



## The Effects of Pilates, Step and Zumba Exercises on Self-esteem, Happiness and Communication Skill Levels

Serhat Özdenk<sup>1</sup>   
Mehmet İmamoğlu<sup>2</sup> 



(✉ Corresponding Author)

<sup>1,2</sup>Sinop University Faculty of Sport Sciences Department of Sport Management, Turkey.

<sup>1</sup>Email: [sozdenk@hotmail.com](mailto:sozdenk@hotmail.com)

<sup>2</sup>Email: [mehmet.imamoglu@outlook.com](mailto:mehmet.imamoglu@outlook.com)

### Abstract

The aim of this study is to examine the self-esteem, happiness and communication skills of women who participated in pilates, step and zumba exercise programs. A total of 54 women participated in the study. Pilates, step and zumba exercise program was applied three days a week for a total of 12 weeks. As a data collection tool in research; personal information form, Rosenberg self-esteem scale consisting of 10 items, which was adapted to Turkish by Cuhadaroğlu (1986) the scale of communication skills created by Korkut-Owen and Bugay (2014) consisting of 25 items, and the scale of happiness created by Demirci (2017) composed of 6 items. When the self-esteem, happiness level and communication skills scale scores of the participants in the pilates exercise program are examined, there is a statistically significant difference between the pre-posttest values ( $p < 0.05$ ). When the self-esteem scale scores of the participants in step and zumba exercise program were examined, there was no statistically significant difference between the pre-posttest values ( $p > 0.05$ ). When the happiness level and communication skills scale scores of the participants in step and zumba exercise program were examined, statistically significant difference was observed between the pre-posttest ( $p < 0.05$ ). Pilates exercise program positively affects self-esteem, happiness and communication skills. Step and zumba exercise programs have no effect on self-esteem. Step and zumba exercise program positively affect the level of happiness and communication skills. It is recommended that women participate in exercise programs such as pilates, step and zumba.

**Keywords:** Exercise program, Physical activity, Pilates, Sport, Zumba, Women.

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### Contribution of this paper to the literature

This study contributes to existing literature by examining the self-esteem, happiness and communication skills of women who participated in pilates, step and zumba exercise programs.

## 1. Introduction

People are increasingly aware of the benefits of various policies and regular exercise and physical activity programs as a result of actions and campaigns aimed at developing a more active and healthier lifestyle. Physical activity is fundamental to maintaining life functions and is an essential part of having a healthy lifestyle because it has been proven in many studies to have a protective role against cardiovascular disease, metabolic disorders, skeletal disorders and even mental development (Vendramin *et al.*, 2016).

In the psychological well-being category, we can frame perceptions, thoughts and emotions related to body image, health status, self-esteem, etc., which can be improved by most physical activities (Pop, 2017).

In recent years, as an alternative to traditional physical activities, new types of organized physical activity have been developed that direct large segments of the population to physical activities. It is thought that these physical activities are easier to become widespread because of the lack of specific or complex rules and the use of entertaining music.

Another important detail in these physical activities is the enjoyment of the participants during the activity is an important factor in the participation of individuals in this activity. This type of new structured physical activity (Pilates, step, zumba, etc.) is more attractive compared to classical sports activities, the number of participants increases each year due to intensive marketing activities and these new physical activity activities appeal to the wider population (National Institutes of Health National Heart Lung and Blood Institute North American Association for the Study of Obesity, 2000).

The diversity of technical elements that are permanently combined in numerous dynamic structures and various choreographies often develops with a dynamic musical background (Pop, 2017).

It can assume the studies that reveal the potential of music as a new research approach in which people are considered holistically. Music can provide a resource for improving well-being, understood as a positive development of identity, regardless of "objective" health status (MacDonald *et al.*, 2013).

Recently, it has been observed that these new physical activities can provide health benefits. In a systematic study examining the health benefits of zumba fitness training, it was found to have a positive but lighter effect on improving muscle strength and flexibility in addition to developing social, psychological and aerobic capacity (Vendramin *et al.*, 2016).

In addition to depression, the physical decline of the elderly negatively affects their personal autonomy and quality of life. Physical activity is a way to slow down this decline and to preserve and even improve personal autonomy and quality of life (Pernambuco *et al.*, 2012). The pilates method can provide a significant improvement in personal autonomy, static balance and quality of life (Rodrigues *et al.*, 2010). Pilates, step and zumba activities are among the most important physical activities in which the popularity and number of participants have increased in recent years (Neagu, 2015).

