

## Researching the Effect of Physical Activities On Hopelessness Level of Elders Staying at Rest Homes

*Mehibe Akandere*

Selçuk University, School of Physical Education and Sport, Konya, Turkey

**Abstract:** The aim of the study was to investigate effect of physical activities on hopelessness level in elders staying at Rest Homes. Also, to research the effect of physical activities on hopelessness level in terms of the gender variable was the other aim of this study. A total of 78 elders participated in this study voluntarily 21 of whom were female and 57 were male and who were chosen via random sampling method. Beck Hopelessness Scale (BHS) was applied in elders who stayed at Konya Central Rest Home and Aksehir Rest Home. The measurements were taken twice as before and after exercise program being applied as 8-week series of 45 minutes exercise three days a week. The findings of the study revealed that the exercise activities administered to the female and male elders staying at the rest homes for 8 weeks reduced their hopelessness levels ( $p < 0.05$ ). An analysis of the elders' hopelessness levels in terms of the gender variable revealed that female and male elders exhibited identical hopelessness levels. A comparison of the pre-test and post-test applied revealed that hopelessness levels declined more in women than in men as a result of the exercise program ( $p < 0.05$ ). In conclusion, physical activities administered to the elders at rest homes reduced their hopelessness levels thereby affecting them positively.

**Key words:** Physical activities • Elder • Hopelessness • Rest Home

### INTRODUCTION

The nature of human being always searches for happiness and the human being consciously makes selections and decides in order to live in accordance with himself and his nature. A healthy person is aware of all his behaviors and develops effective responses in such a manner that will lead to his expected results [1]. There is a providence in hope to success the plans that are put into practice for achieving the goal [2].

Believes of people for never overcoming their failures and solving their problems, misinterpreting their lives though there is no realistic reason and expecting negative results although they do not make an effort to reach a goal are described as hopelessness [3]. There are negative thoughts and failure considerations in hopelessness [2]. Hopelessness is described as expectations less than zero in performing a job or a goal [4].

Optimism is an alienated form of belief and pessimism, on the other hand, is an alienated form of hopelessness. If an interest is really shown to human being and his/her future, in other words, insightfully and with responsibility, this interest may rise barely from belief or hopelessness [5].

The senses of individuals having a sense of hopelessness are caused from negative senses including thoughts such as helplessness, anxiety, pessimism which come together with not materializing desires, expectations, requirements of people for future and also meeting with many negative events in the future [6].

Everlasting or uncontrolled stress situations lead some destructive variations in the brain. These lasting variations may cause stress and anxiety for individuals and make them more vulnerable and form a basis for the development of psychiatric diseases such as anxiety disorders, negative thoughts and depression. Psychological diseases such as a feeling of insecurity, impatience, depression, indecision, a feeling of desolateness are observed [7]. The intensity of hopelessness varies depending on the person, situation, when and how the expected result comes true [2]. In the researches related with both depressive symptoms and suicide among young people, two factors which were emphasized and became prominent were depression and hopelessness [8].

Recurrence of negativeness experienced in the past, anxiety, fear, concern, difficulty in giving a decision are among the factors affecting hopelessness.

The individual who is mentally in a negative expectation for his/her future experiences difficulty in evaluation while being in negativeness. Pessimist and depressed expressions prompt the individual to hopelessness and causes him/her to get into depression in the degree of hopelessness. The feelings of people related with future, their motivation losses, hopes and expectations, depressions, construction levels and pessimisms create hopelessness [6].

The close relationship between depression, suicide and hopelessness directed researchers to determine the level of hopelessness in risk groups. Beck *et al.* [3] developed "Beck Hopelessness Scale" in order to determine the level of hopelessness objectively as a result of heading away from observations and a series of studies. This scale is a type of self-assessment scale including 20 items which is frequently observed in the literature and has high reliability [3].

A set of physiological and morphological variations are observed with ageing. These cannot be prevented. Another variation observed with ageing is immobility. Immobility, on the other hand, paves the way for some diseases observed during ageing. Regular continuous exercise activity both can prevent these diseases and can be beneficial in the treatment of them. Exercises are prepared as a prescription and their dosages vary depending on the situation of the individual. Exercises are beneficial hardly as long as they are applied [9].

