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THE RELATION BETWEEN LIFE QUALITY AND OBESITY IN INDIVIDUALS DOING PHYSICAL ACTIVITY

[1]Gizem AKARSU, [1]Erdal ZORBA, [1]Metin YAMAN [2]Aytekin Hamdi BAŞKAN, [1]Akan Bayrakdar, [1]Merve KARAMAN,

[1]Gazi University, Faculty of Sports Sciences
[2]Giresun University, Faculty of Sports Sciences

ABSTRACT

This research was conducted to analyze the relation between life quality and obesity in individuals doing physical activity. This research aimed to study the relation between life quality and obesity in individuals doing physical activity and its population included individuals doing physical activity in Ankara province and its sampling consisted of 102 women and 108 men, a total of 210 persons, selected in B-Fit, Shapes for Women, Ankara Yiğit Youth and Sports Center, and Cross Fight VIP Sports Center by using the random sampling method. The research data were collected to measure general life quality of individuals by using the BMI body analysis method to determine the World Health Organization Life Quality Scale (Whoqol-Bref) and Body Mass Index. SPSS 23 package program was used to analyze the collected data.

The height average of the women was 1.66 and that of the men was 1.76. The body weight average of the women was 60.07kg and that of the men was 72.49kg. The BMI average of the women was 21,63 kg/height^2 and that of the men was 23,2 kg/height^2. 21.6% of the women indicated that they did exercises for health, 31.4% said they did it for losing weight, 8.8% said they did it to gain weight, 1% said they did it to reduce their stress level, 2% said they did it for socializing, and 35.3% said they did it to improve their muscular tone. 6.9% of the women who were thin according to the BMI classification did exercises for health, 8.8% said they did it to gain weight, 1% said they did it to reduce their stress level, 2% said they did it for socialization, and 24.5% said they did it to improve their muscular tone. 14.7% of the women whose BMI classification was normal said that they did exercises for health, 12.7% said they did it to lose weight, and 10.8% said they did it to improve their muscular tone. 18.6% of the women who were overweight according to the BMI classification did exercises to lose weight.

14.8% of the men said they did exercises for health, 5.6% said they did it to gain weight, 2.8% said they did it for socialization, and 58.3% said they did it to improve their muscular tone. 0.9% of the men who were thin according to the BMI classification said they did exercises for health, 4.6% said they did it to gain weight, and 2.8% said they did it to improve their muscular tone. 11.1% of the men who were normal according to the BMI classification said that they did exercises for health, 2.8% said they did it to lose weight, 0.9% said they did it to gain weight, 2.8% said they did it for socialization, and 45.4% said they did it to improve their muscular tone. 2.8% of the men who were overweight according to the BMI index said that they did it for health, 15.7% said they did it to lose weight, and 10.2% said they did it to improve their muscular tone.

In conclusion, regular physical activity and nutrition program must be implemented to improve life quality and to be healthy. The conducted studies showed that individuals must maintain the two vital components lifelong by balanced nutrition and regular physical activities in order to have an ideal weight and to maintain this weight and to lead a healthy life. The benefits of long-term programmed physical activity have been proven by the conducted studies.

Key Words: Life quality, obesity, body mass index, physical activity

INTRODUCTION

Human beings moved for the purposes of sheltering, feeding, and self-defense in natural conditions in the prehistorical periods. Individuals who could fulfill their basic needs used their movement skills to receive admiration, for approval, to have a profession, and to advance in their profession upon the change of living conditions (Ergül, 2017, p.1).

Conditions that improved with the aid of technologic tools improve life quality of individuals and enable performance of multiple works more easily (Vural, 2010, p.1). Wıth the development of technology and increased industrialization, diversification and easing of transportation, utilization of many tools requiring less energy in daily life, popularization of computers and television, and increased time allocated for technological tools affect life quality positively, and they affect physical force and moving negatively (Aydanarığ, 2008, p.10). Whilst people met 90% of their energy needs 100 years ago, and this ratio dropped to 1% today, (Zorba, 2015, p.22). With the development of medical sciences, there is a substantial decrease in deaths due to infectious diseases that was experienced in the past and people became protected from many of illnesses. Hence, people have gained the chance to lead longer, quality and healthy lives (Zorba, 2015, p. 12). Whereas health was expressed as staying away from illnesses in the past and it is defined today as to encompass the developmental aspects (Zorba & Saygın, 2013, p.35).

