

# The Study of the Effects of the Regular Exercise Program on the Self-Esteem of the Elderly in the Old People Home of Rasht

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## Abstract

**Background & Objectives:** Regarding the importance of improving the health of elderly and the relationship between the physical performance and self-esteem, this study was done with the aim of determining the effect of the regular exercise programs on the self-esteem of elderly in the old people home of Rasht (north of Iran) in 2008.

**Methods:** This was a pre-post test study done on 32 elderly in the old people home of Rasht. The qualified elderly after filling out the Rosenberg's self-esteem questionnaire, received one month of designed exercise programs and after one month, their self-esteem of the samples was determined. The data were analyzed by a t-test and the SPSS soft ware.

**Results:** The mean age of participants in the study was 73.5. 59.4% of participants were widowed, 43.8% didn't have any children, 87.5% were uneducated, and 12.5% had primary education. 37.2% of them had been there for less than one year and the mean of their residence duration was 1357 days. The source of their income in 59.4% of them was from their children and relatives. 27 of them (84.4%) received visits. 34.4% had the history of disease. There was a significant coefficient between the number of children, marital status, education, job, the number of the previous jobs, gender and visits and education and the last time visit. The mean score of self-esteem was  $22.81 \pm 4.84$  before exercise program. This reached  $26.84 \pm 4.35$  after exercise programs, and this change was statistically significant ( $p < 0.001$ ).

**Conclusion:** Doing exercises is effective in increasing self-esteem and it is recommended as a harmless and inexpensive way which has no complications.

**Keywords:** Regular exercise program, Self-esteem, Elderly

## **Introduction**

Senility is a phenomenon that is the result of the natural passage of time and results in physiological and psycho-social changes. Senility is not a phenomenon related to a special group, but all people will experience it gradually [1].

The United Nations in 2006 reported the number of the elderly as 675923000 and this number in 2050 will reach 1968153000 [2]. According to the latest census of housing. In 2006, the elderly coefficient which is the ratio of the people over 65 to the people under 15, reached from 6.6% in 1986 to 20.6% in 2006 which has tripled. These numbers imply the ageing of people [3].

Feeling of inability is the most common problem in elderly and results in the decrease in bearing unwanted stimuli, decrease in performance in inappropriate environment conditions, depression, increase in the level of stress, adaptive incongruous reactions, the decrease of self-esteem and even death [4].

Decrease of self-esteem causes several mental problems like depression, seclusion, shunning from publicity, anxiety, indifference and feeling of loneliness [5]. The problems of elderly have created serious problems in the societies especially in recent years. Most of their problems are losing their self-esteem and social relations besides physical problems. An elderly is centered upon himself, becomes depressed and feels lonely which are the signs of old age [6]. Several factors affect the self-esteem in old age, such as depression, anxiety, seclusion, alienation, and loneliness and in this case having low activity stands out. In fact being inactive in elderly can have mental and physical complications. One of the mental complications of inactivity is losing self-esteem gradually [7]. Activity and exercise increases efficiency and can increase self-esteem [8]. Low activity decreases self-esteem and causes anxiety and seclusion [9]. Physical activities and having low activity can be helpful in the prevention of disease in the elderly [10]. According to the statistics of Health and Human Services of the US, more than 60% of American don't have regular exercise activities, 25% of them don't do exercise and these statistics is alarming in that they express the importance of attention to exercise [3]. Exercise and physical activities delay ageing and the elderly who have physical activities are more healthful and jovial. So one of the most effective methods to prevent ageing disorders is to exercise and have physical activities [11]. The elderly should do exercise with moderate severity at least 30 minutes in a day and for 5 days in a week to improve their health [12]. Eyigor et al, reported that doing exercise programs in elderly women increase their physical performance on the muscles of their knees and ankle and also the scores of the quality of life [13]. Ghaffari et al, expressed that group regular exercise programs increase the self-esteem of the students and regarding the easiness of performance and physical benefits and not having serious complications, exercise is considered as a factor that increases self-esteem and physical and mental health [14].

This study was done with the aim of studying the effects of doing exercise programs on the self-esteem of elderly who were in the old people home of Gilan in 2008.

## **Method**

This study was a pre- post-test with the design of clinical trial. The elderly of the old people home of Rasht that were qualified filled out the consent form and entered the study through census.

