that the data did not meet the criterion of parametric tests (normality of data). Therefore, Wilcoxon and Mann-Whitney tests were used to compare the means of happiness and life satisfaction. In this study, a significance level of 0.05 was used.

Ethical considerations

The study was approved by the ethics committee of Larestan University of Medical Sciences (IR.LARUMS.REC.1398.027). The study protocol was explained in detail to the subjects and attempts were made to answer their questions. Prior to the intervention, informed consent was obtained, which was in accordance with the Declaration of Helsinki.

Results

In this study, 18 elderly subjects were in the intervention group and 18 elderly people in the

control group. Eligible participants were randomly assigned to the intervention and control groups, according to the trial profile (Fig. 1). Table 1 summarizes the demographic characteristics of the studied samples. As shown in the table, the two groups were the same in terms of age, MMSE, gender, level of education, and marital status ($p > 0.05$).

The results of comparing the mean of happiness and life satisfaction variables between the intervention and control groups in the pre-test phase, immediately after the intervention and one month after the intervention are presented in Table 2. As can be seen in the table, in the intervention group, comparing the means of the variables in these 3 stages shows a statistically significant difference ($p < 0.05$), while in the control group, comparison of the means did not show a statistically significant difference ($p > 0.05$).

Discussion

Due to the increase in the elderly population in communities, it is necessary to pay more atten-

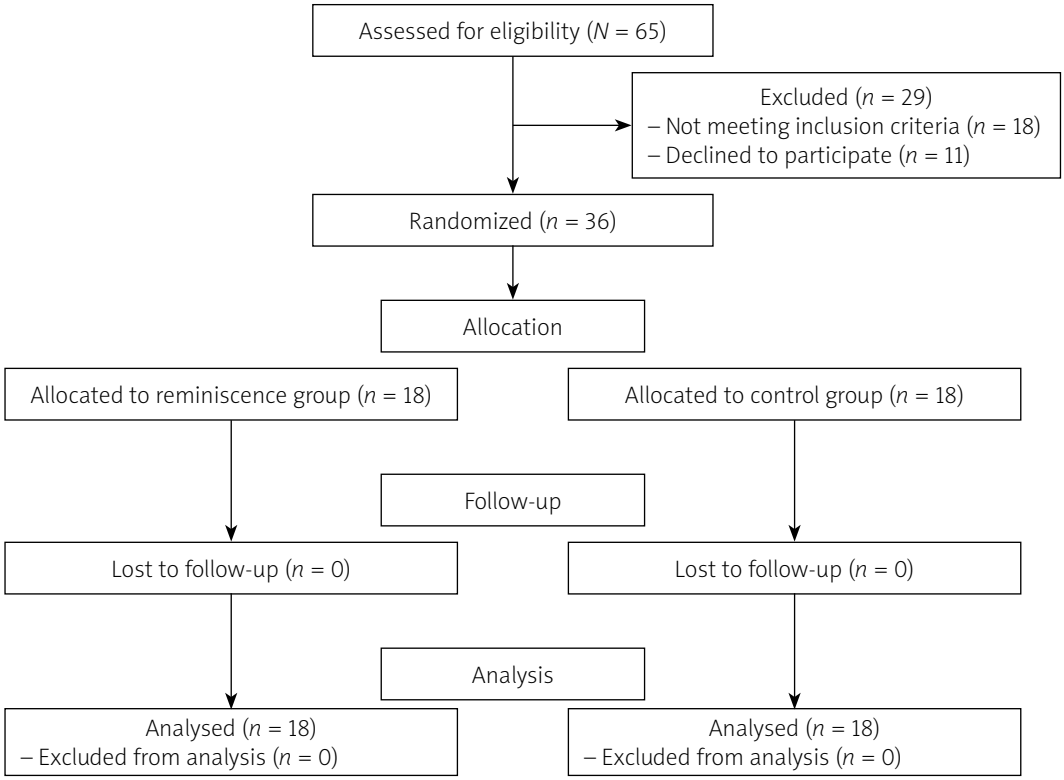

Fig. 1. Trial profile

Table 1. Comparison of quantitative and qualitative characteristics of participants in the control and intervention groups

Variables	Intervention group	Control group	*P*-value
Age, mean ±SD	63.06 ±3.03	64.00 ±3.67	0.407[a]
MMSE	24.78 ±0.54	24.56 ±0.70	0.299[a]
Gender, *n* (%)			0.658[b]
Male	2 (33.33)	4 (66.67)	
Female	16 (53.30)	14 (46.70)	
Education, *n* (%)			1.00[b]
Diploma or less	15 (48.40)	16 (51.60)	
Academic	3 (60.00)	2 (40.00)	
Marital status, *n* (%)			1.00[b]
Married	17 (51.50)	16 (48.50)	
Widow	1 (33.33)	2 (66.67)	

[a] *Results of Mann-Whitney U;* [b] *Results of Fisher's exact test*

Table 2. Comparison of the median (IQR; 25-75%) of happiness and life satisfaction in the intervention and control groups

