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The effect of “Elder Care by Elderly People Program” on life satisfaction and quality of life among institutionalized senior citizens

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Abstract:

INTRODUCTION: Improving participation in life meaningful roles is one of the most important predictors of quality of life (QOL) and life satisfaction (LS) in later life. The purpose of this study was to investigate the effect of Elder Care by Elderly People (ECP) on LS and QOL among institutionalized senior citizens.

MATERIAL AND METHOD: This was an interventional study involving a targeted sample of 36 older adults in Ghods nursing home in Tehran in 2018. WHOQOL-OLD 24-item and LS 40-item questionnaires were used to measure LS and Olathe repeated-measures ANOVA and descriptive was employed to obtain the objectives.

RESULTS: The participants were 36 older adults in Ghods nursing home. The mean age of older adults was 67.27 (standard deviation [SD] = 7.6), of whom about 77.8% were male. The mean score of QOL increased from 74.38 (SD = 13.09) pre intervention to 83.72 (SD = 11.43) 2 months post intervention, with most significant change of 9.3 QOL points between pre intervention and 2 months post intervention alone ($P < 0.01$). Similarly, LS increased from 114.19 (SD = 26.93) pre intervention to 133.94 (SD = 20.49) 2 months post intervention, with most significant change of 19.7 LS points between pre intervention and 2 months post intervention alone ($P < 0.001$).

CONCLUSIONS: The results of this study showing the evidence of the positive impact of the ECP Programmed for the elderly, therefore, it is suggested that the programmer is evaluated in future studies.

Keywords:

Elder Care by Elderly People Programmed, Ghods nursing home, life satisfaction, quality of life

Introduction

Today, with the increase in the elderly population and life expectancy, the elderly has become a significant part of the population that need to use care services is increasing. Chronic age-related diseases and disability have affected a large number of elderly people and have a significant impact on the quality of their life.^[1]

The growth of elderly population is inevitable, which is consisted of a gradual change process from difference aspect of physical, psychological, and social dimensions.^[2] In general, elderly care is provided by formal and informal caregivers (family members). Due to the prevailing culture of family relations in Iran and sometimes the lack of confidence in the proper services of nursing homes, families are reluctant to leave the elderly in nursing homes.^[3] According to latest general census in Iran, 9.28% of 80 million population of

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Iran are older than 60 years old. Moreover, it is expected that Iranian elderly population would reach 30% in 2050.^[4]

Greater life expectancy is associated with an increasing number of older adults in society, along with this growth in aging population, however, there is an increasing concern over some predominant changes in various aspects of their life including social networks and socioeconomic, health-related, and demographic condition.^[5] These transitions may result in decreasing life satisfaction (LS) and quality of life (QOL) among elderly population. LS is subjective well-being which is considered as an indicator of QOL.^[6] QOL is the main effect on work ability and cognitive performance.^[7] According to the activity theory, the elderly who continue to participate in meaningful activities (physical activity, reading books, watching TV, etc.) have higher LS, as well as increasing the number of activities performed by the elderly and the quality of services provided in nursing homes to perform activities. Opinion plays a very important role in increasing LS in the elderly.^[8]

Furthermore, LS is a multidimensional construct, particularly among older population, which is consisted of different dimensions such as physical health, mental health, socioeconomic status, social and family relationship, and environment.^[9,10] Physical activity is the most important component in aging which has been significantly associated with LS.^[11] Older adults who perform activities of daily living (ADL) usually have higher LS in comparison with those who do not achieve to participate in these activities.^[12] On the other hand, older adults tend to experience a progressive loss of occupational behaviors; in fact, society is forced to relinquish obligatory roles due to declined personal abilities. Therefore, elderly persons are assigned the role of "retiree" and elderly individuals may begin to feel worthless. As a result, based on activity theory, if elderly persons become involved in meaningful activity.^[13]

