

Evaluation of Healthy Lifestyle Behaviour Level of Active Athletes and Sedentary Students Study at Physical Education and Sports College

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KEYWORDS Education. Health. Personality Development. Physical Activity. Sport

ABSTRACT The aim of this study is to determine the healthy lifestyle behaviour level of Physical Education and Sports College students actively engaged in sports with sedentary students of the Arts and Sciences and the Faculty of Education. A total of 189 girls and 297 boys making up a total of 486 students volunteered in this study. In this study, Healthy Lifestyle Behaviors Scale (HLBS) was used. In conclusion, it was identified that some factors such as gender, age, class and school influence university students' healthy lifestyle behaviors positively. Based on these results, it was recommended that to protect and improve the health of university students; there should be creation of training programs related to healthy lifestyle behaviors and with the implementation of these programs, students level of realization of healthy lifestyle behaviours will increase.

INTRODUCTION

University life is a period of life in which individuals experience significant changes. In university education, vocational training as well as personality development leads to a change in the individual's life and health behavior. This change is particularly important in terms of attitudes and behaviors in the health field because attitudes and behaviors are related to the student's individual health itself and affects the present and future family life and society (Ayaz et al. 2005).

Healthy lifestyle is defined as individuals' controlling all behaviors that affect the health, choosing their behavior according to their own health status while regulating daily activities. Behaviors that improve health are increasing the well-being of the individual, this behaviour translates to self-development. Healthy lifestyle behaviors cover adequate and regular exercise, balanced diet, cigarette use, health responsibility, stress management and hygiene (Stanhope et al. 1996). Being healthy is a fundamental right of every human being, and it ensures the basic objective of maintaining health personnel, and

also the person's own responsibility. To be aware of this responsibility, the individual's behavior and creating a healthy lifestyle is the first step of maintaining it (Ferah and Arslan 2015).

Health and wellness take an important place in people's happiness, success and quality of life. Today, science and the world is experiencing a rapid process of change. Due to advances in technology, individuals' demand for better quality of life is increasing. Thus, the understanding of public health protection aims to improve and maintain health. However, with healthy individuals there is a chance to create a healthy society. Therefore, individuals acquire positive attitudes to protect their own health and well-being and should be able to develop and make the right decisions for their own health. Individuals who transform these behaviours into attitudes can continue to be healthy and can also achieve a better level of health status. Family and society are the two indispensable elements in imparting an individuals' evolving and changing healthy lifestyle behaviors with training (Alpar et al. 2003). As in education, it is important to make the necessary guidance and to determine young

people's attitudes and behaviours toward a healthy life. Compared to adolescents, college students have more autonomy and control on their lifestyles due to the physical, psychological, social and sexual development and the new responsibilities that take place during this period. This transition period is a period of consolidation of healthy lifestyle behaviors (Campbell et al. 2008). This change period depends on factors such as individual's health status, life experiences, education, the society's culture and being able to use opportunities in daily life (Kara 2001); healthy lifestyle behaviors or activities contribute to a healthy being. Healthy lifestyle behaviors or activities are interpersonal support and stress management of self realization, health responsibility, exercise and nutrition (Altun 2002). The period of youth is known as the most dynamic period for the individual and society. Students studying health education courses were found to engage in more physical activities, healthy nutrition, spiritual development, stress management, interpersonal relationships than other student groups (Vural and Bakir 2015).

According to this view, to determine the attitudes and behaviors of university students related to health according to their department and gender, the outcome of this study is expected to allow young people to have access to right guidance. Being healthy is a fundamental right of every human being, ensuring and maintaining it is the main objective of the medical staff, and also the responsibility of individual. To gain health promoting behaviors, the person needs self-control and desire to get this behavior. Because of this, to improve health, positive health behaviours must be gained and maintained. Therefore, examining university students health behaviours and supporting on issues that they are incompetent in are important for public health (Ilhan et al. 2010). People with the ability to control their health lifestyle have the ability to improve their health; and the individual's awareness of this is important to ensure success in all aspects, which is defined as the ability to adjust to the changing environment and environmental compatibility (Ottawa Charter for Health Promotion 2015).

The aim of this study is to determine the healthy lifestyle level of Physical Education and Sports College students actively engaged in sports compared with sedentary students of the Arts and Sciences and the Faculty of Education.