The significance of the life quality concept increased with the increased length of life and many studies were conducted on this subject. Life quality is a subjective concept affected by socio-economic status, age, illness, profession, and health positively or negatively (Uğur & Eser, 2015, p. 121). The World Health Organization defines life quality as “the way persons perceive their status in connection with their goals, expectations, standards, and interests within the totality of the culture they live in and value judgements” (Zorba, 2008, p. 83).

Life quality is related with the bliss felt in life, the person’s ability to perceive and question oneself, the ability to determine his / her goals, and to improve oneself based on those goals (Gönülateş, 2016, p.22). In order to keep life quality high, it is necessary to keep balanced diet, turn physical activity into a life style, consume healthy food and drinks, abstain from cigarettes and alcohol, and have an ideal body weight (Demirtürk & Kaya, 2016, p.17).

Physical activity is the consumption of energy generated as a result of body movements by means of skeletal muscles. Physical activity may be diversified as aerobic, anaerobic, static or dynamic (Zorba, 2013, p. 1). Physical activity is not only beneficial for physical health but also for mental, social, and emotional health. In a study conducted on 18,766 women at the ages of 70-81 years old in the United States of America in 2001, it was seen that long-term regular exercises improved cognitive capacity (Ağaoğlu, 2015, p. 70). Individuals who adapt regular physical activity as their life philosophy become healthier and happier (Ergün, 2005, p. 137).

Whereas reasons including harsh living conditions, stressful work life, competitive life, and race against time affect life quality of individuals negatively (Gönülateş, 2016, p. 2), regular physical activity and healthy diet affect life quality positively (Ergün, 2005, p. 137). Turning mobility into a life style in society has become a government policy in many countries since it is a fact that protecting health and improving life quality by means of physical activity is feasible (Zorba, 2015, p. 16).

Regular physical activity enables balance establishment, extends the length of life, shortens reflex and reaction time, protects against infections, enables elderly to move independently, and enables children to gain healthy habits (Murathan, 2013, p. 32). Physical activity improves interpersonal communication. People meet other people, establish communication, and let off steam of life and work conditions by physical activity accompanied by socializing and moving (Vural, 2010, 26).

Whilst many conducted research found that women's length of life was longer than that of men, their life quality scores were lower. The reason for finding life quality level of women lower is that it is not only related with gender but also with their responsibilities and personal features (Ilhan et al, 2016, p. 63).

The Life Satisfaction Research that published the field study of TÜIK in Turkey is the first effective research conducted on the satisfaction and life quality in Turkey. The study was conducted on 6,714 persons by using the one on one survey and it has been conducted since 2003 and aims to measure the happiness of people in Turkey about their general life and public services.

According to the results of this research, individuals see health and then love as the source of their happiness. Following these values, money and work came first for men, and money, success and work came first for women (Şeker, 2011, p. 30).

Due to adapting a sedentary life style, lack of information about physical activity and healthy nutrition, and time problems due to intense life tempo, risks of catching diseases including obesity, hypertension, diabetes, osteoporosis, cancer, depression, etc. increase every passing day (Ildız, 2014, p. 18). The World Health Organization defines obesity as "accumulation of body fat excessively or abnormally as to derange health" (Orhan & Bozbora, 2008, p. 1). Obesity is a chronic illness which spread throughout the world during the past ten years and needs to be treated. Insufficient physical activity, socio-cultural factors, hormonal and metabolic factors, excessive and wrong nutrition, age, income level, educational status, cigarette and alcohol habits, parity, psychological factors, and received medications are the most important factors leading to obesity (Yılmaz et al, 2016, p. 138). One of the greatest causes of obesity is genetics (25-40%). At least one or both of the parents of 65% of the obese people is overweight. Identical twins are similar in terms of being overweight (Yıldız, 2011, p. 6).

