International Journal of Sport Culture and Science
December 2020 : 8(4)
ISSN : 2148-1148
Doi : 10.14486/IntJSCS.2020.617

Investigation of the Relationship between Healthy Lifestyle Behavior, Quality of Life and Leisure Constraint Levels of Amputee Individuals Who Take Sports Education

Ali Ozan SARIGÖZ[1], Fatih YAŞARTÜRK[2]
[1] Bartın University, Education Sciences Institute, Bartın, TURKEY
https://orcid.org/0000-0003-4861-9868
[2] Bartın University, Faculty of Sport Sciences, Bartın, TURKEY
https://orcid.org/ 0000-0003-4934-101X
Email: aliozansarigoz@hotmail.com, fatihyasarturk@gmail.com

Type: Research Article (Received: 01.12.2020 - Accepted: 04.12.2020)

Abstract

This study analyzes the relationship between a healthy lifestyle behavior, quality of life, and leisure constraint levels of amputee individuals receiving sports education. The research participants include 106 volunteer amputee football athletes from the amputee football super league teams of the Turkish Sports Federation for the Physically Disabled. The study utilizes the "Personal Information Form" prepared by the researchers, "Healthy Lifestyle Behaviors Scale (HLBS)" developed by Walker, Sechrist, and Pender (1987) and adapted to Turkish by Esin (1999) as the data collection tool. "World Health Organization Quality of Life Short Form (WHOQOL-BREF-TR)" was employed, which was developed by the World Health Organization and adapted into Turkish by Fidaner et al. (1999). Besides, "The Leisure Constraints Questionnaire-18 (LCQ)" developed by Alexandris and Carroll (1997) and adapted to Turkish by Gürbüz and Karaküçük (2007) was utilized. In analyzing the data, frequency, percentage, t-test, ANOVA, and Pearson Correlation tests were employed to analyze the data. Per the study findings, a significant difference was found between the sub-dimensions of HLBS ($p<0,05$) in the results of the ANOVA test by the age variable, but no significant difference was found between the sub-dimensions of WHOQOL and LCQ ($p>0,05$). No significant difference was found between the sub-dimensions of HLBS, WHOQOL, and LCQ in the t-Test results ($p>0,05$) by the amputation time variable. Besides, per the correlation analysis results, a statistically moderate and positive correlation was found between HLBS and WHOQOL and LCQ ($p>0,05$). Similarly, a moderate and positive correlation was found between WHOQOL and LCQ ($p>0,05$). In conclusion, as the quality of life increases mentally and socially due to the leisure time activities in which amputee individuals receiving sports education participate, we can observe that their healthy lifestyle behaviors are directly affected and positively affect their leisure constraint mentally and physically.

Keywords: Amputee individuals who take sports education, Healthy lifestyle behaviors, Quality of life, Leisure constraints

Introduction

As it is known, everybody is a disabled candidate and can experience it before, during, or after birth. Being disabled can affect a person physically and mentally as well as psychologically. In particular, negative opinions and behaviors of society towards people with disabilities affect the process quickly. Change can begin with a conscious society and active or passive participation in recreational sports activities.

The World Health Organization (WHO) defines health as a condition without disease or disability and a state of physical, mental, and social well-being (WHO, 2017). Health behavior is referred to as all kinds of behavior that an individual believes and does to be healthy, protected from diseases, and maintains well-being. A healthy lifestyle is defined as controlling all behaviors that may affect the health of the individual, choosing and regulating the behaviors appropriate to the health condition while performing daily life activities with his decision-making ability and making these behaviors a habit (Kostak et al., 2014). Examples of healthy lifestyle behaviors include regular physical activity, adequate sleep, good communication in social relationships, regular and balanced nutrition (Hu, Liu & Wilett, 2011). With increasing sensitivity towards a healthy lifestyle, the quality of life can be improved by providing control over the individual's health, lifestyles that can pave the way for diseases can be changed, and positive, healthy lifestyle behaviors can be acquired, accordingly (Cirhinlioğlu, 2001). Therefore, increasing the quality of life will improve happiness by being satisfied in many disabled or amputee individuals.

Quality of life is a broad concept and represents an individual's well-being and subjective satisfaction in different life areas. Quality of life is referred to as how individuals perceive themselves based on their goals, expectations, interests, and living standards that are constituted within the culture and values in their lives (Akvardar et al., 2006; Özçelik & Karaçam, 2014). Quality of life is a concept that describes the difference between family, work-life, socioeconomic conditions and the goals, expectations, hopes, dreams, and realities of the person and involves the perception of satisfaction and well-being from the daily life of the person (Eser, Yüksel & Sieberer, 2008). Therefore, increasing the quality of life will motivate the disabled or amputated individual and create a desire for efficient leisure activities.

While the concept of leisure time is defined as the time allocated for compulsory work such as rest, study, nutrition, among others, they observe that what matters is that people spend their time more efficiently by participating in quality activities in the free time (Gürbüz and Karaküçük, 2007). The concept of disability refers to the leisure literature, the reasons that prevent or restrict people's participation in recreational activities in their leisure time and are also perceived by the individual (Öztürk, 2016). Today's living conditions pushed individuals to leisure activities to achieve peace and happiness, and the need for leisure activities improved in parallel with it. Except for the increase in need, we observe in many research findings that participation in such activities, which are considered significant for people and societies' health, is limited or that participation is prevented for different reasons (Alexandris & Carroll, 1999; Devine, 2004; Ayhan & Özel, 2020). It is vital to assess leisure activities with sports activities and make it a pivotal issue to overcome leisure constraint.