## 2. Method

This study is an experimental study that focuses on self-esteem, happiness and communication skills of women who participate in pilates, step and zumba exercises voluntarily. There is no criterion for participation in the study. A total of 54 women aged 19 to 58 participated in the study. Pilates, step and zumba exercise program was applied three days a week for a total of 12 weeks.

### 2.1. Exercise Program

Three days of pilates exercise program includes aerobics for two days and fitness exercises for one day. It includes 40 minutes of floor exercises at low tempo, two minutes of rest and 20 minutes of aerobic movements. Each Pilates exercise program consumes an average of 400 calories of energy.

The step program includes two step and one day fitness exercises. 20 minutes aerobics, 20 minutes step and 30 minutes cushion movements. There are three minutes of rest between aerobic movements and two minutes when moving from step to floor exercises. Each step exercise program consumes an average of 450 calories of energy.

The zumba exercise program, which is applied for three days, includes two days of zumba and one day of fitness exercises. Movements that last for 10-13 songs take about 55 minutes. After each song, a break of 20 seconds is given. The program is completed with cool down exercises 10 minutes. Each zumba exercise program consumes an average of 800 calories of energy.

Personal information form and 3 scales were used as data collection tool. These scales are; Rosenberg Self-Esteem Scale adapted by Cuhadaroğlu (1986) into Turkish, Communication Skills Scale created by Korkut-Owen and Bugay (2014) happiness scale developed by Demirci (2017).

### 2.2. Statistics and Data Analysis

IBM SPSS 21.0 software was used in the calculation and evaluation of the data, statistical significance level was determined as  $p < 0.05$ , normality level was measured by Kolmogorov-Smirnov test. The data does not show normal distribution. Mean, standard deviation, minimum, maximum and rank mean values were taken into consideration in the analysis of the data. The Wilcoxon Signed Rank Test was used to compare the pre-posttest measurements for those who participated in Pilates, Step and Zumba exercises in terms of scale scores. Kruskal-Wallis and Mann-Whitney U test was used.

## 3. Findings

The age, height and weight values of the pilates, step and zumba groups are given in Table 1.

**Table-1.** Age, height and weight values.

Groups	Count	Age (year)			Height (cm)			Weight (kg)		
		Mean $\pm$ Std.	Min.	Max.	Mean $\pm$ Std.	Min.	Max.	Mean $\pm$ Std.	Min.	Max.
Pilates	36	47 $\pm$ 8	24	58	160 $\pm$ 5	150	172	75.41 $\pm$ 11.47	56.9	101.5
Step	10	39 $\pm$ 10	23	51	160 $\pm$ 3	154	164	67.43 $\pm$ 10.21	57.4	92.4
Zumba	8	39 $\pm$ 10	19	50	161 $\pm$ 6	150	169	68.01 $\pm$ 7.48	59	81.1

The average age of 36 women participating pilates exercises was 47 $\pm$ 8 years, average height was 160 $\pm$ 5 and weight average was 75.41 $\pm$ 11.47. The mean age of the 10 women participating in step exercises was 39 $\pm$ 10, average height was 160 $\pm$ 3 and weight average was 67.43 $\pm$ 10.21. The mean age of the 8 women who participated in the zumba exercises was 39 $\pm$ 10, average height was 161 $\pm$ 6 and weight average was 68.01 $\pm$ 7.48.

**Table-2.** The relationship between self-esteem, happiness and communication skills scale scores of the pilates exercise program.

Scales		Pilates				
		N	Mean Rank	Sum of Ranks	Z	p
Self Esteem Post-Pretest	Negative Ranks	6	12.08	72.5	-3.249	0.00*
	Positive Ranks	23	15.76	362.5		
	Ties	7				
	Total	36				
Happiness Scale Post-pretest	Negative Ranks	0	0	0	-4.631	0.00*
	Positive Ranks	28	14.5	406		
	Ties	8				
	Total	36				
Communication Skills Post-Pretest	Negative Ranks	0	0	0	-5.234	0.00*
	Positive Ranks	36	18.5	666		
	Ties	0				
	Total	36				

\*p<0.05.

The statistical relationship between the self-esteem, happiness and communication skills scale scores of the participants in the pilates exercise program is given in [Table 2](#).