Whereas Body Mass Index (BMI) between 20-24.9 is considered normal, BMI between 25-29.9 is considered slightly overweight, BMI between 30-39.9 is considered overweight, and BMI 40 and higher is considered as excessively overweight in men, BMI between 19-22 is considered normal, BMI between 22.1-28 is considered slightly overweight, BMI between 28.1-36 is considered overweight, and BMI 36.1 and higher is considered excessively overweight in women (Zorba, 2014, p. 124). It is estimated that BMI of 315 million people in the world is higher than 30 kg/m^2 and BMI of 750 million people is between 25-30 kg/m^2 (Şanal, 2008, p. 68).

Despite obesity is an illness seen at any age, basal metabolic rate (BMO) drops and obesity rates increase with age, and it is seen more frequently in women in comparison to men (Yücel, 2008, p. 6). Energy need of individuals over the age of 25 years old drops 4% every 10 years. Hence, adults must consume the extra calories by either exercising or they must decrease their calorie intake (Zorba, 2014, p. 126).

Body fat rate is higher in women in comparison to men. There are essential fats as much as 3-5% of the body weight both in men and women. In addition, there are 5-8% gender specific fats in women (Zorba, 2013, p. 273). The ideal body fat ratio is 12-18% in men and it is 20-28% in women (Orhan & Bozbora, 2008, p. 289).

Obesity occurrence ratio by countries differs due to multiple reasons including culture, physical activity state, and nutrition. In a study conducted in 56 countries, the obesity rate of women was found higher than that of men in 46 countries. Similar to this study, the obesity rate in women is higher than that in men in Turkey as well. The obesity rate in men is 20.5% and it is 40% in women in Turkey. In developed countries, the obesity rate is high in sections with lower socio-economic status, and in developing and underdeveloped countries, the obesity rate is higher in the middle class and upper class (Hamurcu, Öner, Telatar, and Yeşildağ, 2015, p. 43). The reason behind it is that people in underdeveloped or developing countries consume carbohydrate-rich food and they eat more in some meals and skip meals. In developed countries, on the other hand, it stems from the inadequate mobility and wrong nutrition habits of people with low socio-economic status (Yücel, 2008, p. 15).

In Latin America and Caribbean countries, women gain more weight in comparison to men due to religious beliefs and socio-cultural factors. Obesity is accepted as a cultural factor in Jamaica and the obesity rate is 63.8%. Obesity rate is twice higher in women in comparison to men in African, South-East Asian, and East Mediterranean countries. In a study conducted in Egypt, Jordan, Iraq, Sudan, Bahrain, and Qatar, participation of women in physical activities was found low and hence their obesity level was found high due to reasons including inadequate facilities, transportation difficulty, social hindrances, lack of courage, beliefs and attitudes, environmental obstacles, and discrimination against women (Ergin, 2014, p. 49).

Obesity affects life quality negatively by leading to breakdown of interpersonal relationships, difficulty to find employment, loss of self-confidence, rejection in school and work environments, depression, decrease of physical capacity, power loss, decreased self-respect, and various illnesses (Gündüzoğlu et al, 2014, p. 64).

Obesity-related illnesses are listed as 57% Type II Diabetes, 30% gallbladder diseases, 17% coronary heart disease, 17% hypertension, 14% osteoarthritis, 11% uterus carcinoma, 11% breast cancer, and 11% colon cancer (Orhan & Bozbora, 2008, p. 28).

Furthermore, it may lead to multiple illnesses including prostate cancer, hirsutism, and ovarian cancer, fatty liver, asthma, increased preoperative and postoperative complication risks, dyspnea, and musculoskeletal system disorders (Yıldız, 2011, p. 9).

One of the most important reasons for the start of obesity at young ages is eating high calorie fast food starting in childhood (Ergün, 2005, p. 157). In a study analyzing the relation between obesity and life quality and self-respect in adolescents, it was found that high body mass index lowered life quality and affected self-respect and self-perception negatively. There are different variables affecting the concepts of life quality and self-respect but it is well known that obesity affects these concepts negatively in general sense (Işıklar, 2012, p. 90).