METHODOLOGY

This study aims to explicitly define the condition that exists today. Explanation of attitudes and behavior, comparison and description will clearly display the findings (Karasar 2000). To determine the healthy lifestyle level of Physical Education and Sports School College actively engaged in sports with sedentary students of the Arts and Sciences and the Faculty of Education is a situation that already exist so it is designed as a descriptive research in scan model.

Research Group

Of university students participating in the study, 61.1 percent were men, 38.9 percent were women. The age group: 29.8 percent of the students were between 18-20 years old, 44.2 percent were between 21-23 years old, 25.9 percent belong to the 24-26 age group, Looking at the Faculty and School, 34.3 percent (167) were studying Physical Education, 30.5 percent (148) belonged to the Sport College, 35.2 percent (171) belonged to the Faculty of Education, was composed of the Faculty of Science Arts students.

Data Collection Tools

Personal information form developed by the researchers was used to determine socio-demographic information of the people who agreed to participate voluntarily in the study. In the study, Healthy Lifestyle Behaviors Scale II, developed by Walker et al. (1987) was used; 48 articles and then an additional 4 articles, adding up to 52 articles were considered. Eligibility to Turkish and Turkish culture and the validity and reliability study was done by Bahar et al. (2008).

Overall Cronbach alpha internal consistency coefficient of the scale was 92 and in this study it was 87 and had a high reliability coefficient.

Health Responsibility Subscale (HRS): determines the individual's level of responsibility over their own health, in what level to participate in health.

Exercise Subscale (ES): measures the level of implementation of the exercise by individuals with a constant element of wellness applications.

Nutrition Subscale (NS): measures the individual's changes in food selection and arrangement of choice of meals.

Spiritual Development Subscale (SDS): determines the individual's life goals, ability of self-development, self awareness and satisfaction.

Interpersonal Communication Subscale (ICS): measures the communication with the immediate environment of the individual and the level of continuity in the relationship.

Stress Management Subscale (SMS): determines an individual's stress level and the source of stress control mechanisms.

Data Analysis

In this study, descriptive statistical calculations were made for the independent variables which took place in the first part of the measurements while assessing the obtained data. As a result of the Kolmogorov-Smirnov test performed to determine whether the variances were variances or not. The binary comparisons of independent variables obtained from the Healthy Lifestyle Behaviors Scale were analysed with t-test while, in multiple comparisons, the data showing normal distribution was analysed with one-way variant analysis (ANOVA) and the data not showing normal distribution was analysed with a non-parametric test, Kruskal Wallis H test. The binary comparisons of independent variables obtained from the Healthy Lifestyle Behaviors Scale were analysed with t-test while, in multiple comparisons, the data showing normal distribution was analysed with one-way variant analysis (ANOVA) and the data not showing normal distribution was analysed with a non-parametric test, Kruskal Wallis H test. All statistical procedures were performed using SPSS 17.0 software package.

RESULTS

Findings on the data obtained from the study group are presented in the tables:

In the analysis, according to gender of the study group, healthy lifestyle behaviors scale, health responsibility ($t = 2.038$; $p < 0.05$) and physical activity ($t = 3.110$; $p < 0.05$) difference between the groups in the subscales were found to be statistically significant (Table 1).

According to the analysis of age variable of the study group, healthy lifestyle behaviors scale, physical activity ($F(2,483) = 10.411$, $p < 0.05$) difference between the groups in the subscales were found to be statistically significant. In the analysis, to find the source of this difference it was determined that this difference stems from the 24-26 age group (Mean = 14.3 ± 4.5) (Table 2).

In the analysis, according to class variables of the study group, healthy lifestyle behaviors scale, nutrition ($\chi^2 = 7.804$; $p < 0.05$) difference between the groups in the subscales were determined to be statistically significant. In the analysis to find the source of difference, it was determined that the difference was caused by the difference between 1st class and 4th classes (Table 3).