Regular exercises performed are beneficial for all groups of age as well as they might be more beneficial for elders. In fact, regular activity generally slows down together with ageing or immobility inversely decreases. This situation takes elder person off diseases and disabilities such as walking, falling down, equilibrium, reduced muscle mass, hypertension, cardiovascular, osteoporosis and proprioception. Scientific researches indicated that aerobic conditioning, force training program, equilibrium and flexibility exercises may reduce or reverse these mentioned diseases and disabilities in ill and elder people, bring in mobility and independence and thus assist to improve the quality of life [10-12]. Hughes *et al.* [13] showed that glucose tolerance, insulin stimulated glucose excretion and skeletal muscle glucose transmission protein level in glucose intolerance elder subjects were increased as a result of regular aerobic exercises even if weight loss was not observed. It was also indicated that diet-controlled weight loss together with aerobic exercises were more effective in increased insulin action than weight loss efforts just with limitations in diet. Many of investigation reported beneficial effect of

physical activity on prevention of health problems [14-18]. For example, Ali and Hanachi [13], stated that the anaerobic power exercise accelerates blood coagulation and activates blood fibrinolytic activity.

Many studies exposed that physical exercise is positively related to psychosocial well-being among older adults hopelessness [19, 20]. Studies have also shown that increasing physical exercise in older age is important due to the range of associated health benefits such as improving balance, strength and gait endurance. Physical exercise has been shown to be an effective mode to circumvent age-related changes in the body [21].

Organized program including regular physical activity for elder people will increase their socialization and at the same time will reduce their lazy and shiftless time. In this way, they will gain joy of living and their happiness will be supported [11, 12]. As a result, to continue on regular exercises lifelong not only protects individuals from various diseases but also support self-confidence and help them to live independently and efficiently without being in a need for another person. Maybe this will not add years to their lives but may add life to their years.

In the view of such information, sports medical doctors describe exercise and sports as movements which will improve a person's state of health and maintain this situation [22, 23].

**Aim:** It's necessary to have a healthy elder society for public welfare, looking to future with confidence and being sure in terms of new generation. For this reason, elderliness and physical activity were discussed in this study and it was aimed to search the effect of physical activities on the level of hopelessness.

## METHOD

In this study, "Single group pre-test, post-test experimental design without control group" was used among other experimental models. In this design, the effect of experimental process was tested on a single group. The measurements related with independent variable of experiment subjects are obtained as pre-test before activity and post-test after activity by using same subjects and same measurement instruments. There aren't randomness and matching [24].

**Sample of the Research:** A total of 78 elders staying at Konya Central Rest Home and Akşehir Rest Home, 21 of whom were female and 57 were male and who were chosen through the random sampling method, participated in the study voluntarily.

**Data Collecting System:** Beck Hopelessness Scale (BHS) which was developed by Weissman, Lester and Trexler [25] was administered to the subjects at the beginning and end of the study and their Hopelessness levels were determined. The study for its validation and reliability was performed by Seber, Dilbaz, Kaptanoglu and Tekin [26] in our country and it was used to determine negative expectations of the individual for the future. Afterwards Durak [19] studied on the scale and obtained detailed information about validity, reliability and factor structure of the scale. BHS is a scale including 20 items and is graded between 0 and 1. When the points are high, it is supposed that the hopelessness of the individual is high.

A 45-minute exercise program was administered to the subjects three days a week for eight weeks (Table 1 and Table 2).

Arithmetic mean, median, standard deviation, independent t-test and paired samples t-test were used in the analysis of the research data. In the analytical process, first, a group was considered a whole and paired t-test was applied on the Beck Hopelessness Scale scores administered to the elders at the beginning and end of the exercise, independent t-test was used in the comparison of the dependent variables (Hopelessness Level) according to the gender; on the other hand, paired samples t-test was used in the pre-test and post-test comparisons in each gender group. The significance level was accepted as 0.05.