Therefore, sports competitions' rehabilitative and therapeutic effects have begun to be employed as a physical, mental, emotional, and social development tool for physically disabled people (Kabasakal, 2007). Being able to move, exercise, participate in sports

activities, regardless of their disability and degree, pleasures the person, and the admiration toward mobility positively affects the motivation of a person for life (Özer, 2001).

Therefore, we can note that some ways to change the motivation and general condition of disabled or amputee individuals in sports education will positively affect both the quality of life and the healthy lifestyle by performing recreational and socializing leisure time activities.

In this context, this study analyzes the relationship between a healthy lifestyle, quality of life, and leisure constraint levels of amputee individuals receiving sports education.

Method

Research Model

We utilized the "Descriptive and Relational Screening Model" for research purposes. Descriptive screening models are conducted on the whole population or a group or sample to make a general judgment in a population composed of many elements. (Karasar, 1994). Relational screening models research models aiming to identify the existence and/or degree of co-change between two or more variables (Karasar, 2017).

Research population and sampling

The research population includes 102 volunteer amputee football athletes from the following amputee football super league teams of Turkish Sports Federation for the Physically Disabled;

- TSK Rehabilitasyon Merkezi Engelliler Sport Club,
- Osmanli Engelliler Sport Club,
- Izmir Büyüksehir Belediye Amputee Sports Club,
- Anadolu Erciyes Engelliler Sports Club,
- Sahinbey Belediyesi Sports Club,
- Malatya Büyüksehir Sports Club,
- Bursa Amputee Sports Club,

which are chosen with a random sampling method.

Data Collection Tools

The study employs a personal information form developed by the researchers as the data collection tool. The personal information form includes questions for the participants about age, monthly income, amputee time, national athlete status, and their teams.

The Healthy Lifestyle Behavior Scale (HLBS) was adapted into Turkish by Esin (1999), which was developed by Walker, Sechrist, and Pender (1987) to measure the health-promoting behaviors of individuals concerning a healthy lifestyle. The scale, which consists of 48 items in total and six sub-dimensions: "self-actualization, health responsibility, exercise, nutrition, interpersonal support and stress management", was prepared in a 4-point Likert type and was scored as "1 - Never" and "4 - Regularly".

World Health Organization Quality of Life (WHOQOL) was developed by the World Health Organization (1996) to identify the quality of life of the individual, and the WHOQOL-BREF short form consisting of 26 questions was adapted to Turkish by Fidaner et al. (1999). A total of 27 items of WHOQOL are scored by reverse coding of the 3rd, 4th, 26th, and 27th questions and consist of five sub-dimensions such as "general health, physical health,

psychological, social relationships, and environment". Area scores are calculated between 4-20, and the higher the score, the higher the quality of life (Oliver, 1997).

The Leisure Constraints Questionnaire -18 (LCQ) was developed by Alexandris and Carroll (1997) to identify the situations that may prevent individuals from participating in recreational activities, and adapted to Turkish by Gürbüz and Karaküçük (2007) and, its short form was adapted to Turkish by Gürbüz, Öncü and Emir (2020). The LCQ was prepared in a 4-point Likert type consisting of 18 items and six sub-dimensions such as "individual/psychological, lack of knowledge, facilities/services and lack of partners, time and lack of interest" and scored as "1 - Absolutely not important" and "4 - Very important". The high score obtained from the sub-dimensions of LCQ indicates that the perception of leisure activities' constraint is high.

Data Analysis

SPSS 20.0 package program was employed to analyze the data. The descriptive statistical methods, independent sample t-test, one-way analysis of variance (ANOVA), and Pearson correlation test results were analyzed and resolved. The level of significance calculated for the equality of variances was accepted as $p < 0.05$ (Büyüköztürk, et al., 2012).

Results

Table 1. Descriptive Statistics Results of Participants According to Demographic Variables

	Groups	n	%
Age (29,25±7,83)	20 years and under	14	13,7
	21-25 years old	26	25,5
	26-30 years old	24	23,5
	31-35 years old	18	17,6
	36 years and older	20	19,6
Monthly İncome	2000 TL and below	40	39,2
	2001-3000 TL	34	33,3
	3000 TL over	28	27,5
Amputation time	Prenatal	33	32,4
	Post-natal	69	67,6
National athlete	Yes	31	30,4
	No	71	69,6
Team including	TSK Reh.Merk.Eng.SK	16	15,7
	Osmanli Eng. SK	20	19,6
	İzmir Büyüksehir BLD Ampute Futbol SK	15	14,7
	Anadolu Erciyes Eng SK	13	12,7
	Sahinbey Belediyesi SK	14	13,7
	Malatya Büyüksehir SK	12	11,8
	Bursa Ampute SK	12	11,8

According to the table, the 20 years and under age of 102 amputees receiving sports training 29,25 was determined as 13.7%. And also 25.5% for aged 21-25, 23.5% for aged 26-30, 17.6% for between the ages of 31-35 and 19.6% of them were determined to be 36 years old and above. The monthly income of 39.2% of the participants was 2000 TL and below, 3.3% of the participants was 2001-3000 TL, 27.5% of the participants was over 3000 TL and 32.4% of prenatal, 67.4% of post-natal have amputee time. 30.4% of the participants were national

athletes. The teams they played were 15.7% TSK Rehberlik Merkezi Engelli, %19,6 Osmanli Engelliler, %14,7 Izmir Büyüksehir Belediyesi Ampute Futbol, %12,7 Anadolu Erciyes Engelli, %13,7 Sahinbey Belediyesi, %11,8 Malatya Büyüksehir, %11,8 Bursa Amputee sports clubs.

