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Comparison of Social Physique Anxiety of Fitness and Pilates Exercise in Women

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Abstract

This study included the participation of sedentary women between the ages of 20 and 30 who were doing fitness and pilates exercises. Social physique anxiety (SPA) status of participants was compared. Twenty-seven sedentary women between 20 and 30 participated in the study voluntarily. The volunteers were divided into two groups: pilates group (PG, n = 15) and fitness group (FG, n = 12). PG and FG performed the exercises three days a week for eight weeks. Body weight (BW), fat ratio (%), body mass index (BMI) were measured before and after eight weeks of exercise program and SPA inventory was completed. Data were analyzed with the SPSS program. There was a significant difference between BW, BMI and SPA values when compared with the pre-end data of FG and PG ($p < 0.05$). In the comparison between groups, there was a significant difference in favor of PG and SPA values ($p < 0.05$). As a result, we can mention the positive effect of the exercise programs we have implemented in favor of PG.**Key words:** Tennis, Static Stretching, Dynamic Stretching, Warm-up, Targeting

Key Words: Pilates, Fitness, Social Physique Anxiety

INTRODUCTION

The concept of social anxiety was the first time used by Janet in 1903. The concept of social anxiety was used to speak out in front of the crowd, and to avoid writing, although she could write. At first, such symptoms were not considered a psychological disorder but accepts a normal condition. The concept of anxiety has been entered into Turkish from Western sources by the translation of the concept of "anxiety". Concern shows with uncertain fear, anxiety, and distress for an unknown cause. The concern arises with the emergence of an idea that something bad will happen and cannot prevent it (1).

Social appearance anxiety; in addition to the features such as weight, height, muscle structure and skin color of people, laughter, nose structure and eye shape, including features such as the physical appearance of people experienced by other people are expressed in the form of tension and anxiety (9). Various personal and situational factors appear to contribute to social anxiety. However, one of the most critical determinants based on the definition of the structure involves the confidence of individuals in the ability to create the impression that others want and to avoid an unwanted

impression (2). From a theoretical perspective, it seems reasonable to assume that SPA and perfectionism relations with disordered eating might be stronger for females than males. For instance, girls are praised more for physical appearance and boys for physical functioning such as athletic skills (17). A number of studies have shown that athletes and exercisers experience SPA in a variety of situations and contexts (6, 10, 16).

Focht and Hausenblas (2004) stated that in order to improve the image of a healthy body, people should exercise regularly to stay fit (19). If

individuals do not exercise regularly, they may result in undesirable lifestyles such as shapeless bodies, health and weight problems (e.g. body weight, BMI, fat ratio), alcohol and substance abuse (13).

It is known that Pilates is applied not only for physical education but also for mental education (11). Physical activity is the most effective way to stay in shape. Studies have shown that pilates and fitness exercises are effective on individuals' body composition (14, 15, 12, 8). Therefore, the social physical anxiety (SPA) status of sedentary women between twenty-thirty years of age who were doing fitness and pilates exercises were compared.

MATERIAL AND METHOD

Twenty seven sedentary women between aged twenty-thirty years participated in the study. The participants were informed about the purpose and content of the study and a voluntary consent form was signed before starting the research procedure. The participants were divided into two groups as pilates group (PG, n = 15) and fitness group (FG, n = 12). PG was given one-hour pilates exercise three days a week for eight weeks. The exercise program consists of 10 minutes of warm-up, 25-40 minutes of exercise on the mat and 10 minutes of cooling. Pilates mat exercises consist of movements in 5 different positions: supine position, side-lying position, prone position and sitting position. Movements; one leg stretch, hundreds, double leg stretch, scissors, shoulder bridge, oblique preparation, criss-cross, hip twist, Clare, sidekick, arm openings, lift lower, leg lifts, side bend, swan dive, one leg kick, swimming, breaststroke preparations, breaststroke, cobra, half roll back, oblique roll up and sidekick in kneeling.

Before starting the 8-week program, the participants in the fitness group were given training on correct grasping with low weights, proper breathing and weight lifting with the right technique for 1 week. To determine the exercise loads to be applied to the participants before the exercise, 1 repetition maximum (RM) loads were estimated using 10 RM method and the loads to be applied to the participants were determined. The studies were conducted following the recommendations of the American College of Sports Medicine for health and fitness (1) for 8 weeks, 3 days a week. During the exercise program, participants worked under the supervision of sports instructors. Participants in FG (3 sets, 12 repetitions in 60% of the estimated 1 RM) working at the specified loads during the first 4 weeks of the resistance training program were re-measured to determine the new loads to be applied by the 4th week of the program. Each participant's new estimated 1 RM level was determined (3 sets in 70 %, 12 repetitions) and new loads were calculated and recorded on the training cards. The participants performed the exercise program in 11 stations in approximately 50-60 minutes. These stations; chest press, seated row, shoulder press, knee flexion, knee extension, biceps curl, triceps press, crunch, hyperextension. All strength measurements were performed after a complete rest with a break of 48 hours. Exercises were performed in the sports center between 08:30 and 10:30. During the resistance training program, 10 minutes of warm-up, 5 minutes of stretching and 5 minutes of active cooling were performed before and after the exercises.

