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Full Length Research Paper

Health-related quality of life level in terms of sports age and weekly training frequency

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ABSTRACT

Being physically active during the day and keep it in all the life along gives us the feeling well both physically and mentally. The purpose of the presented study is to investigate the effect of weekly training intensities and sport ages of the Faculty of Sport Sciences, Department of Coach Training students' health-related physical and mental quality of life. 52 female and 56 male students participated in the study. 74% of the participants were in the 18-23 age range, 18.5% were in the 24-28 age range and 7.4% were in the 28-32 age range. SF-36 Quality of Life Scale was used as a data collection tool SF-36 Quality of Life Scale consists of 8 sub-dimensions and 36 items. Participants who had a weekly training intensity of 5 days or more had higher scores than those who had training intensity for 1-2 days and 3-4 days in physical health components sub-dimensions. Participants who had a weekly training intensity of 1-2 days had higher scores than the scale scores of those who had a weekly training intensity of 3-4 and 5 days more, in mental health components sub-dimensions. In mental health subscale scores and weekly training intensity scale scores, it was seen that there was a significant difference between those who trained for 1-2 days and those who trained for 3-4 days. In conclusion, within the scope of the study involving a department of a sports sciences faculty, it can be said that being physically active is improving and protecting both physical and mental health status, considering the quality of life scale scores.

Keywords: Quality of life, training intensity, sports age, exercise, university students.

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INTRODUCTION

Although rapidly advancing global technological developments offer opportunities to facilitate our daily life, these possibilities reduce the mobility capacity of people. Day by day, we move less and spend less energy, both in our business life and at home. Accordingly, the amount of calories we get through foods is more than the calories we spend with daily activities, causing an increase in adipose tissue. Inflammatory and pro-inflammatory adipocytokines, whose release increases due to the increase in adipose tissue, can lead to different metabolic disorders such as diabetes, obesity, insulin resistance, and metabolic syndrome. Such metabolic disorders cause the person's quality of life to be low both physically and mentally. It is known that as our level of physical activity increases, we feel better physically and mentally. Studies have shown that encouraging children and teenagers to exercise can protect them from certain diseases such as obesity and coronary heart disease (Veugelers and Fitzgerald, 2005; Brown and Summerbell, 2009; Janssen and Leblanc, 2010; Hallal et al., 2006). The awareness of being physically active, which should be gained in childhood, will provide enough contributions for the child to be a healthy individual both physically and mentally throughout his/her life.

There are various scales used to measure an individual's health-related quality of life. The SF-36 Quality of Life scale is frequently used as health-related quality of life scale. SF-36 Quality of Life Scale defines to what extent a person's physical health status affects his / her functional ability and perceived well-being in the mental, social and physical aspects of life (Ware and Sherbourne, 1992). The scale consists of 36 items, and these items provide the measurement of two components with a combination of 8 sub-dimensions. While physical role (FR), physical function (FF), pain (A), and general health perception (GHQ) constitute the Physical Health

(FS) component, vitality (C), social function (SF), emotional role (ER) and mental health constitutes the general Mental Health (RS) component. The scores that can be obtained from the scale are between 0 and 100.0 points indicate bad health and 100 points indicate good health (Aksungur, 2009).

Elite athletes and sports sciences faculty students are physically active both in terms of their school and profession, in addition to their daily life. While elite athletes train every day for success, students of the faculty of sports sciences regularly do physical activity due to the applied lessons they take as part of their curriculum. In addition, the weekly training intensity of the faculty students participating in the competitions varies. In light of this information, the presented study aims to investigate the effect of weekly training intensities and sports ages of the Faculty of Sport Sciences Department of Coach Training students' health-related physical and mental quality of life.

METHODS

Participants

The sample of this study was the students of Firat University, Faculty of Sport Sciences, Department of Coach Training. The scale forms were distributed to the students and the necessary explanations were made about the scale and they were asked to fill it in without a time limit. Some descriptive data of the participants are shown in Table 1.

Table 1. Descriptive data of the participants.

Parameters	N	%
Gender		
Female	52	48.1
Male	56	51.9
Age (year)		
18-23	80	74.1
24-28	20	18.5
28-32	8	7.4
Training age (year)		
2-5	26	24.1
6-9	37	34.3
10+	45	41.7
Weekly training frequency (day)		
1-2	27	25.0
3-4	46	42.6
5+	35	32.4
Total	108	100

Data collection

SF-36 Quality of Life Scale was used as a data collection tool SF-36 Quality of Life Scale consists of 8 sub-dimensions and 36 items. These sub-dimensions, items and evaluation criteria are shown in Table 2.

Table 2. Sub-dimensions, items and evaluation criteria.