Table 2. According to the Age Variable of the Participants HLBS ANOVA Test Results

Sub-scales	Age Groups	n	$\overline{X}$	SS	F	p	Significant Difference
Self-actualization	20 years and under	14	2,75	0,61	3,28	0,014*	B,C,D>E
	21-25 years old	26	2,86	0,50			
	26-30 years old	24	2,83	0,52			
	31-35 years old	18	3,01	0,47			
	36 years and older	20	2,44	0,47			
Health responsibility	20 years and under	14	2,67	0,56	2,87	0,027*	C,D>E
	21-25 years old	26	2,73	0,55			
	26-30 years old	24	2,89	0,53			
	31-35 years old	18	3,06	0,49			
	36 years and older	20	2,53	0,50			
Exercise	20 years and under	14	2,84	0,46	2,98	0,023*	C,D>E
	21-25 years old	26	2,77	0,48			
	26-30 years old	24	2,91	0,52			
	31-35 years old	18	3,04	0,55			
	36 years and older	20	2,51	0,53			
Nutrition	20 years and under	14	2,83	0,62	1,69	0,159	-
	21-25 years old	26	2,72	0,61			
	26-30 years old	24	2,85	0,55			
	31-35 years old	18	3,06	0,51			
	36 years and older	20	2,60	0,56			
Interpersonal support	20 years and under	14	2,67	0,54	2,70	0,035*	C,D>E
	21-25 years old	26	2,75	0,64			
	26-30 years old	24	2,83	0,52			
	31-35 years old	18	3,13	0,45			
	36 years and older	20	2,58	0,57			
Stress management	20 years and under	14	2,79	0,58	1,88	0,120	-
	21-25 years old	26	2,81	0,56			
	26-30 years old	24	2,91	0,54			
	31-35 years old	18	2,99	0,57			
	36 years and older	20	2,53	0,56			
HLBS	20 years and under	14	2,76	0,53	2,74	0,033*	C,D>E
	21-25 years old	26	2,77	0,53			
	26-30 years old	24	2,87	0,48			
	31-35 years old	18	3,05	0,46			
	36 years and older	20	2,53	0,47			

* p<.05 A= 20 years and under, B= 21-25 years old, C= 26-30 years old, D= 31-35 years old, E= 36 years and older

According to the table, when examined in terms of age variable "self-actualization, health responsibility, exercise, interpersonal support", it can be seen the participants HLBS total mean scores and sub-dimensions. Sub-scales and HLBS in total score average a statistically significant difference was detected (p<0,05). "Self-actualization" significant difference in sub-dimension was "21-25 years old, 26-30 years old and 31-35 years old" group of persons "36 years and older" were found to be beneficial for amputees in the group. Also "health responsibility, exercise, interpersonal support bottom sizes and HLBS" significant differences

"26-30 years old and 31-35 years old" group of persons "36 years and older" have been found to be beneficial for the individuals in the group.

Table 3. According to the Age Variable of the Participants WHOQOL ANOVA Test Results

Sub-scales	Age Groups	n	$\overline{X}$	SS	F	p
General health	20 years and under	14	12,32	4,10	0,87	0,487
	21-25 years old	26	12,60	4,09		
	31-35 years old	18	13,61	3,35		
	36 years and older	20	11,63	4,08		
Physical health	20 years and under	14	11,73	3,96	1,51	0,207
	21-25 years old	26	11,51	3,71		
	31-35 years old	18	13,65	3,00		
	36 years and older	20	10,75	4,03		
Psychological	20 years and under	14	12,44	4,22	1,36	0,253
	21-25 years old	26	11,31	3,58		
	31-35 years old	18	13,89	3,37		
	36 years and older	20	11,63	4,25		
Social relationships	20 years and under	14	12,14	6,22	0,90	0,469
	21-25 years old	26	11,79	5,27		
	31-35 years old	18	13,89	4,54		
	36 years and older	20	11,08	4,50		
Environment	20 years and under	14	12,14	4,03	1,01	0,408
	21-25 years old	26	11,58	4,24		
	31-35 years old	18	13,27	2,58		
	36 years and older	20	10,89	3,98		
WHOQOL	20 years and under	14	60,78	20,28	1,23	0,305
	21-25 years old	26	58,80	18,88		
	31-35 years old	18	68,31	14,20		
	36 years and older	20	55,97	19,80		

A=20 years and under, B=21-25 years old, D=31-35 years old, E=36 years and older

According to the table, the age variable of the participants ANOVA in test results WHOQOL had no statistically significant difference between the total mean scores and sub-dimensions. (p>0,05).