In the analysis, according to school variables of the study group, healthy lifestyle behaviors scale, health responsibility ($F(2,483) = 11.091$; $p < 0.05$), physical activity ($F(2,483) = 44.812$; $p < 0.05$), spiritual development ($F(2,483) = 4.221$; $p < 0.05$) and stress management ($F(2,483) = 9.609$; $p < 0.05$) difference between the groups in the subscales were found to be statistically significant. In favor of PESC students, it was

Table 1: The results of the analysis according to gender of the study group (t-test)

Scale sub-scales	Gender	N	Mean	SD	T	P
Health Responsibility	Male	297	19.9	4.4	2.038	.042*
	Female	189	19.1	4.4		
Physical Activity	Male	297	16.6	5.3	3.110	.002*
	Female	189	15.1	4.8		
Nutrition	Male	297	19.9	3.9	1.540	.124
	Female	189	19.3	3.8		
Spiritual Development	Male	297	26.6	4.3	-1.077	.282
	Female	189	27.0	4.0		
Interpersonal Development	Male	297	26.2	4.2	-1.070	.285
	Female	189	26.6	4.7		
Stress Management	Male	297	19.6	3.8	1.224	.221
	Female	189	19.2	3.3		

* $p < 0.05$

Table 2: The results of the analysis according to the age of the study variables (ANOVA)

Scale sub-scales	Age	n	Mean	SD	F	P	Diff.LSD
Health Responsibility	18-20	145	20.2	4.6	2.965	.052	c<a,b
	21-23	215	19.6	4.4			
	24-26	126	18.8	4.2			
Physical Activity	18-20	145	16.9	5.4	10.411	.000*	
	21-23	215	16.4	5.0			
	24-26	126	14.3	4.5			
NS	18-20	145	19.9	4.1	.524	.593	
	21-23	215	19.7	3.7			
	24-26	126	19.4	4.0			
Sds	18-20	145	27.4	4.3	2.876	.057	
	21-23	215	26.3	4.3			
	24-26	126	26.7	3.8			
Interpersonal Relations	18-20	145	26.7	4.2	.502	.606	
	21-23	215	26.2	5.1			
	24-26	126	26.2	3.4			
Stres Management	18-20	145	19.8	3.7	1.291	.276	
	21-23	215	19.4	3.8			
	24-26	126	19.0	3.1			

*p<0.05

Table 3: The results of the analysis according to the class variables of the study group (Kruskal-Wallis)

Scale subscale	Education	n	Mean	SD	χ^2	P	Diff. U test					
Health Responsibility	1 st class	110	18.9	4.2	3.225	.358	1<4					
	2 nd class	344	19.8	4.5								
	3 rd class	12	20.4	4.7								
	4 th class	20	19.5	4.8								
Physical Activity	1 st class	110	15.4	4.8	1.659	.646		1<4				
	2 nd class	344	16.1	5.2								
	3 rd class	12	16.5	4.9								
	4 th class	20	16.7	6.4								
Nutrition	1 st class	110	19.0	3.4	7.804	.049*			1<4			
	2 nd clas	344	19.8	4.0								
	3 rd class	12	20.5	3.9								
	4 th class	20	21.3	3.9								
Spiritual Development	1 st class	110	26.2	4.1	4.453	.216				1<4		
	2 nd class	344	26.8	4.2								
	3 rd class	12	28.0	3.2								
	4 th class	20	27.9	4.1								
Interpersonal Relations	1 st class	110	25.7	3.7	2.617	.454					1<4	
	2 nd class	344	26.5	4.6								
	3 rd class	12	26.7	3.3								
	4 th class	20	26.8	5.0								
Stress Management	1 st class	110	19.1	3.4	1.713	.634						1<4
	2 nd class	344	19.5	3.6								
	3 rd class	12	20.3	3.2								
	4 th class	20	19.8	4.2								

*p<0.05

determined that the difference stems from the difference between the other faculty students (Table 4).

DISCUSSION

In the analysis according to gender of the study group level, healthy life style behaviour

scale, health responsibility (t=2.038; p<0.05) and physical activity (t=3.110; p<0.05) difference between the groups in the subscales were found to be statistically significant (Table 1). The study on university students held by Yildirim (2005), according to gender between exercise subscale score averages was found statistically significant (p<0.05). Male students exercise score av-

Table 4: Results of the analysis according to the school variant of the study group (ANOVA)