In this study the instruments for collecting data were 2 questionnaires: demographic and the scale of self-esteem. The first questionnaire was for collecting characteristics individual's including age, gender, material status, spouse's condition, number of children, education, job, duration of their residence in old people home, source of income, exercise in the past and present, the number of visits and determining the last time they had visits. The second questionnaire was the Rosenberg's Self-esteem Scale. This scale is a standard scale that includes 10 sentences or assertions that determined the real feeling of the people toward each of the sentences. Each sentence has 4 choices: completely agree, agree, disagree and completely disagree which are specified by a cross and the scores of 1 to 4 in front of each sentence for 10 questions. Thus, the minimum score is 10 and the maximum is 40. The

reliability of the instruments for data collection in this study was determined through test retest in which the questionnaires were filled out in 2 steps by 20 people and it was  $r=0.85$ . The criteria for inclusion into study were having information to the place, time and people according to the physician's view and willingness to be in the study and confirmation for participation by the physician, the criteria for exclusion from study were being absent for 3 consecutive sessions or for 1/4 of the sessions and facing an unpleasant event for the participants. After knowingly filling out the consent form, regarding the criteria for the inclusion into the study, the elderly who were qualified entered the study.

The physical and socio-mental benefits of the exercise were explained for the elderly and the demographic and the data about the routine activities were collected by the researcher. The self-esteem of the samples was collected by Rosenberg Self-Esteem Scale before the exercise program. The designed exercise program was performed by an exercise coach every morning (except Fridays) and for 30-45 minutes. After 1 month the self-esteem of the samples was determined again. Then the data was analyzed by t test and SPSS software.

## **Results**

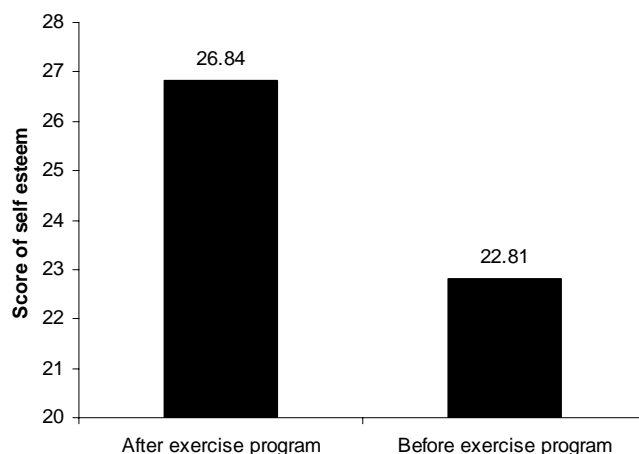
36 of the participants were excluded due to having more than 4 sessions of absence. The mean age of participants was  $73.5\pm 8.3$ . The youngest one was 60 and the oldest was 87. The highest percentage was 70-79 (40.6%), half of them were men and the rest were women. Most of the participants were widowed (59.4%), and the single, divorced, and married ones were 28.1%, 9.4%, 3.1% respectively. 43.8% of elderly didn't have any children. There was an inverse relationship between residence in the old people home and the number of children, so a few of the elderly had 4 children. The average number of children was  $1.63\pm 2.22$ . The maximum number of their children was 10 and the minimum was 0. Most of the elderly (87.5%) were uneducated and the rest had primary education. There was an inverse relationship between education and residence in the old people home. 50% of the participants had a previous job. 46.9% were housewives and only one man was jobless. One woman was employed and the others were housewives. 50% of them didn't have a previous job and there was an inverse relationship between the number of previous jobs and residence in the old people home. Most of them didn't have previous jobs, and were female and housewives. 37.2% were in the old people home for less than one year. 27.9% were there from 1 to 3 years. The mean of their residence was  $1357\pm 1781$  days. The maximum length of their residence in the old people home was 7752 days and the minimum was 61 days. The source of their income in 59.4% of people was through their children and their relatives and the others (40.6%) didn't have any income. The participants in this study didn't have any history of regular exercise and they don't do exercise at the moment. 27 of participants (84.4%) had visits and 5 of them 15.6% didn't have any visits. 53.1% had visits in less than one month and 12.5% didn't have visits for a year. The average of their last visit was  $223.28\pm 415.64$  days. 34.4% of them didn't have the history of disease and 65.6% had the history of disease. Thus 18.6% were suffering from heart diseases, 9.3% from diabetes, 6.2% from hernia, 3.1% from prostate and 3.1% eye disease and 3.1% from asthma.

