EXAMINATION OF THE HEALTH-RELATED QUALITY OF LIFE OF PHYSICAL EDUCATION AND SPORTS STUDENTS

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ABSTRACT

The present study aimed at examining theHealth-Related Quality of Life (HRQOL) of physical education and sports students in terms of educational variables.The sample group consisted of a total of 526 students studying at school of physical education and sport.The data of this study was collected via the Personal Information Form and SF-36 questionnaire. The evaluation of the data was performed by using ANOVA, the independent-samples t-test, and Pearson correlation coefficient.Study results suggested Recreation education program students at the scales of Vitality, Mental health, Social functioning and Pain had significant high scores compared to the other programs. The second grade (the years of education) students compared to the first grade students had significantly high score in General health. The mean scores of the Vitality, Mental health and General health scales for students who joined at sports club were significantly higher than those who do not. There was no significant relationship between the Academic success of the students and the HRQOL scales.

The lesson content of the physical education and sports programmes could have an effect on the HRQOL of the students. In addition to university programmes of physical education and sport, Joining at a sport club could also improve the HRQOL.

Key words: physical education and sport, physical education programmes, university student, Health-related Quality of life.

BEDEN EĞİTİMİ VE SPOR ÖĞRENCİLERİNİN SAĞLIKLA İLGİLİ YAŞAM KALİTELERİNİN İNCELENMESİ

ÖZ

Bu çalışmanın amacı, beden eğitimi ve spor yüksekokul öğrencilerinin sağlıkla ilgili yaşam kalitesini (SİYK) farklı değişkenler açısından incelenmektir. Araştırma grupu beden eğitimi ve spor yüksekokulunda okuyan toplam 526 öğrenci oluşturmaktadır. Araştırmanın verileri''Kişisel Bilgi Formu'' ve "SF-36 Ölçeği" ile toplanmıştır. Verilerin değerlendirilmesi tek Yönlü Varyans Analizi (ANOVA), İndependent-Samples T Testi ve Pearson Korelasyon analizi kullanarak yapılmıştır. Araştırmanın sonuçlarına göre "Rekreasyon" bölümü öğrencilerin SİYK'sinin Enerji, Mental sağlık, Sosyal fonksiyon ve Ağrı alt boyut puan değerleri diğer bölümlerde okuyan öğrencilere göre, 2. sınıf öğrencilerin Genel sağlık alt boyut puan değeri 1.sınıf öğrencilerine göre, ve bir spor kulüpuna katılanların Enerji, Mental sağlık ve Genel sağlık alt boyut puan değerleri anlamlı olarak daha yüksek tespit edilmiştir. Öğrencilerin akademik başarıları ile SİYK'leri arasında hiçbir ilişki tespit edilmemiştir.

Beden eğitimi ve spor bölümlerinde ders içerikliği öğrencilerin SİYK'sinin üzerinde etkisi olabilir. beden eğitimi ve spor derslerinin yanısıra bir spor klupüna katılmak öğrencilerin SİYK'sini iyileştirilebilir.

***Anahtar kelimeler*:** Üniversite öğrencisi, sağlıkla ilgili yaşam kalitesi, beden eğitimi ve spor, akademik başarı

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INTRODUCTION

Health, a concept discussed today in relation to all scales of life such as physical, social, emotional and moral states, contributes to an individual's satisfaction in life, quality of life, and in this sense, signifies the continued increase in self-realization (Edelman and Fain, 1998). Quality of Life, which is mostly changeable and specific to each individual, is the individual's perception regarding his/her state in life in terms of his/her goals, expectations, standards and concerns in connection with the cultural structure and system of values in which he/she lives (WHOQOL Group, 1993). However, the concept of health-related quality of life (HRQOL) and its determinants have evolved since the 1980s to encompass those aspects of overall quality of life that can be clearly shown to affect health—either physical or mental (CDC, 2000;Selim, 2009). On the individual level, this includes physical and mental health perceptions and their correlates—including health risks and conditions, functional status, social support, and socioeconomic status. On the community level, HRQOL includes resources, conditions, policies, and practices that influence a population's health perceptions and functional status. (Kindig et al., 2010).