When the self-esteem, happiness and communication skills scale scores of the participants of pilates exercise program were examined, a statistically significant difference was observed between pre-posttest ( $p<0.05$ ). Self-esteem scale score decreased in 6 of 36 women who participated in pilates exercises, self-esteem scale score increased in 23, and there was no change in self-esteem scale score of 7 women. Pilates exercise program positively affects self-esteem. After the exercise program, the happiness scale score of the 28 women who participated pilates exercises increased and happiness scale score of 8 did not change. Pilates exercise program positively affects the level of happiness. After the pilates exercise program, communication skills were increased in all 36 women. Pilates exercise program positively affects communication skills.

The statistical relationship between the self-esteem, happiness level and communication skills scale scores of the participants who participated in the step exercise program is given in [Table 3](#).

**Table-3.** Post-pretest relationship of self-esteem, happiness and communication skills scale scores of step participants.

Scales		Step				
		N	Mean Rank	Sum of Ranks	Z	p
Self Esteem Post-pretest	Negative Ranks	5	3.9	19.5	-0.36	0.71
	Positive Ranks	4	6.38	25.5		
	Ties	1				
	Total	10				
Happiness Scale Post-pretest	Negative Ranks	1	3	3	-2.502	0.01*
	Positive Ranks	9	5.78	52		
	Ties	0				
	Total	10				
Communication Skills Post-pretest	Negative Ranks	1	2	2	-2.446	0.01*
	Positive Ranks	8	5.38	43		
	Ties	1				
	Total	10				

\*p<0.05.

When the self-esteem scale score of the participants in the step exercise program was examined, there was no statistically significant difference between the pre-posttest values ( $p>0.05$ ). When the happiness level and communication skills scale scores of the participants in step exercise program were examined, a statistically significant difference was observed between pre-posttest ( $p<0.05$ ). 10 women who participated in step exercises, 5 had decreased self-esteem scale score, 4 had increased self-esteem scale score, and 1 had no change in self-esteem scale score. Step exercise program has no effect on self-esteem. Happiness scale score decreased in one woman who participated in step exercises and happiness scale score of 9 increased. Step exercise program positively affects the level of happiness. After the exercise program, 1 of 10 women who participated in step exercises decreased their communication scale score, 8 of them increased their communication scale score and 1 of them did not change their communication scale score. Step exercise program positively affects communication skills.

The statistical relationship between the self-esteem, happiness and communication skills scale scores of the participants in the zumba exercise program is given in [Table 4](#).

**Table-4.** Post-pretest relationship of self-esteem, happiness and communication skills scale scores of participants in zumba exercise program.

Scales		Zumba				
		N	Mean Rank	Sum of Ranks	Z	p
Self Esteem Post-pretest	Negative Ranks	3	3.5	10.5	0.000	1
	Positive Ranks	3	3.5	10.5		
	Ties	2				
	Total	8				
Happiness Scale Post-pretest	Negative Ranks	0	0	0	-2.585	0.01*
	Positive Ranks	8	4.5	36		
	Ties	0				
	Total	8				
Communication Skills Post-pretest	Negative Ranks	0	0	0	-2.527	0.01*
	Positive Ranks	8	4.5	36		
	Ties	0				
	Total	8				

\*p&lt;0.05.

When the self-esteem scale score of the participants in the zumba exercise program was examined, there was no statistically significant difference between the pre-posttest values ( $p > 0.05$ ). When the happiness level and communication skills scale scores of the participants in Zumba exercise program were examined, a statistically significant difference was observed between pre-posttest ( $p < 0.05$ ). 8 women who participated in zumba exercises, 3 had decreased self-esteem scale score, 3 had increased self-esteem scale score, and 2 had no change in self-esteem scale score. The zumba exercise program has no effect on self-esteem. Happiness and communication skills scale scores of 8 women who participated in zumba exercises increased after the exercise program. Zumba exercise program positively affects the level of happiness and communication skills.

The statistical relationship between the self-esteem, happiness scale and communication skills scale scores between the pilates, step and zumba groups was given in Table 5.

