



## Original Article

### The Effect of Psychoeducation on Quality of Life and Dependency in Elderlies

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## ABSTRACT

### Article history

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**Introduction:** Quality of life and dependency are two important issues in elderly population. The aim of this study was to investigate the effectiveness of the elderly psychoeducation on their quality of life and dependency in a day care center in Iran.

**Methods:** A pre-post interventional design was used to evaluate the effectiveness of a psychoeducation program on a convenient sample of 130 elderlies with randomized control group. Intervention procedure included a healthcare package which contained healthy lifestyle education, memory telling sessions, physical education, prayer meetings, art workshops and arranging excursions, all of which was delivered within 3 months. Quality of life short form (SF-12) and Lawton index of instrumental activities of daily living (IADL) were assessed at baseline, after one month and three months later by a trained research coordinator. Covariance analysis was used to examine the effectiveness of the elderly psychoeducation on their psychophysical quality of life and their IADL status.

**Results:** The mean score of physical quality of life at pretest in the experimental group was  $35.70 \pm 8.80$ . These score, were  $38.53 \pm 8.32$  and  $39.27 \pm 7.80$  in the first and second posttest respectively. In terms of psychological quality of life, the mean of pretest score in the experimental group was  $41.59 \pm 9.47$ . It was  $43.26 \pm 9.09$  and  $47.19 \pm 8.98$  in the first and second post-test but in the control group the mean had decreased. The mean score of IADL in pretest for the experimental group was  $9.98 \pm 2.56$  in the post-test it was  $10.49 \pm 2.31$  and  $10.69 \pm 2.34$  in the first and second post-test, respectively.

**Conclusion:** These results suggest that psychoeducation for elderlies had a significant positive effect on psycho-physical quality of life and dependency. Therefore, psychoeducation can be helpful in day care centers.

**Keywords:** Elderly, Psychoeducation, Quality of Life, Dependency

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### Introduction

The elderly population growth means a higher demand for health care and social welfare services. Currently, no communicable diseases are the greatest threat for elderlies' health in different countries. The major difference between developed and developing countries such as Iran is that in the developed countries, the government and society are supposed to

cope with the challenges of the increasing number of elderlies whereas most of the developing countries are not even fully aware of this phenomenon and its hygienic, social and economic complications (1). Quality of life is a major index and encompasses different aspects such as physiological, functional and being of the person which asks for special attention

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(2). Health improving behaviors in aging contributes to significant improvements in health and quality of life and consequently reduces the health care economic burden. Sustaining independence in physical and cognitive functions and living actively play key roles in improving the health and quality of Life (3).

Quality of life is influenced by several factors. Factors such as age and culture cannot be modified, however some other influential factors e.g. environmental factors, diet, and physical activity and controlling the physiological signs are modifiable and require individual awareness (4).

Osada et al. has shown that the elderlies who are able to perform daily physical activities as well as leisure activities experience higher levels of quality of life and lower levels of depression (5). Elavsky et al. suggested that exercise improves quality of life. Also they concluded out of 139 researches, that religious beliefs and activities such as prayer, attending to religious events spirituality affect the health positively and improves the psychological well-being (6). Memory telling also has been shown to be effective in decreasing the elderlies' depression (7). Period family-based empowerment pattern regularly can increase quality of life of the elders (8).

One of the other health factors is sustaining independence till death. Whereas the functional independency is beyond the self-care ability and refers to the active role of the elderly in performing the daily activities. Research evidence reveals the advantages of the active lifestyle in improving the psychophysical health status and quality of life of elderlies. These results are even far more highlighted when the independence is sustained lifelong (9). Main et al. has shown educational interference through PRECEDE model able to promote quality of life in elderly (10). Many studies have confirmed the effect of education on the quality of life in the elderly (18-24).

In this study psychoeducation administered in an elderly day care center to examine its effects on their independence and quality of life.

## Method

### *Procedure and sampling*

This was an interventional study recruiting 130 of women elderlies in a day care center (in Mehriz town –one of the dependencies of Yazd state in Iran.) who all were over 60 year old in 2013, with no contagious disease or physical restriction. Potential subjects were assessed through 10-item Abbreviated Mental Test to be excluded in case of suffering from delirium or dementia (11). The other exclusion criteria were: experiencing social or family crisis of any kind during the study being carried out, hospitalization or suffering from an acute condition, receiving any sort of interventional services, absence in more than one third of the educational sessions and bereavement. Study subjects were 130 from whom 7 were excluded due to dissatisfaction; illness and inaccessibility of the center (long distance between home and center) were

removed from the study. Subjects were assigned randomly to interventional and control group.

After the primary assessment, subjects were assigned to the interventional and control group with 65 elderlies in each. Interventional group benefited from the elderly psychoeducation for three consecutive months and control group used the health care services such as control of sugar and blood pressure randomly in the day care center during three month. This service is not provided as routine program.