The conceptual framework for this study is derived from occupational therapy practice framework: domain and process, which is consisted of various domains including occupations, client factors, performance skill, performance patterns, and context and environment.^[14]

Hence, it is necessary to develop a program that uses the remaining abilities of the elderly to improve the QOL and LS and reduce the burden of care in caregivers.^[7] One of these strategies is to discover the remaining capacities in all physical, mental, and social dimensions of the elderly to help care for other elderly people. Since there are people in care centers with different abilities or capabilities, by considering the factors related to the person, special activities or activities can be considered

for him, which ultimately not only improves their mental and functional condition. It creates a sense of independence and self-confidence and a sense of worth in them.^[15]

Furthermore, when an elderly person participates in activities with their peers in a group, he can increase the number of his social networks, and psychologically, he can play a role in a small group of peers or in a small community of a nursing home. Because by doing such purposeful activities, they feel that their existence is important for the people of that society and their lives have become purposeful. Due to the problems that exist in the field of home care for the elderly and also the lack of knowledge of informal caregivers or families in how to perform care activities for the elderly, they can be transferred to long-term care centers that specialize in the care of the elderly and reduce much of the burden of caring for families, and the elderly will receive better services under the supervision of a trained team. By carrying out this project in all nursing homes across the country, the view of society, especially families, on nursing homes will change, because in the general public, nursing homes are where dependent elderly people live, both mentally and physically, and these people spend days without doing anything. They spend specific and purposeful activities in sanatoriums. With the implementation of this project throughout the country, with this project, each of the elderly can continue their life in a safe and comfortable place by continuing their favorite care roles. On the other hand, the implementation of this program leads to a great change in the view of families who take care of the elderly in a very strict and inflexible way in the long run. By observing these fundamental changes in nursing homes, they transfer their loved ones to these centers with full awareness and more confidence, because they see that nursing homes are a place to do their favorite activities and enjoy life, and that is why it is respected and accepted there. Policymakers can also benefit from the results of this project to establish other institutions that are associated with the participation of the elderly. Therefore, this present study aimed to investigate "The effect of Elder Care by Elderly People Programmed (ECP)" on LS and QOL among older adults in Ghods nursing home.

Methodology

Study design and setting

This research was an interventional study involving a targeted sample of 36 older adults in Ghods nursing home in Tehran in 2018. The present study was implemented in three phases including before intervention program (Phase 1), the first intervention period (Phase 2), and the second intervention period (Phase 3).

Prior to the survey, all participants in older adults were screened for cognitive impairment using a concise mental test (AMT). It was the first introduced by Hodkinson in 1972, a 10-item diagnostic test for rapid assessment of dementia in elderly patients.^[16] Iranian version of AMT was validated by Bakhtiyari *et al.* 2014.^[17] Informed consent form to participate in this study was completed.

Study participants and sampling

Sampling method was targeted sampling technique in a Ghods nursing home which is located in Shahryar, that is, one of the Tehran counties. First, a short cognitive test was taken from the elderly and then, based on the test results, people who scored 1 or higher in the test were included in the study. All caregivers in the nursing home were included in the study to select caregivers. Finally, was conducted among 36 older adults (aged 60–84 years old).

Inclusion criteria for the elderly were follows

1. Informed consent
2. The elderly who have been in the nursing home for 6 months
3. The elderly who scored 7 or more on the short cognitive test (AMT) and were cognitively healthy
4. Caregivers who worked in the nursing home for 3 months.

Exclusion criteria were as follows

1. Refusing participation
2. Getting acute disease.

Data collection tool and technique

At the first phase of the present study, an approach to need assessment was established for providing an appropriate practical schedule of interventional program. Therefore, the basic information was obtained through 15 semi-structured interviews, which were conducted among 8 elderly persons. All responses were collected either tape recorded or written down by interviewers. Consequently, by applying careful consideration, an extended information from semi-structured interviews was extracted, and then, Excel software was used for determining the frequency of activities which had been carried out by older adults in Ghods nursing home. Based on gathered data, an interventional procedure was written under supervision of a group of experts on aging. Furthermore, a researcher explained the final intervention document for older persons and caregivers through conducting two educational classes. As a result, a unique activity form for each elderly persons was provided and older participants could complete this form according to specific activity and leisure activities which was daily considered for them (gardening, contribution in distribution food among older adults, librarian, tailoring, and helping peers in ADL and instrumental ADL).