Physical education classes are not approached considerably in education and fail to aid school-age children gain sports awareness and sports habits. As a result, generations are raised with insufficient knowledge about physical education and sports, doing insufficient activities, and without developing these habits. However, physical education classes should be tools providing the most important setting for school-age children (Aydanarığ, 2008, p. 25). It may be recommended that physical education programs implemented in schools are made more entertaining, bicycling or walking to school is promoted, appropriate settings are prepared for participation of families in activities along with their children, children are aided to prepare materials related with various sports branches, and appropriate and safe settings are prepared for children to do physical activities (Bayrakdar, 2010, p. 47).

Participating and continuing in doing physical activities is effective for protection against many illnesses including obesity, lung and colon cancers, and cardiovascular illnesses. Moreover, it improves life quality and contributes to improving academic success and development of self-reliance and self-respect positively. Starting physical activity at young ages and continuing in the advancing ages protects children from gaining bad habits and enables them to socialize and contributes to continuation of healthy generations. Furthermore, physical activity improves muscular tone and bone density, enables tissues and organs in the body to work better, accelerates circulation, heals back pains and osteoporosis, increases oxygen consumption and accelerates metabolism and aids to have a healthy body (Ergül, 2017, p. 8).

Physical activity decreases health expenditures in addition to its physiological, sociological and psychological benefits in individuals. 9.4% of health expenditures in the USA in 1995 occurred as a result of obesity and immobility, and 6% of health expenditures in Canada occurred as a result of immobility (İzgi, 2011, p.20).

In addition to participation in physical activity and healthy nutrition, behavior change is necessary for obesity treatment. This behavior change encompasses information including being educated about diet and following oneself about physical activity (İzgi, 2011, p. 13).

This research was conducted to analyze the relation between life quality and obesity in individuals doing physical activity.

METHOD

This study is important for enabling doing studies in different cities by keeping the sampling wider in the future studies and in terms of raising awareness in individuals participating in the survey and teaching them about the benefits of doing regular physical activity. This study aimed to analyze the relation between life quality and obesity in individuals doing physical activity and its population included individuals doing physical activity in Ankara province and its sampling included 102 women and 108 men, a total of 210 individuals, selected in B-Fit, Shapes for Women, Ankara Yiğit Youth and Sports Center, and Cross Fight VIP Sports by using the random sampling method. The research data were collected by using the BMI Body Analysis method to determine the World Health Organization Life Quality Scale (Whoqol-Bref) and Body Mass Index.

The World Health Organization Life Quality Scale (Whoqol-Bref)

WHOQOL-BREF (the World Health Organization Life Quality Scale Short Form) consists of 26 items. It is made of four sections namely physical, social, environmental, and psychological sections. The participants were evaluated during the last 15 days and informed about answering. It is a Likert type scale. The scale is calculated by using the four sections' scores. The physical section assesses work capacity, vitality, mobility, sleep, medical care, and relaxation, etc. The social section assesses sexual life, inter-personal relationships. The environmental section assesses physical safety, financial resources, spare time activities, access

to health services, and transportation. The physical section assesses self-reliance, learning, religious belief, and concentration issues. WHOQOL-BREF scale does not have a total score, in other words, a single life quality score is not obtained by adding the scores of all sections.

