

## Effect of walking exercises on quality of life

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### Abstract

**Objective:** to examine the effects of regular walking exercises on quality of life. **Method:** 168 people who did regular walking exercises and who had no health problems participated in the study. A questionnaire that was prepared to collect demographic data and the Quality of Life Questionnaire (SF-36) were used for data on quality of life. The results were given in mean  $\pm$  standard deviation. The data were tested for normality before deciding on the statistical analyzes to be made on the data collected from the participants. The skewness and kurtosis values of the data were examined in this normality test. As a result of the statistical analyses, it was determined that the data were within the range of  $-1.5 > \dots < +1.5$ . The Independent Groups *t*-test and One-Way Analysis of Variance (ANOVA) were used in the analysis of the normally distributed data. The significance level was taken as  $p < 0.05$ . **Results:** there were no detected statistically significant between: 1) the sub-dimensions of quality of life and the gender of the participants ( $p > 0.05$ ); 2) the sub-dimensions of quality of life and the age groups of the participants ( $p > 0.05$ ); and 3) the sub-dimensions of quality of life and the duration of regular walking exercise ( $p > 0.05$ ). **Conclusion:** when the results of the studies reported in the literature and the results obtained in this study were evaluated, very different results were detected. The basis of this is considered to be the differences in the sampling groups of these studies and the different exercise backgrounds.

**Keywords:** walking, exercise, quality of life, sport, health.

### Introduction

People who lived in ancient times did not have problems with their health or physical fitness. With the development of technology, it has become possible to see the positive and negative effects of industrialization on societies. People have become less mobile with the conveniences brought by civilization (Zorba et al., 2000). The sedentary lifestyle threatens the health of the society more and more with each passing day especially with the intense pace of life (Baltacı, 2002). Because of the fact that the sedentary lifestyle of the society has become a habit, the prevalence of many

diseases such as cardiovascular diseases, obesity, high blood pressure, and diabetes is increasing with each passing day (Baltacı, 2002; Johnson & Ballin, 1996; Nelson et al., 2007; Nystoriak & Bhatnagar, 2018).

People must be healthy for them to be successful in the struggle for life. Individuals who do exercise should include regular sports in their lives to gain physical mobility, gain a more aesthetic appearance of the body, and have a healthy body by increasing the quality of life. Regular exercise has an important place in maintaining health. Especially, it is already known that cardiovascular diseases have the highest rates among the causes of death. With regular exercise, the rate of having cardiovascular diseases decreases (Golbidi & Laher, 2012). Doing exercise allows individuals to work their muscles, joints, bones, and cardiovascular system healthily (Akgün, 1986). Regular exercise also has effects on psychological health and sleep patterns as well as reducing stress and anxiety, being peaceful, and making a significant contribution to the self-confidence of the individual (Dinubile, 1993; Vardar et al., 2012).

Fitness, step-aerobics, swimming, and jogging have become a part of daily life in developed societies. Walking, which is used in daily life, and which is the most natural exercise of the body, has become the most popular exercise type today. All around the world, millions of people walk to keep fit (Zorba, 2000). The main purpose of doing exercises is to increase the physiological capacities of individuals, to protect physical fitness and health for many years (Günay et al., 2008). Walking exercises make great contributions to the development of the physical condition of individuals. The risk of developing heart disease is reduced by 50% with walking exercises, also the risk of gaining weight is minimized, and the risk of developing osteoporosis decreases (Oktik, 2004; Thomson et al., 2007). The importance of flexibility, body composition, and muscle strength among physical fitness parameters increases with advancing age (Segal et al., 2004; Tamer, 1996; Zorba, 1999).

These parameters are strengthened and a healthier life standard is achieved with walking exercise, it has become an important issue for individuals to live by increasing quality of life in our present day (Vural et al., 2010). Many study results show that exercise habits play important roles in maintaining general health (Karaca & Turnagöl, 2007). Also, it is considered that regular exercise affects our professional life positively and increases the quality of life (Korkmaz & Deniz, 2013).

The purpose of the present study was to examine the quality of life of individuals who do regular walking exercises.

## Methods

### *The study group*

Individuals who do regular walking exercises at least 3 days a week and have no health problems participated in the present study. A total of 168 people, 94 men (34.5±3.2 years, 177.2±3cm, 83.4±2.3 kg.) and 74 women (30.6±4.1 years, 163.4±2cm, 62.1±4.2 kg.) participated voluntarily in the study. The informing document was given to the participants about the study and all participants signed informed written consent forms.