Parameters	Sub-dimensions	Items	Lowest raw score	Possible raw score
Physical health components	Physical function	3 (a+b+c+d+e+f+g+h+i+j)	10	20
	Physical role	4 (a+b+c+d+)	4	4
	Pain	7+8	2	10
	General perception of health	1+11 (a+b+c+d)	5	20
	Exhilaration	9 (a+e+g+i)	4	20
Mental health components	Social function	6+10	2	8
	Emotional role	5 (a+b+c)	3	3
	Mental health	9 (b+c+d+f+g)	5	25

Score calculation: Achieved – lowest raw/ possible raw score ×100 (6).

RESULTS

In Table 3, physical function scale scores (23.17) among the physical health status components of the participants who have a weekly training intensity of 5 days or more are higher than the values of those who have training intensity for 1-2 days and 3-4 days. When the general health scores are examined, the scale scores (15.05) of those who have a weekly training intensity of 5 days or more are higher than those who have a weekly training intensity of 1-2 and 3-4 days.

In Table 4, the exhilaration scale scores (12.62) among the mental health status components of the participants who have a weekly training intensity of 1-2 days are

Table 3. Weekly training intensities and physical health component sub-dimensions.

Weekly training (day)		Physical function	Physical role	Pain	General health
1-2	$\overline{X}$	21.33	6.77	8.62	14.40
	N	27	27	27	27
	S.D.	3.68	1.28	1.64	3.04
3-4	$\overline{X}$	22.36	6.28	8.23	13.58
	N	46	46	46	46
	S.D.	5.30	1.24	1.49	2.95
5+	$\overline{X}$	23.17	5.77	8.40	15.05
	N	35	35	35	35
	S.D.	3.45	1.33	1.83	3.61

Table 4. Weekly training intensities and mental health component sub-dimensions.

Weekly training (day)		Exhilaration	Social function	Emotional role	Mental health
1-2	$\overline{X}$	12.62	5.48	4.62	18.29
	N	27	27	27	27
	S.D.	2.67	1.01	1.00	2.39
3-4	$\overline{X}$	12.04	5.50	4.45	15.89
	N	46	46	46	46
	S.D.	3.04	1.50	0.91	2.78
5+	$\overline{X}$	11.65	5.25	4.14	17.65
	N	35	35	35	35
	S.D.	2.88	1.44	0.94	3.68

higher than the scale scores of those who have a weekly training intensity of 3-4 and 5 days more. After examining the mental health scale scores, the quality of life scale scores of those who had a weekly training intensity of 1-2 days (18.29) was higher than those with a weekly training intensity of 3-4 and 5 days or more.

In Table 5, the physical function scale scores (22.75) of the general health components of the participants who have sports ages of 6-9 years are higher than the scale scores of those who have sports ages of 2-5 and 10 years and above. When the general health scale scores are examined, those who have a sports age of 10 years or more have a higher quality of life scale scores (15.40) than those with sports ages of 2-5 and 6-9 years.

Table 5. Sports age and physical health component sub-dimensions.

Sports age (year)		Physical function	Physical role	Pain	General health
2-5	$\overline{X}$	21.42	7.11	8.50	13.61
	N	26	26	26	26
	SS	3.82	1.14	1.98	2.36
6-9	$\overline{X}$	22.75	5.81	7.89	13.35
	N	37	37	37	37
	SS	4.84	1.32	1.52	3.44
10+	$\overline{X}$	22.60	6.08	8.73	15.40
	N	45	45	45	45
	SS	4.36	1.20	1.43	3.21

In Table 6, exhilaration scale scores (12.42) of the participants who have sports ages of 10 years or more are higher than the scale scores of those who have sports ages of 2-5 and 6-9 years. When the mental health scale scores were examined, it was found that the quality of life scale scores of those with sports ages of 10 years or more (17.46) was higher than those with sports ages of 2 to 5 and 6 to 9 years.

When examining the Physical health status subscale scores and Weekly Training Intensity scale scores from the life quality components in Table 7, it is seen that there is no significant difference. When the Mental Health subscale scores and Weekly Training Intensity scale scores, which are among the life quality components, were examined, it was seen that there was a significant difference between those who trained for 1-2 days and those who trained for 3-4 days (3.14*) ($p < 0.05$).

Table 6. Sports age and mental health component sub-dimensions.

Quality of life components	(I) W.T.I. Day	(J) W.T.I. Day	$\overline{X}$ (I-J)	S.D.	p
Physical health	1-2	3-4	0.66	1.62	0.91
		5	-1.25	1.71	0.74
	3-4	1-2	-0.66	1.62	0.91
		5	-1.92	1.50	0.41
	5+	1-2	1.25	1.71	0.74
		3-4	1.92	1.50	0.41
Mental health	1-2	3-4	3.14(*)	1.29	0.04
		5	2.32	1.36	0.21
	3-4	1-2	-3.14(*)	1.29	0.04
		5	-0.82	1.19	0.77
	5	1-2	-2.32	1.36	0.21
		3-4	0.82	1.19	0.77

Table 7. Quality of life components.