**Table-5.** Relationship between self-esteem, happiness scale and communication skills scale scores between groups.

Scales	Groups	N	Pretest				Posttest			
			Mean Rank	X <sup>2</sup>	p	diff.	Mean Rank	X <sup>2</sup>	p	diff.
Self Esteem	Pilates	36	27.78	.259	.879	None	29.83	4.072	.131	None
	Step	10	28.50				27.00			
	Zumba	8	25.00				17.63			
Happiness Scale	Pilates	36	29.29	4.641	.098	None	29.82	4.464	.107	None
	Step	10	18.00				18.95			
	Zumba	8	31.31				27.75			
Communication Skills	Pilates	36	24.13	6.070	.048*	Step >Pilates	29.46	2.940	.230	None
	Step	10	37.70				27.20			
	Zumba	8	29.94				19.06			

\*p&lt;0.05.

There was a statistically significant difference between the groups in terms of initial test communication skills ( $p < 0.05$ ). Mean test scores of the pretest communication skills differed significantly between step and pilates group ( $p < 0.05$ ). Step group communication skills rank average score is higher than pilates group communication skills rank average score. There was no statistically significant difference in the pretest self-esteem and happiness scale scores ( $p > 0.05$ ). Posttest self-esteem, happiness scale and communication skills score values did not differ between the groups ( $p > 0.05$ ).

#### 4. Discussion and Conclusion

In the study, it was seen that pilates exercise program positively affected women's self-esteem, happiness and communication skill levels. Step exercise program has no effect on self-esteem. Step exercise program positively affects the level of happiness. Step exercise program positively affects communication skills. The zumba exercise program has no effect on self-esteem. Zumba exercise program positively affects the level of happiness and communication skills. When the groups participating in pilates, step and zumba exercises were evaluated among themselves, there was no difference in terms of self-esteem, happiness and communication skill levels both in the pre-posttests.

Studies have shown that physical exercise training improves depressive disorders and anxiety in the elderly (Zanuso *et al.*, 2012). Pilates exercise is efficient in decreasing the depression level of elderly women (Mokhtari *et al.*, 2013). Pilates exercise program for 12 weeks has a positive impact on reducing the depression degree, improving both heart and blood pressure rates, muscle strength, muscular endurance and flexibility for battered women research sample (Hassan and Amin, 2011).

Psychologists have seen self-esteem as an important psychological predictor for health and quality of life. A significant number of studies have linked the concept of self-esteem to a wide range of subjects, from violence and aggression to Baumeister *et al.* (1996) and to life satisfaction arranged by age, gender, or ethnic origin (Zhang and Leung, 2002).

When the self-esteem scale scores of the participants who participated in the step exercise program were examined according to the pre-posttest examinations of the participants, there was no statistically significant difference between pre-posttest ( $p > 0.05$ ). When the happiness level and communication skills scale scores of the participants in step exercise program were examined, statistically significant difference was observed between pre-posttest ( $p < 0.05$ ). In the study, it was seen that step exercise program had no effect on self-esteem and happiness and communication skill levels were positively affected.

When the self-esteem scale score of the participants who participated in the zumba exercise program was examined according to the pre-posttest examinations of the participants, there was no statistically significant difference between the pre-posttest values ( $p > 0.05$ ). When the happiness level and communication skills scale scores of the participants in the zumba exercise program were examined, a statistically significant difference was observed between pre-posttest ( $p < 0.05$ ). In the study, it was seen that zumba exercise program had no effect on self-esteem of women and had a positive effect on happiness and communication skill levels.

In adolescence, girls are more concerned about body shape and self-image than boys. Body image is negatively experienced by the majority of women (Grogan, 2008). In adulthood, weakness is also more common in women than in men (Ali and Lindström, 2005).

#### 4.1. Suggestions

As a result; pilates, step and zumba exercises can be considered as a type of physical activity that increases the communication skill levels and self-esteem scores of the participants and makes them happy. One-hour pilates, step and zumba exercises for 12 weeks and 3 days a week will positively effect on the participants' psychological well-being. It will be socially beneficial for women who have a sedentary lifestyle and who are not actively engaged in sports to be guided to such exercises with music and in groups. There is no need to be a professional athlete to participate in exercises such as pilates, step and zumba. Pilates, step and zumba do not require expensive equipment and a high budget. There is no need for specially designed areas for exercises like pilates, step and zumba. It would be beneficial for public health units, schools and social community organizations to direct individuals to such exercise programs. It is recommended that women participate in exercise programs such as pilates, step and zumba.

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