**Findings:** The findings obtained in the study which was carried out in order to determine the effect of sports on life satisfaction and hopelessness levels of elders staying at

Table 1: Exercise Program

Days	WEEK 1- 2	WEEK 3- 5	WEEK 6 - 8
Monday	10 min. Warmup 20 min. Exercise 10 min. Cooldown	10 min. Warmup 20 min. floor Exercise 10 min. Cooldown	10 min. Warmup 20 min. Standing, floor, Sitting Exercise 10 min. Cooldown
Wednesday	10 min. warmup 20 min. Sitting Exercise 10 min. Cooldown	10 min. warmup 20 min. Standing and sitting Exercise 10 min. Cooldown	10 min. warmup 20 min. Standing, floor, Sitting Exercise 10 min. Cooldown
Friday	35 min. Outdoor Walking 10 min. Cooldown	35 min. Outdoor Walking 10 min. Cooldown	35 min. Outdoor Walking 10 min. Cooldown

Table 2: Exercise Program

Warmup 10 min.	The exercise of standing 20 min.	The exercise by sitting 20 min.	The exercise on the floor 20 min.	Cooldown 20 min.
* Walking rhythm, while walking forward and backward rotation arm * While walking in an upward trending * Breathing exercises	* Forward, backward and side to side stretching the neck, round neck turning movements * Turn back to the front shoulder and arm movements * Opening and closing movements of the fingers * Waist side to side, forward and backward stretching moves * Legs stretched, forward and backward by bending stretching movements	* The ankle to the front, back and side stretch * Forward, backward, side to side of neck and shoulder turn * Arms extended, opening, closing movements * Waist side to side, forward and backward stretching moves * The legs stretched of Lifting and lowering movements * Opening and closing movements of the fingers * The ankle to the front, back and side turn moves * With toes touching motions in the ground	* Breathing exercises * Extending upward movements * Feet on the floor, bent knees and waist motions * Leg from the knee to the side of the opening and closing * Tight legs, one leg lifted up to download *while legs stretched sideways opening and closing movement * In front of the ankle, back, side to side movement of rotation * The toes opening and closing movement while Lies next to	* Breathing exercises * Arm muscles stretching, opening and stretching movements * Leg muscles stretching, opening and stretching movements

Table 3: Effect of exercise activities on the elders' hopelessness level

Variable	N	Mean	Std. deviation	t	P
Pre-test	78	12,40	2,58	21,902	0,000*
Post-test	78	4,92	2,91		

\*P&lt;0.05

Table 4: Hopelessness levels of the elders participating in the exercise activities in terms of gender

Variable	Gender	N	Mean	Std. deviation	t	P
Pre-test	Male	57	12,21	2,69	1,057	0,294
	Female	21	12,90	2,21	2,21	
Post-test	Male	57	4,21	2,41	3,86	0,0001*
	Female	21	6,86	3,32	3,32	

\*P&lt;0,05

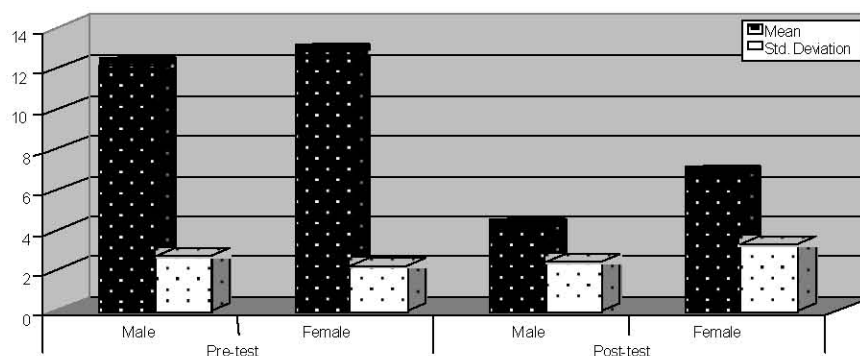


Fig. 1: Distribution of BHS pre-test before activity and post-test after activity grades belonging to the elders in the sample in terms of gender

rest home are shown as follows. In this part of the research, the results analyzed according to hopelessness levels, gender, pre-test and post-test variables of elders were given as tables and graphs.

The “Beck Hopelessness Scale” grades taken before and after the exercises by elders constituting the sample of the research were compared with dependent t test and the results obtained are given in Table 3.

As it can be seen in Table 3, average “Beck Hopelessness Scale (BHS)” of elders in the sample before exercises was found as  $12.40 \pm 2.58$  while average BHS after exercise was  $4.92 \pm 2.91$ . As a result of statistical analysis which was performed in order to compare pre-test and post-test BHS average grades of elders, a significant difference was obtained between pre-test and post-test results of elders ( $t = 21.902$ ;  $P = 0.000 < 0.05$ ). According to this result, exercise programs applied to elders in the research caused a decrease in hopelessness expectations of them.

