



THE COMPARISON OF OBESE STUDENTS' SELF-ESTEEM BEFORE AND AFTER THE EXERCISE PROGRAMME

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Abstract

Aim. The study was carried out on students of 'Yenimahalle Anatolian Vocational High School' and 'Yenimahalle Vocational High School' in Ankara, Yenimahalle region.

Methods. A total number of 44 students consisting of 17 female and 27 male students between the ages of 15-17 years participated in the study. These students were practised through a 60-minute daily exercise three days a week for 12 weeks. Offer's Self Image Questionnaire was conducted on these students before and after the exercise to study the contribution of the exercise.

Results. A significant difference was found in both the female and the male students' pre and post scores in terms of body image, emotional levels, social relations, and psychology.

Conclusions. No difference was found in terms of gender in both female and male students' pre and post scores.

Key words: Obesity, exercise, Offer Self-image questionnaire

Introduction

Today, obesity is an important problem to be fought against. Obese people aren't healthy. They are not at peace with themselves. They have difficulty in having confidence. Because of all these similar reasons, they can't take part in the right places they belong to in terms of productivity for work, social and cultural fields and within the society. Obese people are to be studied for reasons of obesity and they should be motivated for doing exercise. People having ideal body image with exercise and healthy diet will be productive and happy in the society where they belong to.

Purpose of the study. Gökyürek and her friends conducted aerobics exercise programme on obese high school students. After the practice some significant differences were found in obese students' body composition and some physical parameters. Offer Self-esteem scale was conducted on the same group of students before and after the exercise.

Purpose: to search for the question of "studying the effect of aerobics exercise programme on obese students in terms of body compositions and some physical parameters, how will the exercise programme affect the self-images of the students?"

Literature review. It is very common for children at school age to be affected by the important people around them and to be in effort for ideal standards in establishing ideal images (Pişkin, 2000). Adolescence isn't just a simple supplementary process from concrete perceptions of

childhood towards abstract and complicated ones, rather completing a more complicated abstract scene. In adolescence, the relationship between peers is becoming more and more important. Peer pressure is at the top at this stage. Later, at young adulthood it decreases. It is for sure that peers have great importance on adolescent's developing sense of self (Gander and Gardiner, 1993). The first definitions on "self" belong to psychologist William James. According to James, "self", in widest sense, is the total of everything one can say what he/she is (James, 1963). The "self" concept consists of the person's conscious perceptions of oneself. According to Rogers, the concept of self includes the self-perceptions of the individual, perceptions of relationships with the other people and the value attributed to these perceptions (Rogers, 1961). The concept of self is just expressed with typical attitudes, emotions, perceptions, morals and behaviours, views of oneself (Gander and Gardiner, 1993). The concept of self is a whole of views, emotions, and attitudes one can perceive such as individual's personal identity, worth, abilities, borders, value judgements, and aims; the definition of oneself, the table about oneself (Byrne, 1974; Hall, 2001). The image of self is the way of the individual's perception and explanation of oneself. Self-image is the attitude of the individual towards oneself. This attitude includes realities about oneself, ideas, and values in addition to positive and negative trends towards oneself (Bogenç, 1998). Self-image is the total of the feelings and thoughts about oneself, and the

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Received 08 03 2015 / Accepted 10 04 2015



image about what happens to oneself. This image can be real or fantastic and idealised, as well. In other words, self-image is the individual's awareness of what s/he is, mental and physical qualifications one owns (Pişkin, 2000). Obesity which brings along the social problems, is a health problem at great risk of death accompanied with other health problems. It occurs as a result of the imbalance of energy gained by food intake and energy consumed (Kokino, Zateri, 2004). It is an illness which is defined by World Health Organisation as abnormal or excessive accumulation of body fat (Özbay, Şahin, Hınçal, Güögör, Öztürk-Kılıç, Mavili-Aktaş, Aybaş, Göka, 1991). Today, obesity is among the most important health problems in developing and developed countries (Akbulut, Çıtak, Özmen, Besler, 2007). One of the main reasons of many obese people's desire to lose weight is that they do not like their appearances. Most obese individuals believe that their appearances and attractiveness will improve and as a result, they will feel better (Rosen, 2002). Over-weighted and obese women have more dissatisfaction about their bodies compared to normal weighted women (Schwartz, ve Brownell, 2004). Obese people are seen to overestimate their size, more interested in their appearances, avoid social relations because of their appearances (Gander and Gardiner, 1993).