There was a significant relationship between the number of children, marital status, job, and the number of previous jobs, education and the last time of their visit. There was an inverse relationship between age and self-esteem before exercise program, whereas there wasn't such a relationship before doing exercise programs.

The people who didn't have income had low self-esteem. There was a high and significant correlation between scores of self-esteem before and after exercise programs ( $r=0.83$ ).

The mean of total score of self-esteem after the exercise program was  $26.84\pm 4.35$  and was significantly higher in comparison with before doing exercise program  $22.81\pm 4.84$  ( $p<0.0001$ ).

**Figure 1:** Average of sum of self esteem score before and after exercise program



## Discussion

In a research which is done by Iгоре et al about the effects of exercise programs on the quality of life of the elderly, the mean age and deviation was 70.3 and 6.5 respectively [13]. McAuley et al in 2005 did a research about the effects of exercise program on the self-efficacy and self-esteem. The mean age was reported 66.7 [15]. Rafati et al expressed that the mean age and deviation were 76.8 and 7.6 respectively [16].

The marital status of elderly in old people home in different part of country is different. For example in the west of Tehran the percentage of married, single, divorced and widowed were 80,0.2, 17.8 [17]. 52.5% was married, 9.5% divorced and 38% had lost their jobs [18].

There is different numbers about the education of people who were in old people home. Rafati et al reported that 7.3% of women in Kahrizak's old people home were uneducated, but this number was 34.5 in men [16]. In the old people home in the west of Tehran 30.5% of people were uneducated [17], and in Kholdbarin, old people home of Shiraz, it was 18.8%.

Bazrafshan reported that 69.83% of women in the old people home of Shiraz were female [18]. In Kahrizak old people home of Tehran, 53.9% of women were housewives before residence in old people home and 46% of men had service job [16].

McAuley [15] & Elvsky et al [19] reported the effect of exercise program on the self-efficacy and self-esteem. 45% of them were suffering from heart diseases, 23% from arterial problems, 23% had high fat, 9% diabetes, and 10% were suffering from cancer.

Bazrafshan et al reported that 36.44% of women in the old people home of Shiraz were suffering from heart diseases, 41.33% from skeletal problems, and 22.23% from physical problems [18].

Bashire and Mohseni Tabrizi observed the positive and significant correlation between education and job [20]. The relationship between the numbers of children, marital status is predictable, because singles don't have children. It can be stated that the relationship between education and job in men is more than women. We can express the relationship between education and visit status in such a way that people who had more education acted well in the raising of their children, and their children had more affection toward their parents.

Robins et al reported that self-esteem in childhood is more. It decreases in adolescent, and increases in middle-age and decreases greatly in old age [21].

People, who didn't have income, had low self-esteem. This result showed the importance of economic on the self-esteem. Rosenberg and Pearlin expressed that adults who had low education, income and job, had low social self-esteem, For example the people who had appropriate Job, had

more self dependence, prestige, and, had fewer feelings of being bored in comparison to joblessness or people with inappropriate job had high amount of self-esteem [22]. On the other hand the people who had more income and high education had more self-esteem in comparison to uneducated and people with low income [23]. McMullin et al reported that social status in youth had less effect on self-esteem, whereas in middle age and adults its effect was considerable [24].

The results of this study showed the significant effect of exercise program on the enhancement of self-esteem of the elderly in the old people home and are in accordance with the results of some studies in this case. For example relationship between amount of physical performance, safety of exercise programs and self-esteem and self-efficacy [15]. Tiggemann and Williamson showed that although there isn't any relationship between the amount of exercise, body satisfaction and self-esteem in youth, doing exercise activities with the aim of improving health and physical energy increased self-esteem [25]. Although there is relationship between self-esteem and the quality of life, and self-esteem is one of the aspects of the quality of life, most researchers studied the effect of exercise on improving the quality of life. For example the study of Bazrafshan et al on the elderly showed that the mean score of the quality of life before doing exercise program in experimental group, had significant increase, whereas in control group there wasn't any change in its amount [26]. Marquis et al showed that physical activities is related to self-efficacy, self-esteem and quality of life in the long run [26].

## **Conclusion**

Regular exercise program has significant effect on the self-esteem and the quality of life of the elderly and doing such programs in care centers, can be used as factor for improving the health of elderly.

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