Ethical consideration

- The code of ethics for this research has been approved based on Ethical consideration of number code: IR.USWR.REC.1396.397
- In this research, promoting the health of the elderly along with respect for their dignity and rights was considered as the main basis.
- Obtaining informed consent was done in writing and the researcher also made sure that the informed consent was obtained.
- Researchers are responsible for observing the principle of confidentiality and secrecy of the subjects and taking appropriate measures to prevent its publication.
- The researchers of this study publish the results of their research honestly, accurately and completely.

Statistical analysis

SPSS version 21.0 (SPSS Inc., Chicago, IL, USA) was used to analyze collected data. Descriptive analyses such as ranges, frequency distribution, percentage, means, and standard deviation (SD) were used. Repeated-measures variance analysis for analytic analysis was performed. Internal consistency for each questionnaire was assessed by Cronbach's alpha (LS Cronbach's $\alpha = 0.94$, quality of life-WHOOLD Cronbach's $\alpha = 0.87$). Preliminary exploratory data were carried out to determine missing value, detect outliers, and access for normality.

Results

In this survey, 36 older adults in Ghods nursing home were studied. The mean age for seniors was 67.27 (SD = 7.6), with a range between 60 and 84 years old. The majority of the participants (77.8%) were male. To compare the mean scores of LS among three phases, repeated-measures ANOVAs was used. Table 1 and 2 represents the mean score of LS at three phases among older adults in Ghods nursing home.

The result has shown that Mauchly's test of sphericity is statistically significant ($P > 0.05$), the null hypothesis was accepted, and the alternative hypothesis that the variances of the differences are equal. According to repeated-measures ANOVAs ($F = 8.83$, $P < 0.001$), the assumption of equal variances is rejected; as a result, there is a significant difference between various phases of measurement.

According to the result repeated measurement ANOVAs (within groups), the mean of LS follows a linear relationship over time. Based on paired comparison tests, there is a significant difference among three phases; this difference in means (MD) is related to the first and third stages of evaluation. However, there are no significant differences between the first and second phases as well

Table 1: Details of interventional research phases

| Period | Activity | Phases |
|--------------------------------------|---|--|
| Phase 1: Before intervention phase | For evaluation of basic condition of older participants before caring out intervention program, life satisfaction and quality of life index were completed | This phase was lasted for 1 month, from February 14 to March 6, 2018 |
| Phase 2: First intervention program | Weekly schedule was determined for each elderly person Specific activities were performed by older adults based on weekly schedule Weekly monitoring could result in overcoming some barriers, therefore, new activities were placed instead of old ones For increasing elderly's motivation, seniors' preference and interest were considered After 30 days, intervention program, life satisfaction, and quality of life index were completed among older people for evaluation of intervention program | This phase was lasted for 1 month, from March 21 to April 21, 2018 |
| Phase 3: Second intervention program | The second phase of intervention program was more similar to the first phase, therefore, life satisfaction and quality of life index were repeatedly completed among older adults After 60 days, intervention program, life satisfaction, and quality of life index were completed among older people for evaluation of intervention program | This phase was lasted for 2 months, from May 1 to June 31, 2018 |

Table 2: The mean score of life satisfaction at three stages among older adults in Ghods nursing home

| Phases | n | Mean | SD |
|-------------------------------|----|--------|-------|
| Before intervention (Phase 1) | 36 | 114.19 | 26.93 |
| First intervention (Phase 2) | 36 | 124.36 | 26.83 |
| Second intervention (Phase 3) | 36 | 133.94 | 20.49 |

SD=Standard deviation

as the second and third phases. Table 3 indicates the result of paired comparison test among older adults.