Methods

A total number of 44 students at 'Yenimahalle Vocational High School' in Ankara, Yenimahalle region consisting of 17 male and 27 female students between the ages of 15-17 years participated in the study. These students were practised through a 60-minute daily exercise three

days a week for 12 weeks. Offer's Self Esteem questionnaire of 35 items was conducted on these students before and after the exercise. The subscales were body image, emotional level, social relations, and psychology.

Findings

I-Females Pre-test/Post-test

Wilcoxon Rank Sum Test scores of whether obese female students' scores of body image, emotional level, social relations, and psychology subscales differ significantly before and after the exercise are shown in Table 1. In Offer Self-Image Questionnaire higher scores mean increase in the negative direction for self-image (Savaşır, Şahin, Bilişsel, 1997). Lower scores at Offer subscales expresses positive change in self-image (Özbay, Şahin, Hınçal, Güögör, Öztürk-Kılıç, Mavili-Aktaş, Aybaş., Göka, 1991.). Findings show that there is significant difference in obese female students' subscale test scores of before and after the exercise. In subscales of body image [$z=3.254$, $p<.05$], emotional level [$z=3.888$, $p<.05$], social relations [$z=3.534$, $p<.05$] and psychology [$z=3.284$, $p<.05$], post test scores decreased significantly compared to pre-test scores. When rank mean and sum of the score differences are taken into consideration, it is seen that the difference is in favour of the negative rank that is the post test. According to these findings it can be said that the exercise programme has an important effect on female obese students' improvement of body image, emotional level, social relations, and psychology.

Table 1. Female Self-image subscales Wilcoxon Rank Sum Test scores before and after the exercise

Subscale	Post test/pre-test	n	Rank mean	Rank total	z	P*
Body Image	Negative Rank	22	14,73	324,00	3.254	.001*
	Positive Rank	5	10,80	54,00		
	Equal	0				
Emotional level	Negative Rank	24	13,69	328,50	3.888	.000*
	Positive Rank	2	11,25	22,50		
	Equal	1				
Social relations	Negative Rank	22	15,27	336,00	3.534	.000*
	Positive Rank	5	8,40	42,00		
	Equal	0				
Psychology	Negative Rank	22	14,80	325,50	3.284	.001*
	Positive Rank	5	10,50	52,50		
	Equal	0				

P* < .05



FEMALES	N	Mean	Std. Deviation	Minimum	Maximum
PRE BODY IMAGE	27	28,3704	7,42215	13,00	41,00
PRE EMOTIONAL	27	35,1111	9,47602	10,00	49,00
PRE SOCIAL	27	30,7778	10,91694	10,00	47,00
PRE PSYCHOLOGICAL	27	34,5556	10,30434	17,00	51,00
PRE TOTAL	27	128,8148	33,82652	55,00	182,00
POST BODY	27	20,5926	5,40128	11,00	33,00
POST EMOTIONAL	27	21,0370	8,82515	9,00	39,00
POST SOCIAL	27	19,0370	6,49545	9,00	39,00
POSTPSYCHOLOGICAL	27	23,9630	8,85126	12,00	44,00
POST TOTAL	27	84,6296	24,61261	55,00	155,00

II-Males Pre-test Post test

Wilcoxon Rank Sum Test scores of whether obese male students' scores of body image, emotional level, social relations, and psychology subscales differ significantly before and after the exercise are shown in Table 2. Findings show that there is significant difference in obese male students' subscale test scores of before and after the exercise. In subscales of body image [$z=3.211$, $p<.05$], emotional level [$z=3.340$, $p<.05$], social relations [$z=3.064$, $p<.05$] and psychology [$z=3.055$,

$p<.05$], post test scores decreased significantly compared to pre-test scores. When rank mean and sum of the score differences are taken into consideration, it is seen that the difference is in favour of the negative rank that is the post test. According to these findings it can be said that the exercise programme has an important effect on female obese students' improvement of body image, emotional level, social relations, and psychology.