### *Data collection tools*

The demographic characteristics of the participants were determined with the questionnaire method. The Quality of Life Scale (SF-36) Questionnaire was used for quality of life values.

### *Personal information form*

The personal information form that was prepared by the researcher was used for the demographic information of the participants. In this form, information such as gender, age, and regular walking exercise duration of the participants was collected.

### *Quality of Life Scale (SF-36)*

In the study, the data on quality of life were obtained with the Quality of Life Scale (SF-36). The Quality of Life Scale (SF-36) was first developed by Ware and Sherbourne in 1992. The scale consisted of 36 items and provided the measurement of 8 sub-dimensions, which are physical function (10 items), social functioning (2 items), role limitations physical (4 items), role limitation emotional (3 items), mental health (5 items), energy/vitality (4 items), pain (2 items), and general health (5 items) (Ware & Sherbourne, 1992).

The adaptation of the scale into Turkish, and its validity and reliability studies were performed by Koçyiğit et al. (1999). The subscale scores ranged from 0 to 100, and a high score was determined as an indicator of good health (Khanna et al., 2010).

### *Analysis of the data*

Results were given in mean ± standard deviation. Before deciding on the statistical analyzes to be conducted on the data that were collected from the participants, the data were tested for normality in which the skewness and kurtosis values of the data were examined. As a result of the statistical analyzes, it was found that the data were within the range of  $-1.5 < \dots < +1.5$ . The Independent Groups *t*-test and the One-Way Analysis of Variance (ANOVA) were used in the analysis of normally distributed data. The significance level was taken as  $p < 0.05$ .

## Results

The findings of the statistical analyzes made in the scope of the study are in Tables 1, 2 and 3.

**Table 1.** The comparison of quality of life levels of individuals who do Walking Exercise according to gender.

Sub-dimensions of Quality of Life	Female	Male	t	p
	(Mean±SD)	(Mean±SD)		
Physical functioning	91.3±14.1	92.2±14.8	.878	.304
Role limitation physical	80.2±25.1	85.5±34.1	.935	.113
Pain	78.4±12.6	79.2±15.3	.829	.385
General Health	53.1±13.4	60.1±11.4	.651	.534
Energy/Vitality	66.2±14.6	67.1±15.2	.426	.698
Social Functioning	72.6±32.2	73.1±21.8	.583	.560
Role limitation emotional	70.2±33.1	77.2±30.5	.982	.118
Mental health	68.2±23.7	79.8±19.3	.857	.356

In Table 1, according to the sub-dimensions of quality of life of individuals, no statistically significant differences were detected in physical functioning ( $p=.304$ ), role limitation physical ( $p=.113$ ), pain ( $p=.385$ ), general health ( $p=.534$ ), energy/vitality ( $p=.698$ ), social functioning ( $p=.560$ ), role limitation emotional ( $p=.118$ ), and mental health ( $p=.356$ ) values between the genders ( $p>0.05$ ).

**Table 2.** Comparison of quality of life levels of individuals who do Walking Exercises according to age groups.

Sub-dimensions of Quality of Life	20 and under	21-30	31- 40	41 and older	F	p
	(Mean±SD)	(Mean±SD)	(Mean±SD)	(Mean±SD)		
Physical functioning	84.2±17.1	90.4±11.3	92.3±10.6	90.6±15.1	.945	.205
Role limitation physical	85.3±22.7	85.8±21.4	87.1±20.1	82.6±28.1	.358	.783
Pain	81.9±14.1	79.7±13.1	80.4±13.1	80.9±13.6	.644	.605
General Health	55.6±11.8	58.3±12.5	57.3±11.3	54.5±11.8	.893	.454
Energy/Vitality	68.4±12.8	69.5±14.1	65.9±18.4	69.4±15.1	.544	.639
Social Functioning	71.5±24.1	72.5±26.1	73.2±25.2	71.4±12.1	.225	.894
Role limitation	78.1±45.1	77.6±32.6	87.2±27.1	83.2±16.1	.847	.392
Mental health	67.1±18.1	70.9±13.2	67.12±15.1	77.4±18.4	.962	.323

It is seen in Table 2 that no statistically significant differences were detected between age groups and quality of life sub-dimensions of individuals who did walking exercises in physical functioning ( $p=.205$ ), role limitation physical ( $p=.783$ ), pain ( $p=.605$ ), general health ( $p=.454$ ), energy/vitality ( $p=.639$ ), social functioning ( $p=.894$ ), role limitation emotional ( $p=.392$ ), and mental health ( $p=.323$ ) values between the genders ( $p>0.05$ ).