To improve society's health and quality of life, education plays an important role (Shimbo, 2004). The main goal of education is to help individuals achieve the highest level of achievement as much as possible. Another significant tool of raising qualified individuals is physical education and sports (Alkan et al., 1991; Yetim, 2006). Physical education and sports are accepted as the conscious and planned activities that while supplementary, are indispensible parts of general education that aspire to facilitate physical, mental, social and emotional development of the individuals, who are the main sources of the generations that are being raised (Yıldıran and Yetim, 1996).

Higher education institutions attach, more and more, importance to physical education and sports, and this contributes to the enhancement of a qualified work force and the structure necessary for achieving the goals of a developing society (Çınar, 2007; Bailey, 2000; Donnelly and Coakley, 2002). Generally, higher education institutions that provide physical and sports education aim to help young people acquire superior quality academic/pedagogic formative knowledge and skills in order to contribute to the healthy development of individuals and to raise qualified individuals in this area (Yıldız, 2007; Bailey et al., 2009).

In line with this purpose, students studying at physical education and sports schools receive sports education in a more regular and intensive manner. Since it is probable that this education provided will affect their health physically, psychologically and socially, an examination of students' HRQOL is of importance. Also, no study investigating this subject among physical education and sports programme students was found in Turkey or other counties. Thus, the aim of the present study was to compare HRQOL among physical education and sport students with regard to the variables of "sex", "the levels of grade (the years of education)", "programmes of physical education and sport", "Joining at a sport club", and also "academic success",.

METHODOLOGY

Participants

The sample group consisted of a total of 526 students studying at Gazi University School of Physical Education and Sports in Ankara-Turkey who were randomly chosen.

Data Collection Tools

The data of this study was collected via the "Personal information form" and "SF-36 Scale." In the context of Personal information form, there were a series of questions about individuals' *sex*, *programme* (physical education and

sportprogrammes), *grade* (the year of education),*academic success* (weighted grade point average), and*joiningat sports club*(in addition to university programmes of physical education and sport, if he/she regularlyjoined at a sport club).

The SF-36 scale which determines students' HRQOL is a generic measure because it assesses health concepts that represent basic human values relevant to everyone's functional status and well-being (Ware and Sherbourne, 1992).A Turkish version of the SF-36 was used in the current study. The SF-36 includes two sections of physical and mental health questionnaires that each section has four scales, and subsequently, there are eight subscales altogether. The following scales are included in the physical health group: Physical functioning (PF) investigates the activities performed all day long (running, weight lifting, doing exercise, moving a table, climbing the stairs, kneeling down, walking etc.). Role-physical (role limitations due to physical health problems; RP) investigates whether the individual faces a problem at work or in other daily activities (for example, the time spent at work and for other activities, limitations, difficulties, making more effort while performing a task, etc.) with regard to his/her physical health. Pain (P) assesses the degree of bodily pain and to what extent the pain affects the individual's daily life. General health (GH) measures how the individual feels and how they assess their general health status. The following sections are included in mental health group: Vitality (VT) investigates whether the individual feels lively, energetic, tired or experiences any burnout. Social functioning (SF) questions to what extent physical and emotional problems affect an individual's social activities with his/her family, friends and other groups. Role-emotional (role limitations due to emotional problems; RE) investigate the impact of an individual's emotional problems (feeling depressed, anxious etc.) on work and other activities. Mental health (MH) investigates the individual's state of being angry, sad and calm and, feeling depressed, sorrowful or happy etc. and individual's adaptability. Instead of giving only one score, the scale gives individual scores for each scale and the scores vary from 0 to 100. While the "100" points represent a good health state, "0" represents a bad health state. In reliability studies of the Turkish version of SF-36, Cronbach's alpha coefficients were calculated for each scale and the values between 0.7324-0.7612 were obtained. Also, item-total score correlation coefficients were individually calculated for each scale with the relevant items. It was found between 0.4712-0.7348 for "PF," between 0.6883-0.9034 for "RF," between 0.7887- 0.8872 for "P," between 0.5690-0.7812 in "GH," between 0.6167- 0.7943 in "VT," between 0.8353-0.8445 for "SF," between 0.6539- 0.8257 for "RE," and between 0.6893-0.7815 in "MH," (Koçyiğit et al., 1999).

Data Analysis

The evaluation of the data was performed in SPSS 22 by using one-way analysis of variance (ANOVA), Tukey HSD test, the independent-samples t-test, and Pearson correlation coefficient.

FINDINGS

The findings with regard to the study group's demographic features are given in Table1.