Quality of life components	(I) W.T.I. Day	(J) W.T.I. Day	$\overline{X}$ (I-J)	S.D.	p
Physical health	1-2	3-4	0.66	1.62	0.91
		5	-1.25	1.71	0.74
	3-4	1-2	-0.66	1.62	0.91
		5	-1.92	1.50	0.41
	5+	1-2	1.25	1.71	0.74
		3-4	1.92	1.50	0.41
Mental health	1-2	3-4	3.14(*)	1.29	0.04
		5	2.32	1.36	0.21
	3-4	1-2	-3.14(*)	1.29	0.04
		5	-0.82	1.19	0.77
	5	1-2	-2.32	1.36	0.21
		3-4	0.82	1.19	0.77

DISCUSSION

A physically inactive lifestyle and improper eating habits are factors that seriously threaten public health. In addition to the genetic features, the popular sedentary lifestyle shows its effect stronger. The simplest thing we need to do to prevent metabolic diseases is to be physically active. Studies show that serious diseases such as obesity, diabetes, coronary heart disease, and hypertension are caused by a lack of physical activity (Ströhle, 2009). Similarly, studies in the literature have shown that lack of physical activity causes mental disorders such as anxiety and depression (Abu-Omar et al., 2004; Dunn et al., 2008; Motl et al., 2004).

Considering the sample group of the present study, it can be said that the limitation of this study is that it only covers the coach training department students. When this sample group is examined, it would be more correct to generalize in terms of people with similar demographic characteristics. This study tried to examine the quality of life of the sample group in terms of sports age and weekly training intensity.

When the results of the sub-dimensions among the physical health component of the quality of life scale are examined in terms of weekly training intensity, it is seen that the scale scores of the participants increase as the weekly training intensity increases (Table 3). This result shows that physical activity is very effective for people to feel physically fit. Similar to this result, there are studies in the literature in which regular physical activity at all ages is recommended for both healthy people and people with certain chronic diseases in terms of physical health (Warburton and Bredin, 2016; Colberg et al., 2016; Paterson and Warburton, 2010).

When the results of the sub-dimensions among the mental health component of the quality of life scale in terms of weekly training intensity are examined, it is seen that the average of the participants who train for one or two days a week is generally higher (Table 4). However, when the table is considered in general, the fact that the scores in each sub-dimension are above the average value in a way to form a unity proves the positive effect of being physically active on mental health. In support of this finding, studies on physical activity and mental health status in children and adolescents have shown that physical activity has improved and protective effects on mental health (Biddle and Asare, 2011; Best, 2010; Larun et al., 2006).

In terms of sports age, when the results of the sub-dimensions that constitute the physical health component of the quality of life scale are examined, it is seen that the increasing sports age as a general impression of the table makes the participants feel physically better (Table 5). Considering the training duration throughout life, the cardiovascular properties that develop during this time increase the amount of oxygen and metabolic nutrients carried to every part of the body (Laughlin and Roseguini, 2008). Having stronger cardiorespiratory properties, the organism uses the amount of air taken into the body more efficiently. The heart, which is strengthened by continuous physical activities, increases the blood flow and volume and increases the physical health of the person (Rankinen et al., 2012; Rivera-Brown and Frontera, 2012).

In terms of sports age, when the results of the sub-dimensions among the mental health component of the quality of life scale are examined, it is seen from the table that as the age of sports increases, the mental health levels of the participants increase (Table 6).

In addition to this information, when the effect of weekly training intensities on both physical and mental health components are examined, it is seen that there is no statistically significant difference in the physical health component, and there is a statistically significant difference in mental health components in favor of those who train for one or two days in a week (Table 7). As explained in the previous paragraphs, the protective and healing effects of physical activity, from the lowest to the highest, cannot be ignored.

As a result, within the scope of the study involving a department of a sports sciences faculty, it can be said that being physically active is improving and protecting both physical and mental health status, considering the quality of life scale scores. Especially, increasing the weekly training frequency daily may result in more effective protection and recovery. It is very important to be physically active throughout life in terms of protecting public health and having a strong immune system individually. Especially in global pandemics such as the Covid-19, which affects life in every field, we have all seen how important public health is and the power of the individual immune system have effects on country economies and relations between countries. Minimizing such global effects is possible by adopting a physically active lifestyle on an individual basis and by gaining proper eating habits.

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