**Table 3.** The comparison of quality of life levels of individuals who do Walking Exercises according to exercise durations (months).

Sub-dimensions of Quality of Life	1-5	6-12	13 and more	F	p
	(Mean±SD)	(Mean±SD)	(Mean±SD)		
Physical functioning	91.6±18.1	95.3±11.4	95.8±23.2	.984	.294
Role limitation physical	86.3±34.5	92.4±28.3	89.5±29.2	.929	.394
Pain	79.4±12.3	77.2±13.1	81.2±15.1	.274	.778
General Health	58.2±13.1	55.3±12.5	57.2±11.6	.549	.684
Energy/Vitality	69.1±12.3	68.4±13.6	70.4±17.2	.934	.288
Social Functioning	72.4±22.1	73.2±13.4	74.3±21.5	.487	.735
Role limitation emotional	72.1±12.3	69.2±35.2	79.2±32.8	.936	.339
Mental health	70.2±13.9	68.1±18.9	71.4±22.8	.915	.412

It is seen in Table 3 that no statistically significant differences were detected between exercise duration and quality of life sub-dimensions of individuals who did walking exercises in physical functioning ( $p=.294$ ), role limitation physical ( $p=.394$ ), pain ( $p=.778$ ), general health ( $p=.684$ ), energy/vitality ( $p=.288$ ), social functioning ( $p=.735$ ), role limitation emotional ( $p=.339$ ), and mental health ( $p=.412$ ) values ( $p>0.05$ ).

## Discussion

The relations between the quality of life sub-dimension results and some parameters of the individuals who participated in the study were examined. In the comparison between genders, no statistically significant differences were detected between general health, role limitation emotional, physical functioning, role limitation physical, pain, energy-vitality, social functioning, and mental health values in the sub-dimensions of quality of life. However, the general health values of males were found to be better than those of women.

According to the literature data, there are no significant differences in the comparisons of the quality of life of individuals who do exercises in terms of gender, and there are other studies that show parallelism with our study results. In a previous study, when the sub-dimensions of the SF-

36 Scale were examined, no significant differences were reported between men and women (Akbolat et al., 2015).

According to another study that was conducted previously, the sub-dimensions of quality of life were examined, and it was reported that men achieved the highest scores in the category of physical functionality (Bilir et al., 2005).

Unlike this, there are also studies showing that different results were detected between genders. In a study that examined individuals who did physical activity, it was reported that the role limitations because of physical functions and physical problems, which are the sub-dimensions of quality of life, were better in men than in women (Koçak et al., 2010).

It was reported in another study that men who did physical activity had higher SF-36 physical and mental health scores than women. It was also reported that there was a positive correlation between the duration of high physical activity and SF-36 physical health scores of men (Genç et al., 2011).

In a previous study, it was found that women had lower scores than men in all sub-dimensions except for the physical function, which is the sub-dimension of quality of life (Saraç et al., 2007).

It was reported in the study conducted by Vural (2010) that all quality of life scores of men were statistically higher than those of women, except for physical role and mental function scores.

In the present study, no statistically significant differences were detected between age groups and quality of life sub-dimensions. When the quality of life sub-dimension results were considered, the group that was aged 20 and under had pain scores. The 21-30 age group had the highest scores in general health and energy-vitality; the 31-40 age group had the highest scores in physical functioning, role limitation physical, social functioning and role limitation emotional; the 41 and older age group had the highest scores in mental health sub-dimensions.

According to a previous study reported in the literature, the quality of life values of academic and administrative staff working at universities were examined, and it was reported that the quality of life and the social and mental health scores of the participants were high in the 36 and over age group (Özüdoğru, 2013).

In a previous study, it was reported that no differences were detected between age groups in physical function, general health perception, vitality, and mental health sub-dimensions. Physical functioning score, which is a sub-dimension of quality of life, was found to be low in participants who were aged 22-34. The general health score was higher in participants who were aged 55 and over. The vitality score, however, was low in participants who were aged 25-34. Mental health score was found to be lower than those who were between the ages of 45-54. (Kırgız, 2012).