The hopelessness levels of elders participated in exercise activities before and after program were investigated in terms of gender. The comparison of hopelessness levels of elders constituting the sample of the research was performed with independent t test. The data obtained are given in Table 4 and Fig. 1.

According to Table 4, the average “Beck Hopelessness Scale (BHS)” of males before activity was  $12.21 \pm 2.69$  and that of females was  $12.90 \pm 2.21$ . When statistical analysis results related with these data were taken into consideration, no significant difference was found between hopelessness levels of male and female elders before activity ( $t = 1.057$ ;  $P = 0.294 > 0.05$ ). Therefore, it can be concluded that hopelessness levels of male and female elders staying at rest home were same before activity.

After activity, the average “Beck Hopelessness Scale (BHS)” of males was  $4.21 \pm 2.41$  and that of females was  $6.86 \pm 3.32$ . According to statistical analysis results related with these data, it was observed that there was a significant difference between hopelessness levels of male and female elders before activity ( $t = 3.86$ ;  $P = 0.0001 < 0.05$ ). After activity, female elders presented higher hopelessness levels than male elders. The exercise methods applied in the research highly decreased the hopelessness tendency in male elders.

“Beck Hopelessness Scale (BHS)” pre-test and post-test grades of males participated in the sample of the research are firstly given in Fig. 2, then dependent t test is applied to determine whether there is a significant difference between grades or not and finally the data obtained are given in Table 5.

Table 5: Effect of the exercises activities performed by male elders on hopelessness levels

Variable	N	Mean	Std. deviation	t	P
Pre-test	57	12,21	2,69	20,98	0,0001*
Post-test	57	4,21	2,41		

\*P<0,05

Table 6: Effect of the exercise activities performed by female elders on hopelessness levels

Variable	N	Mean	Std. deviation	t	P
Pre-test	21	12,90	2,21	9,31	0,0001*
Post-test	21	6,86	3,32		

\*P<0,05

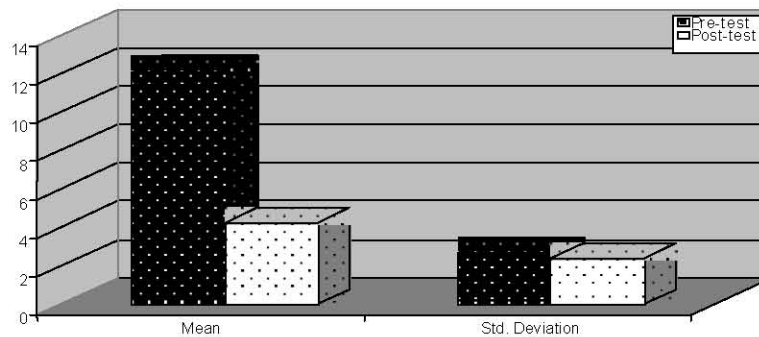


Fig. 2: Distribution of BHS before activity pre-test and after activity post-test grades belonging to the male elders participated in the sample

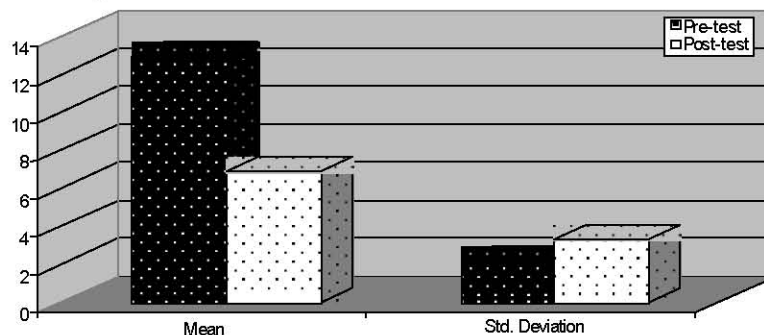


Fig. 3: Distribution of BHS before activity pre-test and after activity post-test grades belonging to the female elders participated in the sample

As it can be seen in Table 5 and Fig. 2, average “Beck Hopelessness Scale (BHS)” of male elders was found as  $12.21 \pm 2.69$  before activity and it was found as  $4.21 \pm 2.41$  after activity. As a result of statistical analysis related with these data, it was determined that there was a significant difference between BHS pre-test and post-test averages of male elders ( $t = 20.98$ ;  $P = 0.0001 < 0.05$ ). Exercise activities performed in the research caused a decrease in hopelessness expectations of males.