Table 2. Male Self-image subscales Wilcoxon Rank Sum Test scores before and after the exercise

Subscale	Post test/pre-test	n	Rank mean	Rank total	z	P*
Body Image	Negative Rank	14	9,29	130,00	3.211	.001*
	Positive Rank	2	3,00	6,00		
	Equal	1				
Emotional level	Negative Rank	16	9,19	147,00	3.340	.001*
	Positive Rank	1	6,00	6,00		
	Equal	0				
Social relations	Negative Rank	16	8,81	141,00	3.064	.002*
	Positive Rank	1	12,00	12,00		
	Equal	0				
Psychology	Negative Rank	16	8,81	141,00	3.055	.002*
	Positive Rank	1	12,00	12,00		
	Equal	0				

P* < .05

MALES	N	Mean	Std. Deviation	Minimum	Maximum
PRE BODY IMAGE	17	30,8824	7,64757	13,00	43,00
PRE EMOTIONAL	17	36,1176	12,68800	15,00	54,00
PRE SOCIAL	17	31,7647	9,67942	14,00	48,00
PRE PSYCHOLOGICAL	17	33,1176	10,46352	13,00	51,00
PRE TOTAL	17	131,8824	38,82796	66,00	192,00
POST BODY	17	18,5294	6,15546	13,00	34,00
POST EMOTIONAL	17	16,5294	7,81119	9,00	36,00
POST SOCIAL	17	18,5882	5,02567	9,00	29,00
POSTPSYCHOLOGICAL	17	17,2941	5,10838	11,00	31,00
POST TOTAL	17	70,9412	21,96722	45,00	126,00



III- Males Females Pre-test.

Mann Whitney U Test scores of whether obese male and female students' scores of body image, emotional level, social relations, and psychology subscales differ significantly before the exercise are shown in Table 3. No significant difference was found in obese female and male students' scores before the exercise in subscales of body image [U=160.5,

p>.05], emotional level [U=199.5, p>.05], social relations [U=222, p>.05], and psychology [U=205, p>.05]. According to these findings, there is no difference in obese female and male students' scores of body image, emotional level, social relations, and psychology before the exercise.

Table 3. Male Female Students' Self-image subscales Mann Whitney U test scores before the exercise

Subscale	Pre-test	n	Rank mean	Rank total	U	P*
Body image	Male	17	26,56	451,50	160.5	.094
	Female	27	19,94	538,50		
Emotional level	Male	17	24,26	412,50	199.5	.469
	Female	27	21,39	577,50		
Social relations	Male	17	22,94	390,00	222	.856
	Female	27	22,22	600,00		
Psychology	Male	17	24,12	410,00	205	.554
	Female	27	21,48	580,00		

P* < .05

IV- Males Females Post test

Mann Whitney U Test scores of whether obese male and female students' scores of body image, emotional level, social relations, and psychology subscales differ significantly before the exercise are shown in Table 4. No significant difference was found in obese female and male students' scores before the exercise in subscales of

body image [U=159, p>.05], emotional level [U=152, p>.05] social relations [U=223.5, p>.05]. However, a significant difference was found in male and female students' psychology subscale scores [U=124, p<.05] after the exercise. When rank mean are taken into consideration, it is seen that female students' scores in psychology subscale are higher compared to male students.