The services provided in Yazd, elderly day care are as follows:

1. Workshops based on Healthy lifestyle in Elderlies (4) including diet (3 sessions), exercise, bones/joints/traumas (3 sessions), dental hygiene (1 session), constipation and urinary incontinence (2 sessions), memory and sleep (2 sessions).
2. Memory-telling meetings once a week.
3. Prayer meetings with recitation of part 30 of Quran or saying prayer once a week.
4. Art workshops for free theme drawing with colored pencils once a week (12).
5. Physical exercise related to balance and arthritis adopted from exercise therapy book (three times a week for 20 minutes).
6. Excursions within the state 5 times during three months.
7. Blood pressure control on a daily basis and blood sugar control twice a week.

### *Instruments*

Standard questionnaire of quality of life (SF-12) were completed. SF-12 consists of 12 items measuring dimensions of physical functions, role limitation due to physical problems, role limitation due to psychological conditions, energy/activity, social function, physical pain and perceived general health. Higher scores (ranging from 0 to 100) indicate better quality of life (13). Validity and reliability of Persian questionnaires were reported (14).

The Lawton Instrumental Activities of Daily Living (IADL) Scale (15) was used to assess routine instrumental activities in this study. IADL test includes 8 activities (the ability to use telephone, shopping, preparing food, housekeeping, washing clothes, getting around by vehicles, taking the medicines on one's own and financial activities). Participants capability and the extent to which the person needs assistance in performing the activity are represented by one of the 3 descriptive statements. Performing any activity receives one score otherwise no score is given. Total score is 18 i.e. independence and 0 means total dependence which are categorized as independent, partially dependent and totally dependent. Questionnaires were completed through five-minute interviews (16). Validity and reliability of Persian questionnaires are reported (18).

### Ethical considerations

The study protocol was approved by the ethics committee and review boards of the University of Social Welfare And Rehabilitation Sciences (Dissertation Code: 95 - 141) and was carried out in an elderly day care center in Mehriz tow—one of the dependencies of Yazd state in Iran.

All participants were assured that all information would be preserved and, any subject can be excluded from study at any time.

### Data analysis

After data collection, they were entered to SPSS software, and then covariance analysis was used to examine the effectiveness of the elderly psychoeducation on their psychophysical quality of life and their IADL status after 1 and 3 months.

### Results

All of our subjects were women and Most of them were between 60 and 69 years old (63% of the interventional group) and (57% of the control group). 57% of participants in the interventional group were married and 40% were widows, whereas in the control group 63% were married and 34% widow. The illiteracy rate in the interventional group showed to be 72% and in the control group it was slightly higher at 78%. Meanwhile only 3% of the interventional group subjects were educated higher than primary school. In terms of living status, 38% of the interventional and 21% of the control group participants were living alone, respectively. Moreover, 92% of participants in the interventional and 98% in the control group were unemployed. Although 14% and 17% were pensioners in the interventional and control group participants respectively and 84% in the interventional and 80% of the control group participants were insured. The experimental and control groups in the variables of this study were not statistically different.

Table 1 describes the pre-test and post-test scores of physical and psychological quality of life and the level of IADL of the subjects in each group. Based on the results, the mean score of the pre-test for physical quality of life in the experimental group was  $35.70 \pm 8.80$  and in the control group was  $36.06 \pm 8.44$ . Also the mean score of the experimental group was  $38.53 \pm$

$8.32$  in the first post-test and  $39.27 \pm 7.80$  in the second post-test. In the control group, the mean in the first post-test was  $35.48 \pm 8.22$  and  $35.41 \pm 7.17$  in the second post-test ( $p < 0.01$ ). So according to the results, the average scores of physical quality of life in the experimental group increased in the post test, but in the control group it was decreased slightly.

In terms of psychological quality of life, the mean of pre-test scores in the experimental group was  $41.59 \pm 9.47$  and in the control group was  $41.03 \pm 9.96$ . Mean score of the experimental group was  $43.26 \pm 9.09$  in the first post test and  $47.19 \pm 8.98$  in the second post-test, but in the control group the mean had decreased. Therefore according to the results, the mean scores of psychological quality of life in the experimental group increased in the post test, but in the control group it was slightly decreased.

According on the results in Table 1, the mean scores of IADL level in pre-test for the experimental group was  $9.98 \pm 2.56$ ; in the post-test it was  $10.49 \pm 2.31$  and  $10.69 \pm 2.34$  in the second post-test. Therefore, the mean of IADL level of the experimental group increased in the post test, but based on results in the control group, the mean of the IADL level scores was almost constant.

Covariance analysis was used to examine the effectiveness of elderly psychoeducation on their psych-physical quality of life and their IADL status after 1 and 3 months. The results are shown in the table 2.

In table 2 according to the results, the calculated F value ( $F: 8.399$ ,  $df: 1$ ) is larger than the tabulated (critical) F-value. Therefore, the results support the effectiveness of elderly psychoeducation on physical quality of life after one month with 0.99 confidence level. Moreover, the results show that the post-test mean scores in the experimental group improved comparing to those of the control group.