Table 4. According to the Age Variable of the Participants LCQ ANOVA Test Results

Sub-scales	Age Groups	n	$\overline{X}$	SS	F	p
Individual/psychological	20 years and under	14	2,45	0,58	1,00	0,409
	21-25 years old	26	2,35	0,85		
	26-30 years old	24	2,63	0,85		
	31-35 years old	18	2,76	0,95		
	36 years and older	20	2,37	0,66		
Lack of knowledge	20 years and under	14	2,62	0,60	0,39	0,818
	21-25 years old	26	2,72	1,07		
	26-30 years old	24	2,67	0,80		
	31-35 years old	18	2,89	0,80		
	36 years and older	20	2,88	0,80		
Facilities/services	20 years and under	14	2,24	0,89	1,94	0,110
	21-25 years old	26	2,92	1,09		
	26-30 years old	24	2,69	0,88		
	31-35 years old	18	3,06	0,79		
	36 years and older	20	2,83	0,71		
Lack of partners	20 years and under	14	2,48	0,86	0,72	0,583

	21-25 years old	26	2,86	0,78		
	26-30 years old	24	2,76	0,90		
	31-35 years old	18	2,70	0,74		
	36 years and older	20	2,57	0,66		
Time	20 years and under	14	2,19	0,57	2,03	0,096
	21-25 years old	26	2,77	0,79		
	26-30 years old	24	2,54	0,74		
	31-35 years old	18	2,83	0,84		
	36 years and older	20	2,78	0,73		
Lack of interest	20 years and under	14	2,24	0,74	0,85	0,499
	21-25 years old	26	2,59	0,74		
	26-30 years old	24	2,51	0,62		
	31-35 years old	18	2,65	0,79		
	36 years and older	20	2,42	0,67		
LCQ	20 years and under	14	2,37	0,43	1,27	0,286
	21-25 years old	26	2,70	0,68		
	26-30 years old	24	2,63	0,62		
	31-35 years old	18	2,81	0,45		
	36 years and older	20	2,64	0,54		

A=20 years and under, B=21-25 years old, C=26-30 years old, D=31-35 years old, E=36 years and older

According to the table, the age variable of the participants ANOVA in test results LCQ, there was no statistically significant difference between the total mean scores and sub-dimensions (p>0,05).

Table 5. According to the Amputation Time Variable of the Participants HLBS t-Test Results

Sub-scales	Amputation Time	N	$\overline{X}$	SS	t	p
Self-actualization	Prenatal	33	2,88	0,50	1,32	0,189
	Post-natal	69	2,73	0,55		
Health responsibility	Prenatal	33	2,80	0,51	0,36	0,717
	Post-natal	69	2,76	0,56		
Exercise	Prenatal	33	2,85	0,42	0,57	0,570
	Post-natal	69	2,79	0,58		
Nutrition	Prenatal	33	2,87	0,59	0,82	0,413
	Post-natal	69	2,77	0,58		
Interpersonal support	Prenatal	33	2,83	0,52	0,41	0,679
	Post-natal	69	2,78	0,60		
Stress management	Prenatal	33	2,81	0,51	0,05	0,959
	Post-natal	69	2,80	0,60		
HLBS	Prenatal	33	2,84	0,47	0,63	0,529
	Post-natal	69	2,77	0,54		

According to the table, in the t-Test results of the amputation time variable of the participants HLBS, there was no statistically significant difference between the total mean scores and sub-dimensions (p>0,05).

Table 6. According to the Amputation Time Variable of the Participants WHOQOL t-Test Results

Sub-scales	Amputation Time	N	$\overline{X}$	SS	t	p
General health	Prenatal	33	12,65	4,84	-0,24	0,813
	Post-natal	69	12,86	3,87		
Physical health	Prenatal	33	12,51	4,05	1,18	0,242

	Post-natal	69	11,56	3,69		
Psychological	Prenatal	33	13,16	3,66	1,56	0,122
	Post-natal	69	11,87	3,99		
Social relationships	Prenatal	33	13,84	4,42	2,17	0,052
	Post-natal	69	11,59	5,09		
Environment	Prenatal	33	12,79	4,06	1,60	0,112
	Post-natal	69	11,51	3,63		
WHOQOL	Prenatal	33	64,95	18,66	1,41	0,161
	Post-natal	69	59,41	18,53		

According to the table, in the t-Test results of the amputation time variable of the participants WHOQOL, there was no statistically significant difference between the total mean scores and sub-dimensions (p>0,05).

Table 7. According to the Amputation Time Variable of the Participants LCQ t-Test Results

Sub-scales	Amputation Time	N	$\overline{X}$	SS	t	p
Individual/psychological	Prenatal	33	2,71	0,75	1,79	0,076
	Post-natal	69	2,41	0,81		
Lack of knowledge	Prenatal	33	2,89	0,85	1,11	0,270
	Post-natal	69	2,69	0,84		
Facilities/services	Prenatal	33	2,67	1,07	-0,87	0,385
	Post-natal	69	2,84	0,83		
Lack of partners	Prenatal	33	2,62	0,86	-0,73	0,465
	Post-natal	69	2,74	0,76		
Time	Prenatal	33	2,62	0,85	-0,31	0,757
	Post-natal	69	2,67	0,73		
Lack of interest	Prenatal	33	2,52	0,83	0,15	0,882
	Post-natal	69	2,49	0,65		
LCQ	Prenatal	33	2,67	0,61	0,24	0,808
	Post-natal	69	2,64	0,56		

According to the table, in the t-test results of the amputation time variable of the participants LCQ, there was no statistically significant difference between the total mean scores and sub-dimensions (p>0,05).