The score in any section is important. A high score received in any section shows a better life quality. The first two items of the life quality scale are not included in scoring and evaluated separately. The original scale consists of 26 items and 27 items are used in its Turkish version. None of the 27 items used in its Turkish version is included in scoring and is evaluated separately. The average of the scores received in each item is used in the estimation of the section scores. Then, the average scores are multiplied with 4 and made comparable with WHOQOL-100 scale. It must be checked in score estimation first that the answers given to all of the items are between 1 and 5 and if there is a different value, these must be changed as blank. Subsequently, the scores of the answers for items 3, 4 and 6 are reversed since they indicate negativity (1=5, 2=4, 3=3, 4=2, 5=1). After these processes; the arithmetic average of the scores of items 3, 4, 10, 15, 16, 17, and 18 is estimated and it is multiplied with 4 for the calculation of the physical section scores (minimum 6 items must be answered completely). The arithmetic average of the scores of items 5, 6, 7, 11, 19, and 26 is estimated for the calculation of the psychological section scores and is multiplied with 4 (minimum 5 items must be answered completely). The social section score is calculated by multiplication of the arithmetic average of items 20, 21, and 22 with 4 (minimum 2 items must be answered completely). The score of the fourth section, which is the environmental section, is calculated by the multiplication of the arithmetic average of items 8, 9, 12, 13, 14, 23, 24, and 25 with 4 (minimum 6 items must be answered completely). Fidaner et al performed validity and reliability of WHOQOLBREF scale for Turkish language and society in 1998 and the scale was determined to be suitable for Turkish society. In the assessment of the scale's validity, the structure validity, synchronous validity, distinguishing validity, and the sections' significance for clarifying general health and life quality were assessed and the scale was determined to be valid in these sections. In the reliability assessment, the internal consistency reliability (Cronbach alpha) of all sections and areas of WHOQOL-BREF scale was calculated and it was found between 0.83 and 0.83 29. These values show that the reliability of the scale is superior (Fidaner, 1999).

Body Mass Index (BMI)

It is defined by the great statistician Lambert Adolpe Jacques Quetelet in 1935. It is obtained by dividing body weight (kg) with the square of body height (meters) (Orhan & Bozbora, 2008, p. 2).

BMI Men	BMI Women
20-24.9 normal	19-22 normal
25-29.9 slightly overweight	22.1-25 slightly overweight
30-39.9 overweight	28.1-36 overweight
40 and higher, excessively overweight	36.1 and higher, excessively overweight

(Zorba, 2014, p.124).

Data Analysis

SPSS 23 package program was used for the collected data analysis. One-way variance analysis ANOVA was used to compare men and women according to their BMI indexes. Tukey HSD test was performed to determine the differences that occurred as a result of ANOVA. Correlation analysis was made to study the relation between BMI and life quality. The purposes of the person to do physical exercises were assessed based on Crosstab analysis.

FINDINGS

Table 1. Arithmetic Average of BMI, Body Weight and Height Values of Men and Women and Standard Deviation Values

	Gender	N	$\bar{x}$	SD
Height (cm)	Women	102	1,66	,04
	Men	108	1,76	,06
Body weight (kg)	Women	102	60,07	8,23
	Men	108	72,49	8,29
BMI (kg/height^2)	Women	102	21,63	2,74
	Men	108	23,20	2,28

Graph 1. Height, Body Weight and BMI averages of Women and Men

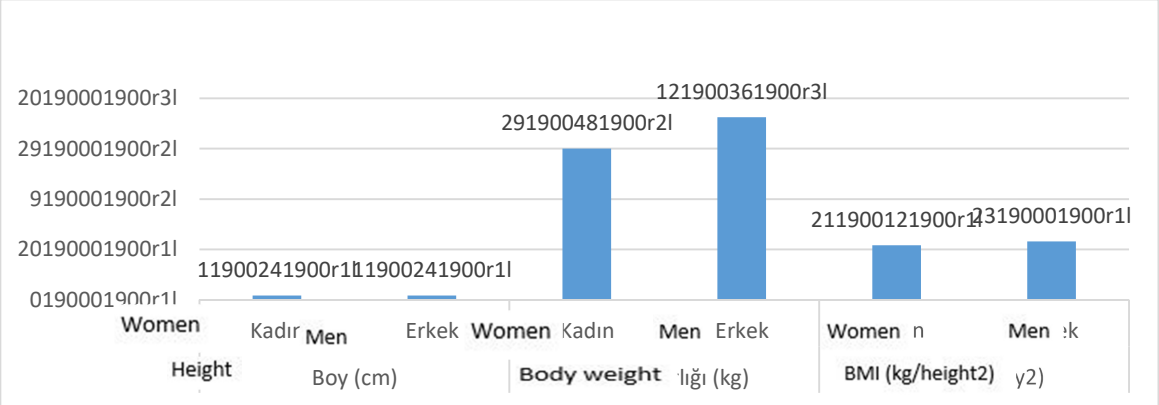

Table 1 and Graph 1 show that; the height average of the women was 1,66±0,04 and the height average of the men was 1,76±0,06. The body weight average of the women was 60,07±8,23 kg and the body weight average of the men was 72,49±8,29 kg. The BMI average of the women was 21,63±2,74 kg/height^2 and the BMI average of the men was 23,2±2,28 kg/height^2.