After three months in the second post-test, the mean scores of the experimental group increased compared to the control group, which is significant ( $F: 16.222$ ,  $df: 1$ ).

Therefore, this services package was effective on the physical and psychological quality of life and the level of IADL of the elderly who were in the experimental group, while the control group did not change in the research alternatives. Also after one month and three months this effect was still visible.

**Table 1. Statistical description of pre-test and post-test scores of physical and psychological quality of life and IADL level**

	Physical quality of life		Psychological quality of life		IADL level	
	Experimental group	Control group	Experimental group	Control group	Experimental group	Control group
<b>Pre-test</b>	$35.70 \pm 8.80$	$36.06 \pm 8.44$	$41.59 \pm 9.47$	$41.03 \pm 9.96$	$9.98 \pm 2.56$	$9.71 \pm 2.74$
<b>First post-test</b>	$38.53 \pm 8.32$	$35.48 \pm 8.22$	$43.26 \pm 9.09$	$40.16 \pm 10.34$	$10.49 \pm 2.31$	$9.72 \pm 2.68$
<b>Second post-test</b>	$39.27 \pm 7.80$	$35.41 \pm 7.17$	$47.19 \pm 8.98$	$39.96 \pm 8.73$	$10.69 \pm 2.34$	$9.45 \pm 2.63$

**Table 2. Covariance analysis of the adjusted means differences of the physical and psychological quality of life and the IADL level of the elderlies in the experimental and control group in the first and second post-test**

Variables	Test	Sum of squares	df	Average squares	F	P	Eta
<b>Physical quality of life</b>	First post-test	888.347	1	347.881	8.399	0.004	0.062
	Second post-test	534.921	1	534.921	16.222	< 0.001	0.113
<b>Psychological quality of life</b>	First post-test	239.297	1	239.297	4.485	0.036	0.034
	Second post-test	1580.284	1	1580.284	26.545	< 0.001	0.173
<b>IADL level</b>	First post-test	8.963	1	8.963	10.947	< 0.001	0.079
	Second post-test	32.632	1	32.632	39.755	< 0.001	0.238

### Discussion

This study aimed to examine the effects of elderly health care services on quality of life. Majority of the elderlies aged between 60 to 69 years old. The elderlies enthusiasm for using the services of day care centers shows that they need to be educated and taken care of as well as being interested in affiliating themselves to a group of peers. Therefore, screening patients suffering from high blood pressure, Diabetes and cancer can be carried out in these centers.

The average of scores increased in both psychological and physical dimensions as well as independence after delivering the services which indicates the positive effects of the package on the quality of life and independence. The findings of this study also are in line with the previous research on this field. Lord and Castal showed that administering the self-care and exercise leads to improvements in muscular strength, the ability to maintain body balance and eventually improvements in different dimensions of life quality (18). The result of the research by Ebersole provided further support for the importance of leisure time, independence in daily activities, going for walks regularly, balanced diet and living by the other family members in improvements in life satisfaction and quality of life in elderlies (19). Brach et al suggested that doing moderate exercise (20-30 minutes per day) reduces the activity restrictions and improves the role-related accomplishments which ultimately lead to a higher quality of life and feeling good about oneself (20). People with active lifestyle benefit from higher quality of life in terms of satisfaction, social interactions, satisfying relationships which are significantly important to maintain life quality in higher levels, physical activity and subjective well-being (21). Koltyn studied a sample of women over 65 year old in the United States to examine the effects of physical activity on elderlies 'quality of life, showed that the level of physical activity is significantly related to quality of life and physical health (22).

According to Elavsky, Abedi and Netz studies exercise improves the elderly quality of life (6, 23-24).

Memory telling groups can encourage elderlies to share their memories with each other. Therapists should take some issues into consideration such as paranoid behaviors of participants and to avoid tackling these problems by inexperienced social workers as the group aims to boost individuals 'self-esteem rather than torturing them by self-disclosure (25).

One of the influential factors in quality of life is art especially music. Music is a non-invasive therapeutic technique which is inexpensive and simple for making improvements in elderlies 'quality of life (26).

The elderlies who were independent in their daily activities experienced higher levels of quality of life (27).

Independence is one the basic needs of human and makes the person more hopeful about life and boosts the self-confidence to live more actively in society. Studies show that one fifth of people with disabilities need assistance in their daily life who constitute almost 58% of elderlies over 65 year old (28). That people who need assistance have lower levels of life quality (29).

### Conclusion

With regard to the fact that elderlies in Iran experience low levels of life quality, delivering the health care services package which improves the quality of life can contribute significantly to their empowerment. Expansion of these day care centers with the idea of prevention better than cure can alleviate the economic burden of health care on them.

### Study limitations

This study was conducted on women so these result could not be generalized to the men elderlies. This limitation should be considered and it is recommended to include male participants in further research.



## Conflict of interest

The authors declare that there is no conflict of interests.

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## Autours, contribution

Study design: RS, AAK, MHL, AA

Data collection and analysis: AA

Manuscript preparation: NSH, FH

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