Table1. Percentage and Frequency Distributions of the Physical Education and Sports Students According to their Demographic Features

Independent Variables		N	%
Sex	Female	224	42.6
	Male	302	57.4
	Total	526	100.0
Programme	Physical education and sports teaching	142	27.0
	Sports administration	137	26.0
	Coaching education	130	24.7
	Recreation	117	22.2
	Total	526	100.0
Grade	1	128	24.3
	2	152	28.9
	3	133	25.3
	4	113	21.5
	Total	526	100.0
Joining at a club	Yes	228	43.3
	No	294	55.9
	Missing	4	8
	Total	526	100.0
Academic Success	1.00-2.00	23	4.4
	2.01-3.00	342	65.0
	3.01-4.00	145	27.6
	Missing	16	3.0
	Total	526	100.0

As highest percentages for each Independence variable, 57.4% of the participants were male, 27.0% were students at the programme of physical education and sports teaching, 28.9% were in their second year of study, 55.9% did not join a sport club, and 65.0% had academic success between 2.01 to 3.00.

The independent-samples t-test was conducted to compare SF-36 Scales between male and female students (Table 2).

Table 2. Results of t-test for the Physical education and sports Students SF-36 Scales with regard to the Sex Variable.

	Female	Male		
Scale	X±SD	X±SD	t	P
PF	90.27±15.34	89.43±18.21	.556	.579
RP	81.25±32.64	83.20±28.84	-.723	.470
RE	63.69±41.05	68.54±38.81	-1.383	.167
V	62.94±18.67	67.45±17.52	-2.812	.005*
MH	69.05 ±16.63	70.00±17.06	-.636	.525
SF	68.35±22.52	73.22±22.54	-2.454	.014*
P	69.35±20.95	73.25±19.66	-2.169	.031*
GH	57.76±13.89	60.45±14.87	-2.133	.033*

When the Table 2 is examined, the male mean scores for "VT, SF, P and GH" scales were higher compared to the female scores, and a significant difference was observed between

them (p<.05). Therefore, at these scales, male students had better HRQOL in comparison with female students.

One-way ANOVA was conducted to compare SF-36-Scales among the levels of Grade (the years of education) (Table 3).

Table 3. One-way ANOVA Results of the Physical Education and Sports students SF-36-Scales according to the variable of Grade

	1.Grade	2.Grade	3.Grade	4.Grade		
Scale	X±SD	X±SD	X±SD	X±SD	F	P
PF	90.70±16.08	92.17±13.58	87.73±21.35	87.97±16.25	2.21	.086
RP	80.47±33.49	84.05±29.84	86.84±24.34	76.99±33.60	2.46	.062
RE	67.97±40.86	68.42±38.89	65.41±39.44	63.42±40.57	.433	.730
VT	65.90±1.74	66.58±1.83	66.24±1.82	62.86±1.87	1.07	.361
MH	71.44±15.42	69.79±17.78	69.20±17.47	67.72±16.44	1.01	.389
SF	71.88±21.57	71.46±23.70	72.91±22.73	67.81±22.21	1.14	.331
P	71.04±2.06	72.72±2.08	71.74±2.09	70.53±1.86	.291	.832
GH	56.76±16.09	62.04±13.14	58.43±15.05	59.51±13.24	3.31	.020*

There were significant differences among levels of Grade at the scale of GH. Post hoc comparisons using the Tukey HSD test indicated that the mean score for second grade students was significantly higher than first grade students (p<.05). Thus, second grade students had higher HRQOL compared to first grade students in this scale.

One-way ANOVA was conducted to compare SF-36-Scales among the physical education and sportprogrammes (Table 4).

Table 4. One Way ANOVA results of the physical education and sports Students SF-36 Scales with regard to the programme variable

	Physical education and sports teaching	Sports administration	Coaching education	Recreation		
Scale	X±SD	X±SD	X±SD	X±SD	F	P
PF	91.09±14.62	89.16±17.99	88.62±17.14	90.24±18.52	.571	.634
RP	78.52±32.97	83.76±30.41	83.23±30.56	84.40±27.21	1.06	.366
RE	60.33±42.00	66.18±39.81	70.51±37.50	69.80±39.14	1.86	.136
VT	64.58 ±1.82	64.30±1.82	63.49±1.86	70.39±1.68	3.74	.011*
MH	70.79±16.09	66.04±16.89	68.73±17.51	73.27±16.32	4.3	.005*
SF	66.64±23.19	71.44±22.84	71.80±21.36	75.53±22.41	3.43	.017*
P	66.92±2.11	73.07±1.97	71.92±1.92	75.17±2.03	4.05	.007*
GH	57.89±15.56	60.39±13.98	58.56±14.82	60.58±13.35	1.12	.342