Table 2. Life Quality Values of the Women by BMI Classification

	BMI	N	$\bar{x}$	ss	F	p	Tukey
How do you evaluate your life quality?	Thin	44	3,63	,48	7,882	,001*	Thin and Overweight* Normal and Overweight*
	Normal	39	3,84	,53			
	Overweight	19	3,21	,78			
How do you evaluate your health?	Thin	44	3,77	,71	4,094	,020*	Thin and Overweight* Normal and Overweight*
	Normal	39	3,76	,58			
	Overweight	19	3,31	,47			
Item 27	Thin	44	2,36	,96	3,692	,028*	Thin and Overweight*
	Normal	39	1,97	,81			
	Overweight	19	1,73	,99			
Physical Section	Thin	44	16,89	1,54	11,284	,000*	Thin and Overweight* Normal and Overweight*
	Normal	39	16,77	1,34			
	Overweight	19	15,09	1,42			
Psychological Section	Thin	44	15,22	1,47	,653	,523	No difference
	Normal	39	15,31	1,51			
	Overweight	19	14,84	1,58			
Social Section	Thin	44	13,63	2,45	,696	,501	No difference
	Normal	39	14,11	2,57			
	Overweight	19	13,40	1,91			
Environmental section	Thin	44	13,62	1,32	1,309	,275	No difference
	Normal	39	13,47	1,44			
	Overweight	19	14,07	1,15			

*p<0,05 statistically significant.

In Table 2, significant differences at the level of p<0,05 were determined according to BMI classification in item 27 “how do you evaluate your life quality?, how pleased are you about your health?”. There were no differences found between the values of the psychological section, social section, and environmental section. Table 2 shows that the differences that occurred according to Tukey test stemmed from the thin and overweight, normal and overweight groups.

Table 3. Life Quality Values of the Men according to BMI Classification

	BMI	N	$\bar{x}$	sd	F	p	Tukey
How do you evaluate your life quality?	Thin	9	3,55	,52	5,660	,005*	Normal and Overweight*
	Normal	68	3,64	,56			
	Overweight	31	3,22	,61			
How do you evaluate your health?	Thin	9	4,11	,60	5,060	,008*	Normal and Overweight*
	Normal	68	4,10	,60			
	Overweight	31	3,64	,83			
Item 27	Thin	9	2,11	1,05	2,707	,071	No difference
	Normal	68	2,23	,83			
	Overweight	31	1,80	,83			
Physical section	Thin	9	16,63	1,00	1,163	,317	No difference
	Normal	68	16,92	1,27			
	Overweight	31	16,47	1,64			
Psychological section	Thin	9	14,59	1,98	1,402	,251	No difference
	Normal	68	15,50	1,53			
	Overweight	31	15,26	1,59			
Social section	Thin	9	14,51	1,55	,171	,843	No difference
	Normal	68	14,09	2,23			
	Overweight	31	14,27	2,55			
Environmental section	Thin	9	14,27	1,60	1,034	,359	No difference
	Normal	68	13,62	1,38			
	Overweight	31	13,87	1,34			

*p<0,05 statistically significant.

In Table 3, significant differences at the level of p<0,05 were found between the variables “how do you evaluate your life quality” and “how pleased are you about your health” according to BMI classification. There was no significant difference found between the values of the physical section, social section, environmental section, and psychological section of Item 27. Table 3 shows that the differences that occurred according to Tukey test stemmed from the normal and overweight groups.