Table 8. Monthly Income Variable of Participants HLBS ANOVA Test Results

Sub-scales	Monthly Income	n	$\overline{X}$	SS	F	p
Self-actualization	2000 TL and below	40	2,78	0,52	0,40	0,674
	2001-3000 TL	34	2,73	0,50		
	3000 TL Over	28	2,85	0,60		
Health responsibility	2000 TL and below	40	2,74	0,53	1,52	0,223
	2001-3000 TL	34	2,69	0,49		
	3000 TL Over	28	2,92	0,62		
Exercise	2000 TL and below	40	2,81	0,51	0,14	0,869
	2001-3000 TL	34	2,78	0,49		
	3000 TL Over	28	2,85	0,62		
Nutrition	2000 TL and below	40	2,79	0,56	0,96	0,385
	2001-3000 TL	34	2,72	0,57		
	3000 TL Over	28	2,92	0,63		
Interpersonal support	2000 TL and below	40	2,77	0,60	1,44	0,243
	2001-3000 TL	34	2,69	0,44		
	3000 TL Over	28	2,94	0,66		

	2000 TL and below	40	2,82	0,54		
Stress management	2001-3000 TL	34	2,69	0,55	1,23	0,296
	3000 TL Over	28	2,92	0,63		
	2000 TL and below	40	2,78	0,49		
HLBS	2001-3000 TL	34	2,72	0,46	0,98	0,378
	3000 TL Over	28	2,90	0,60		

A= 2000TL and below, B= 2001-3000TL, C= 3000TL Over

According to the table, the monthly income variable of the participants ANOVA in test results HLBS, there was no statistically significant difference between the total mean scores and sub-dimensions (p>0,05).

Table 9. Monthly Income Variable of Participants WHOQOL ANOVA Test Results

Sub-scales	Monthly Income	n	$\bar{X}$	SS	F	p
	2000 TL and below	40	12,13	3,69		
General health	2001-3000 TL	34	12,43	4,01	2,27	0,108
	3000 TL Over	28	14,20	4,81		
	2000 TL and below	40	11,64	3,70		
Physical health	2001-3000 TL	34	11,09	3,04	2,39	0,097
	3000 TL Over	28	13,14	4,56		
	2000 TL and below	40	11,88	3,70		
Psychological	2001-3000 TL	34	12,38	3,52	0,44	0,648
	3000 TL Over	28	12,77	4,69		
	2000 TL and below	40	11,21	5,31		
Social relationships	2001-3000 TL	34	12,55	4,17	2,05	0,134
	3000 TL Over	28	13,63	5,19		
	2000 TL and below	40	11,38	3,58		
Environment	2001-3000 TL	34	11,91	3,44	1,06	0,350
	3000 TL Over	28	12,74	4,46		
	2000 TL and below	40	58,23	17,50		
WHOQOL	2001-3000 TL	34	60,36	15,83	1,68	0,191
	3000 TL Over	28	66,47	22,63		

A=2000 TL and below, B=2001-3000 TL, C=3000 TL Over

According to the table, the monthly income variable of the participants ANOVA in test results WHOQOL, there was no statistically significant difference between the total mean scores and sub-dimensions (p>0,05).

Table 10. Monthly Income Variable of Participants LCQ ANOVA Test Results

Sub-scales	Monthly Income	n	$\bar{X}$	SS	F	p	Significant Difference
	2000 TL and below	40	2,44	0,75			
Individual/psychological	2001-3000 TL	34	2,60	0,72	0,37	0,694	
	3000 TL Over	28	2,48	0,97			
	2000 TL and below	40	2,60	0,96			
Lack of knowledge	2001-3000 TL	34	2,90	0,71	1,23	0,298	
	3000 TL Over	28	2,80	0,82			
	2000 TL and below	40	2,55	0,96			
Facilities/services	2001-3000 TL	34	2,77	0,84	3,34	0,039*	C>A
	3000 TL Over	28	3,12	0,85			
	2000 TL and below	40	2,49	0,78			
Lack of partners	2001-3000 TL	34	2,80	0,75	2,38	0,098	
	3000 TL Over	28	2,87	0,81			

	2000 TL and below	40	2,48	0,71		
Time	2001-3000 TL	34	2,78	0,74	1,63	0,201
	3000 TL Over	28	2,73	0,85		
	2000 TL and below	40	2,44	0,70		
Lack of interest	2001-3000 TL	34	2,55	0,61	0,23	0,795
	3000 TL Over	28	2,52	0,83		
	2000 TL and below	40	2,50	0,56		
LCQ	2001-3000 TL	34	2,74	0,47	2,20	0,117
	3000 TL Over	28	2,75	0,68		

* p<,05 A=2000 TL and below, B=2001-3000 TL, C=3000 TL Over

According to the table, participants LCQ when the total score averages and sub-dimensions are analysed in terms of monthly income variable “facilities/services”, there was a statistically significant difference in the sub-dimension (p<0,05). “facilities/services” significant difference in sub-dimension was “3000 TL over” income level and “2000 TL and below” was found to be in favour of those with an income level.

