

Relationship between Quality of Life and Physical Activities in Relation to the Tobacco Smoking Habits

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Abstract

The goal of this paper is to examine the quality of life of respondents in comparison to their physical activities and their smoking status. The study was conducted on a sample of 200 respondents, of which 100 (50%) were smokers and 100 (50%) non-smokers. In both groups half of them have regular physical activity (walking for 60 minutes a day, running up to 30 minutes a day, exercise at the gym more than 2 times a week, or involved in sport activities at least once a week). The study included respondents aged 18-49 years. The study used a questionnaire that was designed for this study based on the SF-36 questionnaire to test the quality of life, and EUROQOL questionnaire to examine socioeconomic status. There was a statistically significant association between physical activity and quality of life. People engaged in physical activity showed higher average scores in quality of life compared to those who are not physically active, this difference was statistically significant on all subscales of quality of life questionnaire. With increasing age reduces the quality of life scores but people who are physically active continue to have higher scores than those who are not physically active. Tobacco smoking is recognized as a factor that reduces the average scores on all subscales of quality of life, but people who are dealing with physical activities have a higher quality of life scores both in group of smokers and non-smokers.

Key words: **quality of life, physical activities, tobacco smoking**

Sažetak

Cilj rada je ispitati kvalitet života kod ispitanika u odnosu na bavljenje fizičkim aktivnostima i njihov pušački status. Istraživanje je izvršeno na uzorku od 200 ispitanika od kojih je 100 (50%) bilo pušača a 100 (50%) nepušača. U obje skupine ispitanika polovina njih se bavila redovnim fizičkim aktivnostima (hodanje u trajanju od 60 minuta dnevno, trčanje do 30 minuta dnevno, vježbanje u teretani više od 2 puta sedmično ili treniranje nekog sporta najmanje jedanput sedmično). U istraživanje su uključeni ispitanici starosne dobi od 18 do 49 godina. U istraživanju se koristio anketni upitnik koji je dizajniran za potrebe ovog istraživanja a na osnovu SF-36 anketnog upitnika za ispitivanje kvaliteta života, te EUROQOL anketnog upitnika za ispitivanje socioekonomskog statusa. Utvrđena je statistički značajna povezanost između bavljenja fizičkim aktivnostima i kvaliteta života. Osobe koje se bave fizičkim aktivnostima pokazuju veće prosječne skorove kvaliteta života i u odnosu na one koji nisu fizički aktivni ta razlika je statistički značajna na svim subskalama kvaliteta života. Sa povećanjem starosne dobi smanjuje se skor kvaliteta života ali osobe koje su fizički aktivne i dalje imaju veće skorove u odnosu na one koji nisu fizički aktivni. Pušenje duhana se prepoznaje kao factor koji smanjuje prosječne skorove na svim subskalama kvaliteta života ali osobe koje se bave fizičkim aktivnostima imaju veće skorove kvaliteta života i kod pušača i kod nepušača.

Ključne riječi: **Kvalitet života, fizičke aktivnosti, pušenje duhana**

Introduction

Quality of life is a concept that has changed its content extensively during the last century, depending on the perspective of the scientific discipline and the goals of society and humans. Now we can say that are generally recognized fields and indicators of quality of life, based on which can be determined the current level of life quality (1). The quality of life is a very complicated concept and its definition depends on who's discussing it, who defines it. Some define it as the ability to perform social and personal tasks appropriate to the age, gender, intelligence and

membership to a particular class. Another in the quality of life includes individual perceptions of their own wellbeing or absence of these perceptions (2,3).

Its definition depends on many factors: financial, physical, safety, social, health, etc. We live in time and space, so everything around us positively or negatively affect the quality of life (2).

Economists estimate the quality of life based on economic standards according to the distribution of national income. For ecologists quality of life depends on the preservation

of the natural environment. Sociologists explain the quality of life as a good understanding of the different groups of people. Theologians under the quality recognize the life that does not deny its metaphysical source. Doctors believe that quality is the life in which health is preserved, and as we know, „health is not merely the absence of disease and exhaustion, but a state of complete physical, mental and social well-being“ (2,3,4).