Scale subscale	Faculty/ college	n	Mean	SD	F	P	Diff. LSD
<i>Health Responsibility</i>	1-PESC**	167	20.9	4.5	11.091	.000*	1>2,3
	2-Education Fac.	148	19.1	4.0			
	3-Science Art Fac.	171	18.8	4.5			
<i>Physical Activity</i>	1-PESC	167	18.8	5.5	44.812	.000*	1>2,3
	2-Education Fac.	148	14.3	4.2			
	3-Science Art Fac.	171	14.7	4.3			
<i>Nutrition</i>	1-PESC	167	20.0	4.2	1.142	.320	
	2-Education Fac.	148	19.6	3.9			
	3-Science Art Fac.	171	19.4	3.6			
<i>Spiritual Development</i>	1-PESC	167	27.5	3.9	4.221	.015*	1>2,3
	2-Education Fac.	148	26.3	4.1			
	3-Science Art Fac.	171	26.4	4.4			
<i>Interpersonal Relations</i>	1-PESC	167	26.6	3.8	.502	.606	
	2-Education Fac.	148	26.2	3.7			
	3-Science Art Fac.	171	26.2	5.4			
<i>Stress Management</i>	1-PESC	167	20.4	3.7	9.609	.000*	1>2,3
	2-Education Fac.	148	18.9	3.3			
	3-Science Art Fac.	171	18.9	3.5			

*p<0.05 ** PESC= Physical Education and Sports College

erages were found to be significantly higher compared to female students. When university students' exercise score averages were analyzed according to gender subscale, male students' scores were found to be significantly higher than female students. It is known that two-thirds of young people do not do enough physical activity, Physical activity is higher in females (Ersoy 1995). In İnönü university, students' physical activity levels were investigated and the researchers' study was consistent with the findings (Gunes et al. 2002). In Pender et al. (1987) and Akca's (1998) study, female exercise subscale score averages were found to be higher. According to the study, females, when compared to the males, due to their biological features, have more disease and hence, pay more attention to their health. Yildirim (2005) and Ilhan et al. (2010) in their study of college students based on gender when compared to healthy lifestyle behaviors scale average scores; females' health responsibility subgroup average score 22.8 ± 5.2 was found to be significantly higher than males ($p < 0.01$). In terms of being statistically insignificant, female HLBS students' score average were higher than males. Karadeniz et al. (2008) found the female health responsibility scores higher than male. In their study, Karadeniz et al. (2008) and Zaybak et al. (2004) also found that although female students' HLBS score averages were higher than males, they were not statistically different.

In Larouche's (1998) study, college female students' HLBS score averages were found to be higher than those of male students. Ozbasaran et al. (2004) female students' HLBS score averages were found to be higher than those of male students. According to the analysis of the age variable of the study group, healthy lifestyle behaviors scale, physical activity ($F(2,483)=10.411$; $p < 0.05$) difference between the groups in the subscales were found to be statistically significant (Table 2). To find the source of difference in the analysis it was determined that this difference stems from the 24-26 age group (Mean = 14.3 ± 4.5). Yildirim (2005) in his study found that university students in 25 age group and over nutrition score averages compared to 17-20 age group; students in 25 and over age group nutrition score average compared to 21-24 age group were higher ($p < 0.05$). Students in 25 age group and over-exercise score averages compared to 21-24 age group were higher ($p < 0.05$). Students' health responsibility score averages in age group 21-24 compared to 17-20 age group; students' health responsibility score average in 25-over age group compared to 17-20 age group were found to be higher ($p < 0.05$).

In the analysis, according to class variables of the study group, healthy lifestyle behaviors scale, nutrition ($\chi^2 = 7.804$; $p < 0.05$) difference between the groups in the sub-scales were determined to be statistically significant (Table 3). In the analysis to find the source of difference, it

was determined that the difference was caused by the difference between 1st class and 4th classes. University students' HLBS is increasing due to class increase and experience (Ildirim 2005). According to the university students of class distributions, there were no statistically significant differences between the health lifestyle and subscales ($p > 0.05$). In the study that Ilhan et al. (2010) applied on university students, when compared, HLB score average according to their classes; 4th class students' health responsibility subscale averages (23.7 ± 5.5), compared to the other classes, 3rd and 4th class students' nutrition subscale score averages (15.7 ± 3.3 , 15.8 ± 2.9) compared to 1st classes, 4th class students' stress management sub-score averages (19.0 ± 3.7) compared to 1st classes, 4th class students' interpersonal support subscale score average (23.2 ± 6.7), and HLBS total score average (132.7 ± 20.7) compared to 1st and 2nd class students was found statistically significant and higher ($p < 0.05$). In a study by Ayaz et al. (1999), 3rd and 4th classes' health responsibility score averages were found significantly higher compared to 1st and 2nd classes (Table 3). In Ergun and Erol (2007) study when students' score averages according to classes were evaluated, it was found to be statistically significantly different. As seen in the results, healthy lifestyle behaviour level increase was related to training period length increase. In literature, it is reported that the education level is effective in carrying out health behavior (Walker et al. 1988). With research results and results of other studies, it can be said that university education affects a healthy lifestyle behaviour positively.