Table 11. Participants HLBS, WHOQOL and LCQ Correlation test results

	HLBS	**WHOQOL**	**LCQ**
HLBS	1	0,72**	0,53**
WHOQOL		1	0,53*
LCQ			1

** p<,01

According to the table “HLBS, WHOQOL and LCQ total score averages”, correlation analysis result was given to show the relationship among the analysis results of HLBS, WHOQOL and LCQ a positive and moderately significant relationship was found.

Discussion and Conclusion

This study analyzes the relationship between a healthy lifestyle behavior, quality of life, and leisure constraint levels of amputee individuals receiving sports education.

By the age variable, a statistically significant difference was found between "self-actualization, health responsibility, exercise, interpersonal support, and HLBS" due to the ANOVA test conducted to analyze the difference between HLBS total score averages ($p<0.05$). We observe that individuals receiving amputee education at a young age were more successful in self-realization, being responsible for health, exercise, and dialogue and support than individuals of a higher age than themselves. Besides, we can note that individuals receiving amputee education at an early age are more successful and at a higher level in assessing healthy lifestyle behavior. Besides, Kayapınar (2012), Balıkçı (2017), Söyleyici & Zorba (2017) and Şahin (2018) found that individuals engaged in physical activity have a high level of healthy lifestyle behaviors. Our research shows similarities with the literature, and we can observe that the healthy lifestyle behaviors of amputees interested in sports are high. No statistically significant difference was found due to the ANOVA test conducted to analyze the difference between the age variable and the mean scores of WHOQOL and its sub-dimensions ($p> 0.05$). In his study, Gülmez (2013) observed no significant difference between the age variable and quality of life. In their study, Ulukan & Esenkaya (2020) noted no significant difference between the age variable and life quality. No statistically significant difference was

found due to the ANOVA test conducted to analyze the difference between the age variable and the total mean scores of LCQ and its sub-dimensions (p>0,05). Age has a vital place in participating in recreational activities, and it varies by the people and the types of activities (Torkildsen, 2000). In their study, Amin, Suleman, Gamal & Al Wehedy (2011) observed a significant difference in the individual psychology and lack of knowledge dimensions of the age variable and leisure constraints; however, they did not conclude a statistically significant difference in other sub-dimensions. Besides, Alexandris & Carroll (1997) similarly observed a significant difference in the same sub-dimensions; however, they did not conclude a significant difference in other dimensions. While the literature review differs in some sub-dimensions, we can observe that leisure constraints are not directly related to age, yet constraints to leisure activities may decline by increasing age.

By the amputation time variable, a statistically significant difference was not observed due to the t-Test conducted to analyze the difference between the mean scores of HLBS, WHOQOL and LCQ and their sub-dimensions (p>0,05). Per such findings, the amputation status of amputated athletes who received sports education before or after does not create a difference between healthy lifestyle behaviors, quality of life, and the level of disability in assessing leisure activities.

No statistically significant difference was found by the monthly income variable due to the ANOVA test conducted to analyze the difference between the HLBS total score averages and its sub-dimensions. (p>0,05). In the same vein, Şahin (2018) observed that self-actualization and health responsibility behaviors are not related to monthly income. The study findings and literature review show similarities, and we can observe that amputees' healthy lifestyle behaviors are not related to monthly income and amputation time. No statistically significant difference was found due to the ANOVA test conducted to analyze the difference between the monthly income variable and the mean scores of WHOQOL and its sub-dimensions (p>0,05). In their study, Akyüz et al. (2017) did not find a significant relationship between personal income and quality of life. However, Esin (1997) reported that those with a high monthly income adopted healthy lifestyle behaviors. A study by Aldinç et al. (2004) observed that the higher the income level, the higher its quality. Research abroad has similarly defined the effect of socioeconomic status on health behaviors (Acheson et al., 2000; Li, 2004). While some researches are parallel with our study, some studies indicate that monthly income changes positively affect health lifestyle in the literature. We can observe that it does not affect the situation between the monthly income and quality of life of amputees, received sports education in our sample group. Per the ANOVA test conducted to analyze the difference between the monthly income variable and the LCQ total score mean and its sub-dimensions, a significant difference was found in the “facilities/services” sub-dimension (p<0,05), no statistically significant difference found in other sub-dimensions (p>0,05). In their study, Yaşartürk et al. (2016) did not observe a significant difference between income level and leisure activities participation. However, in the study by Karaküçük & Gürbüz (2007) they found that the higher the participants' welfare level, the less affected by the income variable in participation. In the research conducted by Dong & Chick (2012) they observed that income has a vital place in participating in recreational activities. The literature review shows similarities with our research yet conflicts in some aspects. Insufficiency of facilities is a vital requirement in evaluating leisure activities, and we can observe that it eliminates the lack of leisure constraints.