There were statistically significant differences among programmes at the scales of VT, MH, SF, and P. Post hoc comparisons using the Tukey HSD test indicated that there were only statistically significant defferences between the “recreation” programme students’ mean scores and the rest of programmes students’ as the scores of “recreation” programme were higher.Themean scoreof “recreation” programme at the “VT” scale was higher compared to “coaching education,” “physical education and sports teaching” and “sports administration”. Atthe MHscale, their meanscore washigher compared to “sports administration”.Moreover, at the“SF” and “P” scales, their scoreswerehigher than “physical education and sports teaching” (p<0.05). Thus, the HRQOL of recreation programme students was better at these scales in comparison with other programm students.

The independent-samples t-test was performed to compare SF-36 scales betweenthe students joining at a sport cluband the rest of students (Table 5).

Table 5. t-test Results of physical education and sports students SF-36 Scales with regard to joiningat a sport club

	Yes	No		
Scale	X±SD	X±SD	t	P
PF	90.31±17.53	89.35±16.76	.635	.526
RP	81.80±31.01	82.57±30.29	-.285	.776
RE	69.30±38.23	64.51±40.75	1.378	.169
VT	67.76±16.71	63.69±19.11	2.596	.010*
MH	71.61±16.20	68.00±17.32	2.453	.015*
SF	73.23±22.38	69.86±22.64	1.701	.090
P	70.77±20.38	72.45±20.14	-.942	.346
GH	61.97±12.81	57.16±15.44	3.885	.000*

The mean scores for the "VT, MH and GH" scales for students who joinedat sports club were higher than those who do not joinatclub, and a significant difference was observed ($p<.05$). Therefore, the students who joined at sports club had better HRQOL in comparison with others at these scales.

A Pearson correlation coefficient was computed to assess the relationship between SF-36 scales and academic success (Table 6).

Table 6. Pearson Correlation Results regarding SF-36 Scales and academic success of Physical Education and Sports Students

		PF	RP	RE	VT	MH	SF	P	GH
Academic success	r	.014	-.033	.045	.064	-.006	-.007	.000	.044
	p	.757	.455	.305	.152	.891	.866	.993	.326

N=510

As can be seen in Table 6, there were no siginificant relationship between the academic success of the students and theSF-36 Scales ($p>.001$). Thus,Increases or decreases in academic success were not correlated with thechangesin levels ofHRQOL.

DISCUSSION AND CONCLUSION

This study found that the HRQOL for the "VT, SF, P and GH" scales of male students were better compared to the female students. This finding is in parallel with the majority of the studies performed in Turkey and in the other countries. The study conducted by Latas, Milovanovic, Stojkovic, Ralic and Jovanovic (2013) on medical students and students from different programmes revealed that the HRQOL of male students in both groups were better than female students. Genç, Şener, Karabacak and Üçok (2011) investigated differences regarding the physical activity and HRQOL between male and female young adults and found that total physical activity and the HRQOL physical and mental scales of male students were better than female students. The study conducted by Hosseinzadeh Asl and Poursharifi (2011) on 240 high school students studying at high schools in the city of Tabriz, Iran illustrated that "PF and VT" scales of the male students were higher than the females. The study also revealed that the HRQOL of female students was lower compared to males in a general sense. The study performed by Yang et al., (2009) on 3570 teachers in the Shenyang region of China found that "PF, P and RP" scales in females were lower compared to males. Vural (2010) stated that all HRQOL scales of males who have

a desk job were better compared to females. Hence, the results obtained of current study are in parallel with the literature. Different biological, social and cultural structures of females could provide an explanation for the fact that female students had a lower HRQOL. At the same time, the female gender is a demographic variable that affects all areas of HRQOL. However, in contrast to the literature, this study did not find a significant difference between male and females with regard to the "PF and PH" scales. This finding could result from the fact that the study sample (physical education and sports students) is different. In other words, it suggests that the effect of physical education and sports on these scales of females' HRQOL is higher than males'. The study performed by Tekkanat (2008) on 391 students studying at different teaching programmes in Turkey supports this finding. It was identified that the physical activity levels of males were not determinant factor for physical and social quality of life. However, the physical activity levels were found to be a determinant for the physical quality of life of female students.