Quality of life can be defined as an individual's personal perception of one's own position in life compared to its goals, within the value system that is accepted and incorporated into their own decision making (5,6).

In a broader context, we can say that the quality of life is the complex overall satisfaction or dissatisfaction with own lives. It is a subjective experience of every human, which clearly depends on the objective circumstances in which someone lives (social, financial, professional, environmental, etc.), but also the personality of the individual, its perception of the actual situation in which he/she lives, its system of values, expectations and aspirations (2,6). The goal of this paper is to examine the quality of life of respondents in comparison to their physical activities and their smoking status.

Material and methods

The study was conducted on a sample of 200 respondents, of which 100 (50%) were smokers and 100 (50%) non-smokers. In both groups half of them have regular physical activity (walking for 60 minutes a day, running

up to 30 minutes a day, exercise at the gym more than 2 times a week, or involved in sport activities at least once a week). The study included respondents aged 18-49 years. The study used a questionnaire that was designed for this study based on the SF-36 questionnaire to test the quality of life, and EUROQOL questionnaire to examine socioeconomic status. The SF-36 measures eight subscales (dimensions) of quality of life:

- Physical functioning
- Physical role
- Bodily pain
- General health
- Vitality
- Social functioning
- Emotional role
- Mental health

The research was conducted in the Sarajevo Canton and the inclusion criteria were that the subjects without chronic disease and which do not use any medications or opiates. All research data were entered into a database and analyzed using the SPSS statistical program. From the statistical analysis, in the study are used methods to assess the significance of difference (X² test, Student's t-test, univariate analysis of variance, Mann - Whitney U test and Kruskal-Wallis analysis of the variance), as well as methods to assess the significance of correlations (Pearson's linear correlations coefficient). To assess the impact of physical activity on quality of life the Cox model of univariate and multivariate analyzes were used.

Results

Table 1. Quality of life of respondents according to participation in physical activity and the age

Quality of life of the respondents according to physical activity and the age									
		Physical activity						F	p
		No			Yes				
		39-49 yrs.	29-38 yrs.	19-28 yrs.	39-49 yrs.	29-38 yrs.	19-28 yrs.		
Physical functioning	Mean	67.72	76.46	83.61	67.54	78.78	86.47	36.599	.000
	Std. deviation	28.46	25.33	19.71	32.95	27.45	21.57		
Physical role	Mean	3.90	3.78	4.15	3.97	3.97	4.36	12.564	.000
	Std. deviation	1.09	1.12	1.00	1.13	1.10	.98		
Emotional role	Mean	3.88	3.89	4.20	3.80	4.04	4.50	16.445	.000
	Std. deviation	1.15	1.09	.88	1.18	1.04	.75		
Vitality	Mean	56.49	56.46	62..001	56.59	58.34	63.00	9.099	.003
	Std. deviation	16.23	16.24	13.56	18.96	17.01	13.75		
Mental health	Mean	57.82	58.54	63.08	57.07	61.18	66.08	16.045	.000
	Std. deviation	17.22	15.52	11.74	17.30	16.65	11.75		
Social functioning	Mean	64.25	71.84	76.84	68.64	72.44	80.50	17.144	.000
	Std. deviation	24.14	22.73	22.80	27.40	23.09	23.99		
Bodily pain	Mean	72.11	79.78	79.55	67.80	79.58	87.20	18.968	.000
	Std. deviation	27.50	24.19	22.76	32.87	25.23	16.58		
General health	Mean	56.14	60.08	62.46	56.98	63.37	67.00	13.736	.000
	Std. deviation	20.00	19.59	19.74	23.85	21.06	20.57		

Analizing the average quality of life scores of respondents in relation to their age and physical activities, we find that respondents who had any kind of physical activity have higher average scores on all subscales of quality of life than those who are not physically active and that differ-

ence was statistically significant ($p < 0.05$). In both groups is noticed the decrease in the average scores of the quality of life in relation to increasing age and this difference was statistically significant ($p < 0.05$).