Figure 1 shows the mean of LS in three phases of measurement. According to this graph, the rate of LS has increased in each phase of intervention, which indicates that assigning roles to older adults leads to enhancing LS among elderly people.

The results have shown that Mauchly's test of sphericity is statistically significant ($P > 0.05$), the null hypothesis was accepted. According to repeated-measures ANOVAs ($F = 6.29, P = 0.003$), the assumption of equal variances is rejected; as a result, there is a significant difference between various stages of measurement. According to the result repeated measurement ANOVAs (within groups), the mean of quality of life follows a linear relationship over time, which indicates repeated measurement ANOVAs (within groups) among older adults [Table 4].

Based on paired comparison tests, there is a significant difference among three phases; this MD is related to the first and third stages of evaluation. However, there are no significant differences between the first and second phases as well as the second and third phases [Table 5].

Figure 2 shows the mean of quality of life in three phases of measurement. According to this graph, the rate of quality of life has increased in each phase of intervention, which indicates that assigning roles to older adults leads to enhancing quality of life among elderly people.

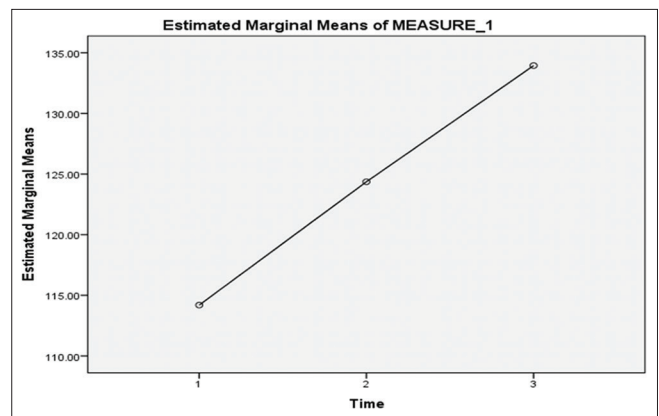


Figure 1: The mean of life satisfaction in three phases of measurement

Discussion

The present study was designed to determine “The effect of Elder Care by Elderly People Programmed” on LS and quality of life among institutionalized senior citizens living in Ghods nursing home.

The results indicated that assigning some meaningful roles and activities remarkably elevate LS and quality of life of elder adults in nursing home residents that is consistent with previous works.^[7,15-17] This result may be explained by the fact that participation in activities is more likely promoted a sense of identity, and reaffirmed the meaning of their lives particularly elder persons in residential institutes.^[18] To explain this relationship, it is necessary to illustrate one of the aging theories that was developed by Havighurst and Albrecht.^[19] According to this theory, a wide range of social roles is positively contributed to LS and good social adjustment in old age; in fact, the greater loss of roles leads to the lower LS.^[20] Therefore, encouraging older adults to maintain participation in active pastime has a predominant implication in later life. Another possible explanation for this is that residents who are separated from former

Table 3: Indicates the result of paired comparison test among older adults

| Phases | MD | SD | P |
|-------------------------|--------|------|--------|
| Phase 1 against Phase 2 | -10.16 | 4.63 | 0.1 |
| Phase 2 against Phase 3 | -9.58 | 5.06 | 0.2 |
| Phase 1 against Phase 3 | -19.75 | 4.37 | <0.001 |

SD=Standard deviation

Table 4: The mean score quality of life at three stages among older adults in Ghods nursing home

| Phases | n | Mean | SD |
|-------------------------------|----|-------|-------|
| Before intervention (Phase 1) | 36 | 74.38 | 13.09 |
| First intervention (Phase 2) | 36 | 80 | 12.97 |
| Second intervention (Phase 3) | 36 | 83.72 | 11.43 |