The 12-item Social Physical Anxiety Scale (SPAS) was developed by Hart et al. (1989) to determine the social physical anxiety levels of individuals. The validity and reliability study for the Turkish population was conducted by Ballı and Aşçı (2006) (4). Participants were evaluated with a Likert-type scale consisting of 5 points ranging from "totally wrong" [1] to "completely right" [5] in each item. The lowest score that can be obtained from the inventory is 12 and the highest score is 60. The higher the participant scores from SPAS, the higher the level of anxiety from his appearance. Items 1, 2, 5, 8 and 11 are graded in reverse. The test-retest correlation coefficient calculated for the whole scale was found to be 0,88. The reliability coefficient of the social physical anxiety scale was found to be 0,886.

In body composition measurements, body weight, body mass index (BMI), fat content (%) were performed by body composition analysis (Tanita BC 418, USA) based on bioelectrical impedance method.

Statistical Analysis

Data were analyzed by SPSS 20.00 program. The suitability of the data for normal distribution was evaluated by the Shapiro-Wilk test. All data were expressed as mean and standard deviation. In the non-normal distribution data, Wilcoxon signed-rank test was used to comparing pre-posttest values and the Mann Whitney U test was used to compare groups. The significance value was accepted as $p < 0.05$.

RESULTS

Table 1. Descriptive parameters of participants

Parameters	PG (n=15)		FG (n=12)	
	Min-Max	Mean±SD	Min-Max	Mean±SD
Age (years)	20-30	24.64±2.24	20-30	25.22±5.64
Height (cm)	165-179	172.13±15.24	158-175	167.1±16.35
Fat ratio (%)	16.2-29.11	21.12±12.5	18.45-28.5	23.12±7.65
Body weight (kg)	55.18-76.25	64.65±21.56	57.5-80.14	67.47±14.2
BMI (kg/m²)	18.15-25.14	23.12±3.45	19.1-26.5	24.1±11.4
SPA	25-36	31.16±1.4	26-33	30.4±7.6

According to Table 2, when the pre-end data of pilates and fitness groups were compared, a significant difference was found in body weight, BMI and SPA values ($p < 0.05$). There was a significant difference between body weight and SPA values in favor of PG ($p < 0.05$).

Table 2. Comparison of ıntergroup and pre-post test values of participants

Parametes	n	Pre test	Post test	Pre-post p-value	PG vs. FG p-value
Body weight (kg)					
PG	15	64.65±21.56	60.21±15.24	.034*	.038*
FG	12	67.47±14.2	64.35±65.41	.038*	.124
Fat ratio (%)					
PG	15	21.12±12.5	20.4±15.55	.062	.098
FG	12	23.12±7.65	22.5±5.5	.069	.085
BMI (kg/m²)					
PG	15	23.12±3.45	22.16±1.15	.045*	.084
FG	12	24.1±11.4	23.54±54.6	.049*	.078
SPA					
PG	15	31.16±1.4	23.67±65.4	.005*	.042*
FG	12	30.4±7.6	25.4±84	.008*	.032*

CONCLUSION AND EVALUATION

It is expected that those who do exercise and those who have better physical performance have lower social physical anxiety. Current sources have findings in this direction.

Fenicchia et al. (2004), sedentary type 2 diabetes; for 6 weeks, 3 days a week, they gave about 50 minutes of exercise (8 exercises, 80% of 3 RM, 3 sets, 12 repetitions and 1.5 minutes of rest). With the exercise program they applied, they observed significant decreases in body weight, body fat ratio, fat weight, lean body weight, and BMI (7).

Williams and Cash (2001), examined the effects of circular weight exercises on body appearance and physical self-efficacy in college students and reported that the experimental group had a more positive physical appearance assessment and higher physical self-efficacy values than the control group at the end of six-week exercises (20).

Balli et al. (2005) examined the difference between the levels of social physical anxiety and satisfaction with body image of women athletes and non-athletes. The results of multivariate analysis of variance showed that there is a difference between these athletic and psychological concepts between athletes and non-athletes. This study showed that non-athletes had more negative emotions than athletes when physical characteristics were evaluated by other individuals (5).

Tekin et al. (2015) examined the effect of regular aerobic exercise program on the psychosocial parameters of obese female university students. The students who were evaluated as obese by body mass index were randomly assigned to exercise (EG) and control (CG) groups. Participants participated in a Tae Bo aerobic exercise program lasting 60 minutes for 3 days a week for 3 months. As a result, it was reported that there were significant differences in favor of the exercise group in terms of physical competence, appearance, self-confidence, body outlook, and social physics anxiety as a result of a comparison of control and exercise group psychological first-last measurements (18). As a result, it is possible to talk about the positive effects of pilates and fitness exercises on social physical anxiety states.

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