Variable	Before intervention[1] (mean ±SD*)	Immediately after intervention[2] (mean ±SD*)	One month after intervention[3] (mean ±SD*)	*P*-value* (between stages 1 and 2)	*P*-value* (between stages 1 and 3)	*P*-value* (between stages 2 and 3)
Happiness						
Intervention (*n* = 18)	68.00 (59.75-76.50)	77.50 (69.75-86.25)	77.00 (69.75-86.50)	< 0.001	< 0.001	0.037
Control (*n* = 18)	70.50 (60.50-79.25)	70.50 (60.75-78.50)	71.00 (61.00-78.25)	0.331	0.564	0.631
p-value**	0.815	0.026	0.034			
Satisfaction						
Intervention (*n* = 18)	20.00 (18.00-21.25)	21.50 (19.75-23.00)	21.50 (20.00-23.00)	< 0.001	< 0.001	0.138
Control (*n* = 18)	19.00 (17.00-21.25)	20.00 (16.75-21.50)	19.50 (17.00-21.00)	0.430	0.668	0.726
p-value**	0.589	0.010	0.022			

*[1] Stage 1, [2] Stage 2, [3] Stage 3, * Wilcoxon test, ** Results of Mann-Whitney U test*

tion to this group of people. Many studies have shown that increasing age is inversely related to the level of satisfaction and quality of life, which has many causes, including economic and non-economic, such as social relations. On the other hand, it has been observed that having an active lifestyle by itself may not increase the level of life satisfaction in the elderly (Angelini *et al*. 2012; Ramia and Voicu 2020). Also, increasing age reduces the level of life happiness, so older people living in a nursing home also experience lower levels of happiness (Luchesi *et al*. 2018).

The results of this study showed that structured reminiscence could affect the level of happiness and life satisfaction of the elderly. This finding has been seen in other studies. For example, in a study conducted in Taiwan, the results showed that group reminiscence for 8 weeks in the elderly increased the level of life satisfaction (Ching-Teng *et al*. 2018). Also, in people with dementia in Taiwan it was found that group reminiscence improved depressive symptoms, and improved communication and mood of patients with dementia. Moreover, in this study, most of the memories mentioned were about Chinese New Year and marriage (Chang and Chien 2018). Another quasi-experimental study showed that group reminiscence alleviated depressive symptoms and a sense of meaninglessness in people with dementia for 8 weeks (Ching-Teng *et al*. 2020). In an experimental study that performed this intervention on 90 patients with Alzheimer's disease, the results also showed that group reminiscence twice a week for 12 weeks reduced the symptoms of depression and neurological symptoms of Alzheimer's disease, and this effect lasted for up to 24 weeks (Ching-Teng *et al*. 2020). However, a 2017 meta-analysis study of more than 511 articles between 2000 and 2016 demonstrated the effect of group reminiscence on reducing depression symptoms in the elderly (Guo and Shen 2017). This effect may be due to increased psychological resilience in this group of people, which has been mentioned in other studies (Yujia *et al*. 2021).

Sahragard *et al*. (2020) also observed that group reminiscence for 4 weeks could affect the quality of sleep in the elderly and reduced insomnia. It was also found that 6 sessions of group reminiscence in the elderly reduced the feeling of loneliness and increased the level of spiritual well-being (Noghani *et al*. 2018). A systematic study showed that reminiscence can be effective in reducing the symptoms of depression, but there is not enough evidence to prove its effect on anxiety and loneliness in the elderly; however, group reminiscence can be used as a treatment technique in the elderly (Elias *et al*. 2015). A study conducted on older Iranian women showed that group reminiscence for 5 weeks could affect general mental health. In this study, indicators such as anxiety, insomnia, social functioning, and physical function were also examined. The results showed a positive effect of group reminiscence on this variable (Musavi *et al*. 2017b). The effect of this technique may be due to the increase in people's sense of self-esteem, because by expressing their nostalgia and experiences, they have expressed significant meaningfulness in themselves.

Studies have shown that remote group reminiscence *via* the Internet can be effective in im-

proving the cognitive status and apathy in patients with mild dementia due to Alzheimer's disease. In one study, people shared memories with others over the Internet for 60 minutes per week for 3 months (İnel Manav and Simsek 2019). Another study found that group reminiscence using the Tele-Operated Android Robot could improve communication between the elderly with dementia who do not have access to medical and nursing facilities (Kase *et al*. 2019). It seems that group reminiscence reduces the complications of age and psychological diseases by increasing communication between patients.

Studies have also combined group reminiscence with other complementary medicine methods and its effectiveness in different patients has been investigated, so that in a study conducted in China in 2018, a combination of group reminiscence and the MESSAGE communication strategies in the elderly with cognitive impairment improved the cognitive function and increased the quality of life of this group of individuals (Zhang *et al*. 2018). Also, in a study conducted on 130 Chinese elderly people in 2021, the results showed that the combination of group reminiscence with physical activity had an effect on improving the spiritual well-being and mental health of the elderly (Yujia *et al*. 2021). The reason for the positive effect of this intervention is an increase in social functioning of the elderly, although it has been observed that this treatment technique sometimes causes a feeling of alienation and disgust in people (Cheung *et al*. 2016).

Limitations

The psychological state of the participants when they answered the questions, as well as the small number of subjects, might limit the generalizability of the findings. Therefore, the researchers suggest that future studies should be conducted on different groups and with a larger sample size.

Conclusions

Considering the condition of older people who have suffered from issues such as lack of happiness and reduced life satisfaction due to their age, and also given the fact that no study has reported any complication for this treatment technique, the results of this study suggest that group reminiscence can be used as a treatment method along with other medical methods in the treatment of elderly patients.

Disclosures

The present study is the result of a research project approved by Larestan University of Medical Sciences (Grant No. 1398-39) and funded by this department.

The study was approved by the Bioethics Committee of Larestan University of Medical Sciences (Approval No. IR.LARUMS.REC.1398.027).

The authors report no conflict of interest.

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