Table 2. Quality of life of respondents according to their smoking status and physical activities

		Quality of life according to smoking status and physical activities				F	p
		Physical activity					
		No		Yes			
		S	NS	S	NS		
Physical functioning	Mean	53.71	82.12	48.72	87.52	253.786	.000
	Std. deviation	27.07	21.33	26.68	20.30		
Physical role	Mean	3.16	4.22	3.04	4.39	180.050	.000
	Std. deviation	1.06	1.00	1.06	1.84		
Emotional role	Mean	3.34	4.11	3.44	4.38	84.261	.000
	Std. deviation	1.08	1.01	1.14	1.85		
Vitality	Mean	44.76	60.99	44.88	67.28	172.730	.000
	Std. deviation	14.04	14.55	16.48	15.32		
Mental health	Mean	51.94	61.27	49.91	66.02	88.899	.000
	Std. deviation	13.92	15.02	16.22	17.42		
Social functioning	Mean	60.69	74.21	57.70	80.14	74.518	.000
	Std. deviation	25.89	21.76	26.02	20.66		
Bodily pain	Mean	66.53	81.33	57.47	86.33	103.907	.000
	Std. deviation	27.66	22.93	28.76	19.28		
General health	Mean	40.89	64.75	40.29	71.33	295.275	.000
	Std. deviation	20.09	16.41	19.78	15.48		

Analysis of the average value of the quality of life scores between smokers and nonsmokers in relation to participation in physical activities shows that there were statistically significant differences on all subscales of quality of life compared to smoking status. Smokers show lower quality of life scores compared to non-smokers and this difference was statistically significant ($p < 0.05$). Seen from the point of physical activities, subjects who are physically active tend to have higher average quality of life scores on all subscales and this difference was statistically significant. Nonsmokers who were engaged in physical activity had higher quality of life scores on all subscales and this difference was statistically significant ($p < 0.05$). In case of smokers were observed statistically significant differences in mean scores of quality of life from the aspects of physical activities.

Discussion

Quality of life is a broad term that refers to the total well-being of the individual in terms of physical, psychological, emotional, mental and social well-being and which is also influenced by numerous factors, including: age, gender, socioeconomic status, behavioral risk factors, environ-

ment of origin and the absence or presence of the disease (1,2,6). Until 1988 the smoking is regarded as harmful lifestyle habits, and then WHO has launched a range of evidences that define smoking as an addiction disease that requires serious treatment. Numerous studies have confirmed that the consumption of tobacco and tobacco products and exposure to tobacco smoke significantly contribute to change in the quality of life, disease, disability and premature death in all age groups, which is why according to the ICD smoking as disease is classified under code F17.2 – „tobacco dependence syndrome“ (8,9). Scientifically are proven many consequences of tobacco use, or tobacco products, which can be seen through the effects on the health of individuals, populations and communities in general. Smoking, besides causing numerous diseases, affects the quality and life span, while according to WHO data, each cigarette shortens life by 7 minutes so that every 8 seconds around the world die one person due to the consequences of smoking (7,8,9).

Better quality of life of the elderly is associated with the level of daily physical activity. Studies show that elderly who remain physically active have fewer health problems than would correspond to their age. Direct benefits of regular physical activity are reflected primarily in higher quality

and longer life, stronger and more resilient bones, less pain in joints and muscles, increasing and maintaining mobility and balance, reducing the risk of fractures and slower loss of muscle mass. Physical inactivity, along with inadequate nutrition is the second (after smoking) cause of death in the United States (1,2,3).

Most of the studies that were conducted in populations involved in certain types of physical activities shows that there is a significant correlation between the average scores of the quality of life and the physical activity, as has been proven in our study (2,6,7). Tobacco smoking is a factor that reduces the quality of life scores particularly in those who are not engaged in physical activities, as confirmed by most of the studies that have linked quality of life, on the one hand, with tobacco smoking and physical activity, on the other hand, as a style of life that largely determine health and the health status of the individuals (2,6,13).

Conclusions

There was a statistically significant association between physical activity and quality of life. People engaged in physical activity showed higher average scores in quality of life compared to those who are not physically active, this difference was statistically significant on all subscales of quality of life questionnaire. With increasing age reduces the quality of life scores but people who are physically active continue to have higher scores than those who are not physically active. Tobacco smoking is recognized as a factor that reduces the average scores on all subscales of quality of life, but people who are dealing with physical activities have a higher quality of life scores both in group of smokers and non-smokers.

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