Table 4 . Male Female Students' Self-image subscales Mann Whitney U test scores after the exercise

Subscale	Post test	n	Rank mean	Rank total	U	P*
Body image	Male	17	18,35	312,00	159	.087
	Female	27	25,11	678,00		
Emotional level	Male	17	17,94	305,00	152	.061
	Female	27	25,37	685,00		
Social relations	Male	17	22,85	388,50	223.5	.884
	Female	27	22,28	601,50		
Psychology	Male	17	16,29	277,00	124	.011*
	Female	27	26,41	713,00		

P* < .05

Discussion

In the study of "The effects of aerobics exercise programme on body composition and some physical parameters for the obese at high school aged 15-17" conducted by Gökyürek B. and her friends; as a result of the exercise programme on obese high school students, an increase in height and a meaningful decrease was found in post

measures of weight, BKI, VYY (%), hip, breast, waist, arm, breast, calf compared to pre-measures; for physical parameters a meaningful increase was found in post measures of vertical jump, standing long jump, right and left hand power, flexibility (sit-reach test), shuttle, and push-up compared to pre-measures. Positive improvements in physical parameters and body composition are seen as



positive in self-image questionnaire conducted on the same group before and after the exercise. A meaningful difference was found in female students' self-image subscale scores before and after the exercise. When rank mean and total of the score differences are taken into consideration, it is seen that the difference is in favour of negative rank that is post-test. According to the findings, it can be said that the exercise programme has an important effect on the improvement of female obese students' body image, emotional level, social relations, and psychology. A significant difference was also found in male students' self-image subscale scores before and after the exercise. In addition to the score differences, taking mean and total scores into consideration, the difference is in favour of the negative rank that is post-test. According to the findings, it can be said that the exercise programme has an important effect on the improvement of male obese students' body image, emotional level, social relations, and psychology. No significant difference was found between obese male and female students' self-image subscale scores before the exercise. No significant difference was found in obese students' self-image scores after the exercise in terms of body image, emotional level, and social relations subscales. However, a significant difference was found in male and female students' psychology subscale scores after the exercise. It was seen that obese female students' psychology subscale scores are higher than that of obese male students.

Compared to pre-test scores, an increase in post-test scores was observed in self-image of the image study conducted by Aldemir, and Biçer, in terms of emotional level, psychology, and social levels. In the study conducted by Turkay, 2015, self-images of the students doing sports were found to be higher compared to students who don't. The idea that sports affect self-image was supported in the study. A research was conducted in our country, studying the relationship between self-perception and body image, body, body-mass index of adolescents at high school; and no difference was found among the variables (Canpolat, Örsel, Akdemir, ve Özbay, 2003).

When the studies on body image of the obese people are reviewed, it is seen that the obese have more dissatisfaction about their bodies compared to the ones who are not obese. The case explains BKI has significant effect on body dissatisfaction (Sarwer, Wadden, ve Foster, 1997). There have been studies focusing on the gender differences of body image dissatisfaction. According to the common findings of many research; high body image dissatisfaction, weighing oneself frequently, the inclination to define oneself

'fat' are more common among women compared to men (Furnham ve Calnan, 1998).

Conclusion.

There have been studies emphasising gender differences on satisfaction of body image at adolescence, and it was found out that self-esteem was lower in females compared to males (Kaplan, Busner, ve Pollack, 1998), (Kostanski, ve Gullone, 1998).

Suggestions- when studies are reviewed, obesity is mainly the reason for dissatisfaction with oneself.

The study indicated that the exercise has positive effects on both physical parameters and body composition, and self-image. The individual who estranged himself/herself from the social life because of obesity and negative self-image could be reintroduce to the society again as a healthy person with the help of exercise accompanied by a healthy diet.

- It should be emphasised that the alternative to obesity is exercise.
- The individual should become aware that his/her presence within the society feeling good as needed depends on regular exercise (and of course healthy diet)
- Exercise should be internalised as a life-style.
- Exercise should be made important within the childhood and it should be a routine for the child.
- Exercise should be recommended for the children and the young by the adult.
- The adult should exercise themselves and be good models for the children the young.
- Exercise programmes should be in the country policy appropriately.
- Exercise programmes should be sponsored by the government thinking that social productivity and success is only possible when there are healthy individuals comprising the society.
- Exercise programme projects should be developed and supported to enhance life quality of obese and healthy individuals.

Aknowlegdements

We thank you for all of subjects from our study.

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