It was found that the "GH" scale of the second grade students' HRQOL was better than the first grade students. No study on this subject was found in the literature. But some researchers lay emphasis on the fact that sports and physical activity had a positive effect on HRQOL for all individuals (Çetin, 2010; Genç et al., 2011; Uritani et al., 2011; Vuillemin et al., 2005; Snyder et al., 2010). In the light of the findings of these researches, in present study, when the number of students joining at a sport club is examined for each grade (1st grade = 38, 2nd grade = 81, 3rd grade = 68 and 4th grade = 41) the fact that the second grade students had higher number of students joining at a sport club could provide an explanation for the fact that the "GH" scale of this grade is better. Also, that the scores of the first grade students are low could be attributed to their adaptation process into a new environment.

It was identified that the HRQOL "V" scale for "Recreation" programme students was better compared to "coaching education," "physical training and sports teaching" and "sports administration" programme students; at the "MH" scale, it was better compared to "sports administration" programme students; and at the "SF" and "P" scales it was better than "physical education and sports teaching" programme students. When the literature was reviewed, no study on this subject was found. The fact that the abovementioned scales and their HRQOL are significantly better among recreation programme students compared to other programmes in a general sense, could be associated with their schedules. Other than common courses with the other programmes, recreation programme students receive education in activities like "bridge, procreative athletics, nature photography, paragliding, modern dance, Pilates, paintball and yoga". Therefore, it is thought that these courses specific to the recreation programme positively affect the HRQOL of the students. In parallel with the finding of the present study, Bahadır (2010) illustrated that at the end of recreational activities in which an educational value was applied for 13-15 aged students for 20 weeks, these activities made a positive contribution to the life quality states of the students.

It was detected that the "VT, EW and GH" scales of HRQOF of the physical education and sport students joining at a sport club were better compared to those who did not joining at a club. Regarding these findings, no studies were found that they performed on the physical education and sport students; however, there are some studies that they suggested when people join at a sport, or when they have high levels of physical activity, their HRQOL is improved too. A study by Çetin (2010) of primary school teachers identified that "PH and GH" scales of those

who engaged in a branch of sports were better than those who did not. A study by Genç et al. (2011) of young adults found that performing physical activity at a moderate and intensive level affected the HRQOL in a positive manner. Snyder et al. (2010) revealed that the "PF, SF, EW and GH" scales of those who joining at sports were higher than those who do not; however, the "P" scale was lower. The results of the study by Castillo and Molina-García (2009) performed on 639 students between the ages of 18-29 found that the physical activity scale was moderate and underlined that physical activity improves well-being. Thus, the results obtained of current study confirm the literature and illustrate that, as well as the university programmes of physical education and sport, actively joining at sports in a club, positively affects the HRQOL.

No correlation between the academic success of physical education and sports students and their HRQOL was found. A study by Dundar et al. (2006) conducted on 17 year old and above students at an Apprenticeship Training Centre identified that students who consider themselves poor with regard to their academic success find their life quality lower compared to those who find their life quality good in psychological, social and environmental areas. A study by Yean (2009) performed on 6th, 7th, and 8th grade primary school students identified that the life quality scores of the students who had good academic success were high and the life quality scores were low among students who had a high absence rate from school and low academic success. The fact that the study sample group was different from our sample group could provide an explanation for these results. Henning et al., (2013) detected no relationship between the academic success of New Zealand medical students and their life qualities, thereby showing parallelism with the result of our study.

Although the research has reached its goals, there were some unavoidable limitations. The study's participants were all Turkish citizens, and the culture can have some strong effects on HRQOL. Therefore, to generalize the results for other societies, the study should have involved more participants from other cultures. Moreover, all the participants were students studying at Gazi University School of Physical Education and Sports. This would limit the generalization of study's results to the students studying at other universities' school of physical education and sports in Turkey. Thus, a worthwhile direction for future research would be examining larger samples of students with different cultural backgrounds. Another recommendation for future research can be considering the variety of physical education curriculums at universities, and comparing the effects of them on HRQOL of students; because different universities can have quite different curriculums.

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