SD=Standard deviation

Table 5: The result of paired comparison test among older adults

| Phases | Mean | SD | P |
|-------------------------|-------|------|-------|
| Phase 1 against Phase 2 | -5.61 | 2.53 | 0.12 |
| Phase 2 against Phase 3 | -3.72 | 2.70 | 0.53 |
| Phase 1 against Phase 3 | -9.33 | 2.58 | 0.003 |

SD=Standard deviation

residence and community either due to their choice or out of necessity may feel isolated from former social circumstances.^[21] The feeling of isolation is consistently associated with lower level of quality of life.^[22] Regular participation in activities would provide an appropriate opportunity to reconstruct social networks, which is component of successful aging and not only maintains greater LS but also declines dramatically feelings of isolation.^[23]

A major strength of our study was the ability to examine the multidimensional construct of occupational therapy framework over a period of 3 months using a sample of elder residents in nursing home. Furthermore, most of the studies have been conducted to date, were cross-sectional design, and have used a single measure of LS, which is doubtful from aspect of validity.^[24] However, our study benefited from multiple domains of occupational therapy framework which is resulting a more comprehensive assessment in older adults in nursing home. The second strength of our work is establishment of practical protocol of the study results, which is easily be used by available nursing home in our country.

Limitation

Certain aspects of sample and omitting some important variables also limit the study. One factor that should be addressed in future studies is that sample size. Unfortunately, some participants dropped out of study because of death and health issues. Having larger sample size would provide more robust analysis. Furthermore, social support and family support measures are additional important factors associated with LS in older

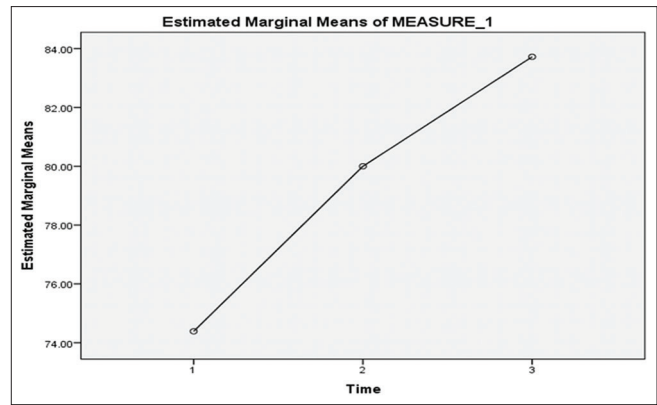


Figure 2: The mean of quality of life in three phases of intervention

adults. Unfortunately, such variables were not available for our intervention programmed.

Future research

It would be interesting to compare the experience of older individuals within different nursing homes around the country through implementing the same interventional program. Moreover, it is recommended that a number of possible future studies using the same interventional setup for longer intervention period for instance 1 year.

Conclusions

In this investigation, the aim was to assess the effect of ECP on LS and quality of life among institutionalized senior citizens living in Ghods nursing home. The results of the present study provide additional evidences on the efficacy of contribution in ongoing activities on LS and quality of life among older individuals. Therefore, policymakers could benefit from available practical guideline for promoting healthy lifestyle among aged population.

Suggestions

According to the results of the research, it is suggested that the “elderly care program” be used by the elderly in the field of elders after re-evaluations. It also seems that this protocol can be useful in educating students and people involved in elderly care. Also, in this study, the effect of “elderly care program” on life satisfaction and quality of life in the elderly has been studied. Therefore, it is recommended that the “Elderly Care Program” be tested in future research in more groups and more diverse centers. If the tools were evaluated at longer intervals (for example, 3 or 17 months), clearer results were obtained in terms of improving the quality and life satisfaction of the elderly living in the nursing home as well as the caregiver burden. On the other hand, conducting this study with the control group can be considered in future studies. In the present study, care was increased at the end of the first month. Therefore,

a future study can be designed to obtain more relevant information.

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Conflicts of interest

There are no conflicts of interest.

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