Per the correlation conducted to illustrate the relationship between the total mean scores of HLBS, WHOQOL, and LCQ of amputated individuals who received sports education, a

positive and moderately significant relationship was found between HLBS, WHOQOL, and LCQ. In his study, Balıkçı (2017) observed a significant relationship between the healthy lifestyle behaviors of individuals who do sports and their quality of life. Akyürek & Bumin (2013) found a positive and significant relationship between amputees' quality of life and leisure time. In their study, Arı (2017) and Sevil (2015) observed a significant relationship between quality of life and leisure time attitudes. Ayhan (2017) observed a significant relationship between the quality of life of individuals who do sports and their evaluations of leisure constraints. Per the literature review, we can observe that as the leisure constraints of amputee individuals who receive sports education increase, their quality of life and healthy lifestyle behaviors decline.

Recommendations

- In conclusion, the most vital leisure time obstacle per the research is the lack of facilities; we need to increase local governments' sports facilities and organize them suitable for citizens and physically disabled individuals.
- It is crucial to direct amputee individuals who receive sports education to mental resistance and sports recreation activities to develop healthy lifestyle behaviors.
- To increase the quality of life of amputee individuals who receive sports education, we need to develop unimpeded access facilities and provide sufficient materials.

**This article is extracted from my master thesis entitled "Investigation of the Relationship between Healthy Lifestyle Behavior, Quality of Life and Leisure Constraint Levels of Amputee Individuals Who Take Sports Education", (Master Thesis, Bartın University, Bartın/Turkey, 2019).*

REFERENCES

Acheson, D., Alleyne, G. A., Casas, J. A., Castillo-Salgado, C., Barzach, M. & Braveman, P. (2000). Round table discussion. health inequalities and the health of the poor. *Bulletin of the World Health Organization*, 78(1), 75-85.

Akvardar, Y., Akdede, B., Özerdem., A, Eser, E., Topkaya, Ş. & Alptekin, A. K. (2006). Assesment of qualityof life with the WHOQOL-BREF in a group of Turkish psychiatric patients compared with diabetic and healthy subjects. *Psychiatry and Clinical Neurosciences*, 60, 693-699.

Akyürek, G. & Bumin, G. (2013). Comparison of people with poliomyelitis syndrome and amputations: environmental perception, social participation, and quality of life. *Journal of Occupational Therapy and Rehabilitation*, 1(2), 123-124.

Ayhan, B. & Özel, B. (2020). Examining the relationship between leisure attitude and life satisfaction levels of university students. *International Journal of Sport Culture and Science*, 8(3), 154-166.

Akyüz, H., Yaşartürk, F., Aydın, İ., Zorba, E. & Türkmen, M. (2017). The investigation of the relationship between university students' levels of life quality and happiness. *International Journal of Cultural and Social Studies. (IntJCSS)*, 3(Special Issue 2), 253-262.

Aldinç, H., Aytar, B., Demetçi, E. M., Seçen, E. A., Şahin, A. & Yılmaz, H. (2004). *Ankara ilinden seçilen birinci basamak sağlık kuruluşlarına başvuran 18 yaş ve üzeri kişilerin medikososyal özelliklerine göre yaşam kalitelerinin karşılaştırılması*. Gazi Üniversitesi Tıp Fakültesi Halk Sağlığı Anabilim Dalı, Ankara.

Alexandris, K. & Carroll, B. (1997). Demographic differences in the perception of constraints on recreational sport participation: results from a study in Greece. *Leisure Studies*, 16(2), 107-125.

Alexandris, K. & Carroll, B. (1999). Constraints on recreational sport participation in adults in greece: implications for providing and managing sport services. *Journal of Sport Management*. 13, 317-332.

Amin, T. T., Suleman, W., Ali, A., Gamal, A. & Al Wehedy, A. (2011). Pattern, prevalence, and perceived personal barriers toward physical activity among adult saudis in Al-Hassa, KSA. *Journal of Physical Activity & Health*, 8(6), 775-784.

Arı, Ç. (2017). *Study of the relationship between free time management and quality of life of candidates teachers registered in pedagogical formation*. Master Thesis, Yıldırım Beyazıt University Institute of Health Sciences, Ankara.

Ayhan, C. (2017). *Investigation of the effects of constraints to be occured in active athletes participation to the recreative activities on life satisfaction and quality*. Master Thesis, Sakarya University Institute of Educational Sciences, Sakarya.

Balıkçı, İ. (2017). *Analyzing the physical activity and heart speed variability with healthy life behavior and quality of life in university students*. Master Thesis, Manisa Celal Bayar University Institute of Social Sciences, Manisa.

Büyüköztürk, S., Kılıç Çakmak, E., Akgün, Ö.E., Karadeniz, S. & Demirel, F. (2012). *Bilimsel araştırma yöntemleri*. Ankara: Pegem Akademi Yayımcılık.

Cirhinlioğlu, Z. (2001). *Sağlık sosyolojisi*. Ankara: Nobel Kitabevi.

Devine, A. M. (2004). "Being a 'doer' instead of a 'viewer' ": the role of inclusive leisure contexts in determining social acceptance for people with disabilities. *Journal of Leisure Research*, 36(2), 137-159.