When previous studies were reviewed, differences were found between the results. These differences are considered to be because of the differences in the groups that participated in these studies.

No statistically significant differences were detected between the duration of regular walking exercises and the quality of life sub-dimensions of the individuals who participated in the present study. According to the results of the study, it was found that those who did regular walking exercises for 13 months or more had the highest scores in terms of physical function, pain, energy/vitality, social functioning, role limitation emotional, and mental health. Individuals who did regular walking exercises between 6-12 months were found to be the group that had the highest role limitation physical scores. It was also found that those who did walking exercises between 1-5 months had the highest scores in general health perception. According to these results, it is considered that long-term exercises also positively affect the quality of life.

As a result, when the results of the studies reported in the literature and the results obtained in this study were evaluated, very different results were detected. The basis of this is considered to be the differences in the sampling groups of these studies and the different exercise backgrounds.

In conclusions, pre-test and post-test studies can be applied by conducting exercises to different groups, and studies with experimental and control groups can be conducted to reach different results about the effects of regular exercises on the quality of life. The effects of exercise on quality of life can be examined by applying regular walking exercises to sedentary individuals.

## References

**Note:** some references were translated from the Turkish language. To consult the original document, go to the URL or DOI.

Akbolat, M., Turgut, M. & Över, G. (2015). The effect of quality of life perception of nurses on motivation: an example of a public hospital. *Manas Journal of Social Studies*, 4(2), 64-82.

<https://dergipark.org.tr/en/download/article-file/577172>

Akgün, N., (1989). *Egzersiz fizyolojisi*. 3 Baskı, I Cilt. Ankara: Gökçe Ofset Matbaacılık.

Baltacı G. (2002). *Obezite ve Egzersiz*. Ankara: Klasmat Matbaacılık.

Bilir, N., Özcebe, H., Vaizoğlu, S. A., Aslan, D., Subaşı, N., & Telatar, T. G. (2005). Assessing the quality of life of males 15 years and older in Van province via SF-36. *Turkiye Klinikleri Journal of Medical Sciences*, 25, 663-668. <https://bit.ly/3EwyLps>

Dinubile, N. A. (1993). Youth fitness-problems and solutions. *Preventive Medicine*, 22(4), 589-594. <https://doi.org/10.1006/pmed.1993.1053>

- Genç, A., Şener, Ü., Karabacak, H. & Üçok K. (2011). Investigation of physical activity and quality of life differences between male and female young adults. *The Medical Journal of Kocatepe*, 12, 145-150. <https://dergipark.org.tr/tr/download/article-file/161328>
- Golbidi, S., & Laher, I. (2012). Exercise and the cardiovascular system. *Cardiology Research and Practice*, 210852, 1-15. <https://doi.org/10.1155/2012/210852>
- Günay, M., Şıktar, E., Şıktar, E., & Yazıcı, M. (2008). *Egzersiz ve Kalp*. Ankara: Gazi Kitapevi.
- Johnson, J.M., & Ballin, S.D. (1996). Surgeon General's report on physical activity and health is hailed as a historic step toward a healthier nation. *Circulation*, 94(9), 2045. <https://doi.org/10.1161/01.CIR.94.9.2045>
- Karaca, A., & Turnagöl, H. H. (2007). Reliability and validity of three different questionnaires in employees. *Hacettepe Journal of Sport Sciences*, 18(2), 68-84. <https://dergipark.org.tr/en/download/article-file/151325>
- Khanna, P.P., Perez-Ruiz, F., Maranian, P., & Khanna, D. (2010). Long-term therapy for chronic gout results in clinically important improvements in the health-related quality of life: short form-36 is responsive to change in chronic gout. *Rheumatology*, 50(4), 740-745. <https://doi.org/10.1093/rheumatology/keq346>
- Kırgız, C. (2012). *Evaluation of postoperative peri-implant health in individuals who received implant therapy by applying various parameters* (Master thesis). Gazi University, Institute of Health Sciences, Ankara.
- Koçak, F.Ü., & Özkan, F. (2010). Physical activity levels and the quality of life in the elderly. *Türkiye Klinikleri Journal of Medical Sciences*, 2(1), 46-54. <https://bit.ly/2XF1qYu>
- Koçyiğit, H., Aydemir, Ö., Fişek, G., Ölmez, N., & Memiş, A. (1999). Kısa Form-36 (KF-36)'nın Türkçe versiyonunun güvenilirliği ve geçerliliği: romatizmal hastalığı olan bir grup hasta ile çalışma. *İlaç ve Tedavi Dergisi*, 12(2), 102-106.
- Korkmaz, N., & Deniz, M. (2013). A research on the relationship between the level of physical activity and socio-economic status in adults. *NWSA-Sports Sciences*, 8(3), 46-56. <https://dergipark.org.tr/en/pub/nwsaspor/issue/20128/213772>
- Nelson, M.E., Rejeski, W.J., Blair, S.N., Duncan, P.W., Judge, J.O., King, A.C., et al. (2007). Physical activity and public health in older adults: recommendation from the American College of Sports Medicine and the American Heart Association. *Medicine and Science in Sports and Exercise*, 39(8), 1435-1445. <https://doi.org/10.1249/mss.0b013e3180616aa2>
- Nystoriak, M.A., & Bhatnagar, A. (2018). Cardiovascular effects and benefits of exercise. *Frontiers in Cardiovascular Medicine*, 5, 135. <https://doi.org/10.3389/fcvm.2018.00135>