“Beck Hopelessness Scale (BHS)” pre-test and post-test grades of female elders participated in the sample of the research are firstly given in Fig. 3, then dependent t test is applied to determine whether there is a significant difference between grades or not and finally the data obtained are given in Table 6.

As it can be seen in Table 6 and Fig. 3, average “Beck Hopelessness Scale (BHS)” of female elders was found as  $12.90 \pm 2.21$  before activity and it was found as  $6.86 \pm 3.32$  after activity. As a result of statistical analysis related with these data, it was determined that there was a significant difference between BHS pre-test and post-test averages of female elders ( $t = 9.31$ ;  $P = 0.0001 < 0.05$ ). Exercise activities performed in the research caused a decrease in hopelessness expectations of females.

## RESULTS AND DISCUSSION

Life of human being is connected to movement which forces the body to do something or move. The movements are a way of happiness, entertainment,

physical fitness, being sociable, tranquility, communication and sound growth. The movement is for training physical body, mind, society and feeling. Over all movement and physical exercises are necessary for physical aspects, mental health and happiness [27].

As a result of the study which was carried out in order to search the effect of physical activity on hopelessness levels of elders staying at rest home, a significant decrease was observed in hopelessness levels of elders staying at rest home after exercises (Table 3). This indicated us that exercises applied to elders decreased their hopelessness levels, depending on this, increased their hopes in connection with their future, caused them to hold on to the life and to build good relationships. As it can be seen in Fig.1, high hopelessness levels observed in BHS grades of elders before activity decreased substantially as a result of sports activities. In this way, exercise is required anytime and anywhere in human life. It's especially a source of hope for people living without hopes and having no expectations of life and it was observed that they looked on life better and with hope.

When the effect of exercise activities on hopelessness levels of elders was investigated in terms of gender variable, it was observed that there was no significant difference between "Hopelessness Scale" average grades of male and female elders before activity (Table 4). Therefore, it can be concluded that hopelessness levels of male and female elders were same before activity. However, when their hopelessness levels were considered after activity, it was determined that there was a significant difference between males and females in favor of males (Table 4). According to this, applied exercise program caused more decrease in hopelessness levels of males than those of females. This also indicates the positive effect of exercise.

Statistical analysis related with hopelessness levels of male elders indicated that exercises applied to male elders caused a decrease in their hopelessness levels (Table 5). High hopelessness levels of male elders before exercise decreased after exercise. Similar results were also observed in statistical analysis related with hopelessness levels of female elders before and after activity (Table 6). These data also indicated that exercise programs applied to female elders caused a decrease in their hopelessness levels.

There are some studies were made by the female participants and It was stated that these exercises effects the girls anatomy statistically [28-30]. Also there are

studies were made by male and female participants too. For example, Annison and Muller [30] investigated the effect sport experiences on girl and boy physical self expression. In this intersection 375 students of 12 to 16 years old took part in a three-months program and result was that boys had good imagination of their body prior to the program. The program showed a significant increase in physical self-concept of boys and girls.

The findings obtained in the study which was conducted to investigate the effect of physical activities on hopelessness levels in elders staying in rest homes can be summarized as follows:

- It was found that there was a statistically significant difference between the hopelessness level pre-test and post-test values of the elders who participated in the study ( $p < 0.05$ ). The post-test values were found to be significantly higher than the pre-test values in this comparison. The exercise practices performed in the study caused the hopelessness expectations to fall.
- A statistically significant difference was found between the hopelessness level pre-test and post-test values in terms of the gender variable ( $p < 0.05$ ). The hopelessness levels of males exhibited a greater fall than those of females did
- As it is seen above, a significant difference ( $p < 0.05$ ) was found between the hopelessness level pre-test post-test values of male elders participating in the study. This comparison revealed that the exercise activities administered to male elders significantly lowered their hopelessness levels.

As a conclusion, it was revealed that physical activities applied to elders staying at rest home decreased their hopelessness levels and affected them positively. As a result of findings and results obtained in this study, it's extremely important to employ permanent physical education and sports expert in terms of showing the contribution of reintroducing healthy elders to society. For this reason, it's necessary to employ permanent physical education and sports expert at rest homes.

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