Table 4. The Purposes of the Women for Doing Exercises according to BMI Classification

	Body Mass Index			
	Thin	Normal	Overweight	Total
For health	7	15	0	22
	6,9%	14,7%	,0%	21,6%
To lose weight	0	13	19	32
	,0%	12,7%	18,6%	31,4%
To gain weight	9	0	0	9
	8,8%	,0%	,0%	8,8%
To reduce stress level	1	0	0	1
	1,0%	,0%	,0%	1,0%
For socialization	2	0	0	2
	2,0%	,0%	,0%	2,0%
To increase muscular tone	25	11	0	36
	24,5%	10,8%	,0%	35,3%
Total	44	39	19	102
	43,1%	38,2%	18,6%	100,0%

X2= 81,141 p<0,001

21.6% of the women said that they did exercises for health, 31.4% said they did it to lose weight, 8,8% said they did it to gain weight, 1% said they did it to reduce their stress level, 2% said they did it for socialization, and 35,3% said they did it to improve their muscular tone. 6.9% of the women who were thin according to BMI classification said they did exercises for health, 8,8% said they did it to gain weight, 1% said they did it to reduce their stress level, 2% said they did it for socialization, and 24,5% said they did it to improve their muscular tone. 14.7% of the women who were normal according to BMI classification said that they did exercises for health, 12,7% said they did it to lose weight, and 10,8% said they did it to improve their muscular tone. 18.6% of the women who were overweight according to BMI classification said that they did it to lose weight.

Table 5. The Purposes of the Men for Doing Exercises according to BMI Classification

	Body Mass Index			
	Thin	Normal	Overweight	Total
For Health	1	12	3	16
	,9%	11,1%	2,8%	14,8%
To lose weight	0	3	17	20
	,0%	2,8%	15,7%	18,5%
To gain weight	5	1	0	6
	4,6%	,9%	,0%	5,6%
For socialization	0	3	0	3
	,0%	2,8%	,0%	2,8%
To improve muscular tone	3	49	11	63
	2,8%	45,4%	10,2%	58,3%
Total	9	68	31	108
	8,3%	63,0%	28,7%	100,0%

X2= 84,025 p<0,001

14,8% of the men said they did exercises for health, 18,5% said they did it to lose weight, 5,6% said they did it to gain weight, 2,8% said they did it for socialization, and 58,3% said they did it to improve their muscular tone. 0.9% of the men who were thin according to BMI classification said that they did it for health, 4,6% said they did it to gain weight, and 2,8% said they did it to improve their muscular tone. 11.1% of the men who were normal according to BMI classification said they did exercises for health, 2,8% said they did it to lose weight, 0,9% said they did it to gain weight, 2,8% said they did it for socialization, and 45,4% said they did it to improve their muscular tone. 2.8% of the men who were overweight according to BMI index said that they did it for health, 15,7% said they did it to lose weight, and 10,2% said they did it to improve their muscular tone.

Table 6. Correlation Analysis Results of the Men

	r	p
How do you evaluate your life quality?	-,253**	**,008***
How pleased are you about your health?	-,263**	**,006***
Item 27	-,173	,073
Physical section	-,092	,342
Psychological section	,041	,677
Social section	,000	,996
Environmental section	-,012	,905

According to BMI classification of the men, there was significant relation found at the level of p<0,05 between the variables "how do you evaluate your life quality" and "how pleased are you about your health". There was no significant relation found between the other variables.

Table 7. Correlation Analysis Results of the Women

	r	p
How do you evaluate your life quality?	-,175	,079
How pleased are you about your health?	-,222*	**,025***
Item 27	-,261**	**,008***
Physical section	-,363**	**,000***
Psychological section	-,072	470
Social section	-,005	,961
Environmental section	,091	,363

According to BMI classification of the women, there was significant relation found at the level of p<0,05 between item 27, "how pleased are you about your health", and physical section variables. There was no relation found between the variables of the psychological section, social section, and environmental section of "how do you evaluate your life quality" according to BMI.