- Oktik, N. (2004). *Huzurevinde yaşam ve yaşam kalitesi: Muğla örneği*. Muğla: Muğla Üniversitesi Yayınları.
- Özüdoğru, E. (2013). A research on the relationship between the university personnel's physical activity level and life quality (Doctoral thesis). Mehmet Akif Ersoy University, Institute of education, Burdur. <https://acikerisim.mehmetakif.edu.tr/xmlui/handle/11672/287>
- Saraç, F., Parıldar, Ş., Duman, E., Saygılı, F., Tüzün, M., & Candeger, Y. (2007). Quality of life for obese women and men in Turkey. *Prevention Chronic Disease*, 4(3),1-11. <https://stacks.cdc.gov/view/cdc/20136>
- Segal, N.A., Hein, J., & Basford, J. (2004). The effects of Pilates training on flexibility and body composition: an observational study. *Archives of Physical Medicine and Rehabilitation*, 85, 1977-1981. <https://doi.org/10.1016/j.apmr.2004.01.036>
- Tamer, K. (1996). Effect of different aerobic training programs on serum hormones, blood lipids and percent body fat. *Beden Eğitimi ve Spor Bil. Dergisi*, 1, 1-11. <https://dergipark.org.tr/tr/download/article-file/280554>
- Thomson, P.D., Franklin, B.A., Balady, G.J., Blair, S.N., Corrado, D., ... & American College of Sports Medicine (2007). Exercise and acute cardiovascular events placing the risks into perspective: a scientific statement from the american heart association council on nutrition, physical activity, and metabolism and the council on clinical cardiology. *Circulation*, 115(17), 2358-68. <https://doi.org/10.1161/CIRCULATIONAHA.107.181485>
- Vardar, E., Vardar, S. A., Toksöz, İ., & Süt, N. (2012). Exercise dependence and evaluations of psychopathological features. *Düşünen Adam The Journal of Psychiatry and Neurological Sciences*, 1(25), 51-57. <https://doi.org/10.5350/DAJPN2012250106>
- Vural, Ö., Eler, S., & Guzel, N. (2010). The relation of physical activity level and life quality at sedentary profession. *Spormetre The Journal of Physical Education And Sport Sciences*, 8(2), 69-75. [https://doi.org/10.1501/Sporm\\_0000000178](https://doi.org/10.1501/Sporm_0000000178)
- Ware, J.E., & Sherbourne, C.D. (1992). The MOS 36-item short-form health survey (SF-36). I. Conceptual framework and item selection. *Medical Care*, 30(6), 473-483. <https://bit.ly/3Ck4Kag>
- Zorba, E. (1999). *Herkes için spor ve fiziksel uygunluk*. Ankara: Gençlik Basımevi.
- Zorba, E. (2000). *Fiziksel uygunluk*. Ankara: Gazi Kitabevi.
- Zorba, E., Yaman, R., Yıldırım, S., & Saygın, O. (2000). 18-24 yaş grubu sedanter bayan öğrencilerde 8 haftalık step uygulamasının bazı fiziksel uygunluk ve antropometrik değerlere etkisi. 1. *Gazi Beden Eğitimi Ve Spor Bilimleri Kongresi*. 26-24th May, Ankara.