Dong, E. & Chick, G. (2012). Leisure constraints in six chinese cities. *Leisure Sciences*, 34, 417-435.

Eser, E., Yüksel, H. & Sieberer, U. R. (2008). The psychometric properties of the new turkish generic health-related Quality of Life Questionnaire for children (Kid-KINDL). *Turkish Journal of Psychiatry*, 19 (4), 409-417.

Esin, M. N. (1997). *Endüstriyel alanda çalışan işçilerin sağlık davranışlarının saptanması*. PHD Thesis, İstanbul University Institute of Health Sciences, İstanbul.

Esin, N. (1999). Sağlıklı yaşam biçimi davranışları ölçeğinin Türkçeye uyarlanması. *Hemşirelik Bülteni*, 12(45), 87-95.

Fidaner, H., Elbi, H., Fidaner, C., Eser, S. Y., Eser, E. & Göker, E. (1999). Yaşam kalitesinin ölçülmesi, WHOQOL-100 ve WHOQOL-BREF. *Psikiyatri Psikoloji Psikofarmakoloji (3P) Dergisi*, 7(2), 23-40.

Gülmez, H. (2013). Çalışanların yaşam kalitesini etkileyen faktörler. Turkish *Journal of Family Medicine and Primary Care*, 7(4), 74-82.

Gürbüz, B., Öncü, E. & Emir, E. (2020). Leisure Constraints Questionnaire: testing the construct validity of short form. *Journal of Sports and Performance Researches*, 11(2), 120-131.

Gürbüz, B. & Karaküçük, S. (2007). Leisure Constraints Scale-28: scale development, validity and reliability study. *Gazi Journal of Physical Education and Sports Sciences*, 12(1), 3-10.

Hu, F. B., Liu, Y., & Wilett, C. (2011). Preventing chronic diseases by promoting healthy diet and lifestyle: public policy implications for China. *International Association for the Study of Obesity*, 12, 552-559.

Kabasakal, K. (2007). *Zihinsel engellilik, zihinsel, ruhsal, duygusal engellilik*. Konya: Lokomotif Medya Yayınevi.

Karasar, N. (1994). *Nilimsel araştırma yöntemi: kavramlar, ilkeler, teknikler*. Ankara: 3A Araştırma Eğitim Danışmanlık Ltd.

Karasar, N. (2017). *Bilimsel araştırma yöntemi*. Ankara: Nobel Akademik Yayıncılık.

Kayapınar, M. (2012). *Comparison of some blood parameters and the physical appropriateness levels and the healthy lifestyle behaviors of football trainers*. Master Thesis, Fırat University Institute of Health Sciences, Elazığ.

Kostak, M. A., Kurt, S., Süt, N., Akarsu, Ö. & Ergül, G. D. (2014). Healthy lifestyle behaviors of nursing and classroom teaching students. *TAF Preventive Medicine Bulletin*, 13(3), 189-196.

Li, J. (2004). Gender inequality family planning, and material and child care in rural Chinese country. *Social Science & Medicine*, 59, 695-798.

Oliver, M. (1997). *WHOQOL-Bref. University of Washington Seattle*, United States of America, U.S. Version, 5-31.

Özçelik, G. & Karaçam, Z. (2014). Common symptoms, health problems, risk factors, and relationships with their ouality of life during the pregnancy. *Journal of Ege University Nursing Faculty*, 30(3), 1-18.

Özer, D. S. (2001). *Engelliler İçin Beden Eğitimi ve Spor*. Ankara: Nobel Akademik Yayıncılık.

Öztürk, H. (2016). The obstacles affecting shopping center employees' participation in recreational activities. *Journal of Social Sciences*, 47(1), 41-48.

Sevil, T. (2015). *The effect of therapeutic recreational activity participation on elders' to perceived leisure satisfaction, life satisfaction and quality of life*. PHD Thesis, Anadolu University Institute of Health Sciences, Eskişehir.

Söyleyici, Z. S. & Zorba, E. (2017). Examining the healthy lifestyle behaviors of university students. *European Journal of Physical Education and Sport Science*, 3(7), 67-76.

Şahin, T. (2018). *Adıyaman il merkezinde 15-49 yaş kadınlarda obezite sıklığı, fiziksel aktivite düzeyi ve sağlıklı yaşam biçimi davranışları*. PHD Thesis, Erciyes University Institute of Health Sciences, Kayseri.

Torkildsen, G. (2000). *Leisure and recreation management (4th edition)*. USA: Taylor and Francis Group.

Ulukan, H. & Esenkaya, A. (2020). Investigation of the relationship between Aydın Adnan Menderes University sports sciences faculty students' quality of life and happiness levels. *Mediterranean Journal of Sport Science*, 3(1), 186-201.

Walker, S. N., Sechrist, K. R. & Pender, N. J. (1987). The health-promoting lifestyle profile: development and psychometric characteristics. *Nursing Research*, 36(2), 76-81.

World Health Organization (2017). *Constitution of world health organization: Principles*. Geneva, World Health Organization.

Yaşartürk, F., Uzun, M., İmamoğlu, O. & Yamaner, F. (2016). Examination of the obstacles for the participation of the recreative activities of sedentary women. *International Journal of Sport Culture and Science*, 4(Special Issue 3), 789-803.