DISCUSSION AND CONCLUSION

Living conditions in the age we live in make people more sedentary. People move less due to reasons including intense work tempo, time spent in front of television and computer, and failure to spend spare times efficiently. Multiple health problems are seen in individuals who intake energy more than they spend and move very little and their body fat mass increases in line with it and obesity develop. The obesity rate in Turkey and the world has increased and

turned out to be the problem of our age. Obesity affects life quality negatively and influences health, work efficiency, happiness, and length of life of persons negatively.

Miller studied the height and weight changes, physical activity levels, and physical fitness of individuals at the age of 13 years old for 18-20 years, and determined that the individuals with normal BMI remained in the same rates during adulthood as well (Aydanarığ, 2008, p.43). Kayman et al conducted a research on both individuals with ideal weight and on individuals who were obese before and lost weight. As a result of this study, they showed that the individuals who continued doing exercises after they lost weight maintained their weight and only 30% of the individuals who did not do exercises maintained their weight (Orhan & Bozbora, 2008, p. 356).

Physical activity not only improves muscular tone but also enables protection of fat-free mass (Murathan, 2013, p.27). Sandberg and Wikblad conducted a study on the effect of diabetes on life quality in 102 Type II diabetic patients and 102 normal individuals. As a result of the study, it was concluded that diabetic disorder led to physical role restrictions and affected social and physical functionalities (Sönmez & Top, 2015, p.211).

In our study, the height average of the women was found 1,66 and the height average of the men was found as 1.76. The body weight average of the women was 60,07 kg and the body weight average of the men was 72,49 kg. The BMI average of the women was 21,63 kg/height^2 and the BMI average of the men was 23,2 kg/height^2.

21.6% of the women said that they did exercises for health, 31,4% said they did it to lose weight, 8,8% said they did it to gain weight, 1% said they did it to reduce their stress level, 2% said they did it for socialization, and 35,3% said they did it to improve their muscular tone. 6.9% of the women who were thin according to BMI classification said they did exercises for health, 8,8% said they did it to gain weight, 1% said they did it to reduce their stress level, 2% said they did it for socialization, and 24,5% said they did it to improve their muscular tone. 14.7% of the women who were normal according to BMI classification said they did exercises for health, 12,7% said they did exercises to lose weight, and 10,8% said they did exercises to improve their muscular tone. 18.6% of the women who were overweight according to BMI classification said that they did exercises to lose weight.

14,8% of the men said they did exercises for health, 18,5% said they did it to lose weight, 5,6% said they did it to gain weight, 2,8% said they did it for socialization, and 58,3%

said they did it to improve their muscular tone. 0.9% of the men who were thin according to BMI classification said that they did exercises for health, 4,6% said they did it to gain weight, 2,8% said they did exercises to improve their muscular tone. 11.1% of the men who were normal according to BMI classification said they did exercises for health, 2.8% said they did it to lose weight, 0,9% said they did it to gain weight, 2,8% said they did it for socialization, and 45,4% said they did it to improve their muscular tone. 2.8% of the men who were overweight said that they did exercises for health, 15.7% said they did it to lose weight, and 10,2% said they did it to improve their muscular tone.

In conclusion, regular physical activity and nutrition program must be implemented to improve life quality and to be healthy. The conducted studies showed that individuals should sustain the two important components lifelong in order to have an ideal weight and to maintain this weight and to lead a healthy life by balanced nutrition and doing regular physical activities. The conducted studies have proven the benefits of long-term programmed physical activity.

It may be recommended that the government develops policies that could direct individuals to physical activities and balanced nutrition for health and superior life quality and it utilizes the media tools efficiently for this purpose. It may be aimed that the benefits of physical activity are explained to individuals by means of both mass medium and social media. A conscious society enables raising conscious generations. Hence, it may be recommended that the education programs of school-age children are organized as to direct them to physical activities, work conditions of working parents are improved and their awareness is raised about nutrition and physical activity, conditions are improved for any individual to do exercises despite of their sociocultural differences in society, individuals' awareness is raised by offering nutrition training at business places and schools, and turning healthy nutrition and doing exercises into a course of conduct and continuance of it lifelong by using media.

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