In this study, university students' analysis according to school variance, healthy lifestyle behaviour scale, health responsibility ($F(2,483) = 11.091$; $P < 0.05$), physical activity ($F(2,483) = 44.812$; $P < 0.05$), spiritual development ($F(2,483) = 4.221$; $P < 0.05$) and stress management ($F(2,483) = 9.609$; $P < 0.05$) subscale groups' intergroup difference was found to be statistically significant (Table 4). In favor of PESC students, it is determined that the difference stems from the difference between the other faculties students (Education Faculty, Science Art Faculty). In Ilhan et al.'s (2010) study on university students, when healthy lifestyle behaviours scale score averages were compared according to department; healthy lifestyle behaviour scale score averages (25.2 ± 5.1), of Nursing department students

were found to be significantly higher when compared to other departments ($p < 0.001$). Nursing department students' nutrition subscale score averages (16.3 ± 3.0) were found to be statistically significantly higher ($p < 0.05$) than Faculty of Arts and Computer Engineering, Architecture and the Department of Business. Zaybak et al. (2004) in his study, found health responsibility subscale score averages of Health department students to be higher compared to other departments ($p < 0.05$). In the same study, health department students' other subscale score averages and total score averages were not found to be statistically significant but were higher than other departments' scores. Unalan et al. (2004) in his study, found a meaningful relation between health programme and social programme students', exercise, self-realization, nutrition subscale and HLBS score averages. It was an expected result that students who are related to health departments', their health behaviours would be higher compared to other departments, but yet not at the desire of significance. In the departments related to the health which provide health staff who take part in protection and development of public health, more attention must be given to the health protection and development related lessons. Yildirim (2005) according to University students faculties and colleges, when health responsibility score averages were compared in pairs, Science according to Social Sciences; Health Science according to Social Sciences; Health Science according to Vocational Colleges were found higher. According to other studies (Akca 1998; Sayan 1998) health staff groups score averages were lower when compared to the other occupation groups. The high level of health responsibility of students in the health sciences suggests that the information given is effective to protect and improve health so that turning information into behaviour education process becomes very important. It is indicated that education supports individuals in all fields as well as in health-related fields to ensure adoption of scientific and healthy development and to reach proficiency (Lusk et al. 1994; Spradley 1990).

CONCLUSION

The results obtained in the study which were done to identify healthy lifestyle behaviors of college students are as follows:

In the analysis of the research groups according to gender, differences in HLBS subscales between the groups were found to be statistically significant. In the analysis of the research groups according to the age, in HLBS subscales, intergroup difference was found to be statistically significant. To find the source of difference in the analysis, it was to stem from the 24-26 age group. According to the class variables, in HLBS subscales, intergroup difference was found to be statistically significant. To find the source of difference in the analysis it was determined that it stems from the difference between 1st class and 4th class. According to the school variables, in HLBS subscales intergroup difference was found to be statistically significant. It was determined that the difference stems from the other faculty students' difference in favor of PESC students.

In conclusion, it was identified that some factors such as gender, age, class and school influence university students healthy lifestyle behaviors positively.

RECOMMENDATIONS

Based on these results; to protect and improve the health of university students, the creation of training programs related to healthy lifestyle behaviors should be developed and with the implementation of these program, students level of realization of healthy lifestyle behaviours will increase. However, the study sample comprised of university students only in Kütahya, in order to make a generalization, a comparison is needed with the other university students' participation in the study. In later studies, benefiting from study results and the results of similar studies, it can be suggested that an experimental study can be done to evaluate the effectiveness of health promotion programs in university students.

As a result of the evaluation of the data obtained in the study, to maintain a healthy lifestyle behavior and to develop, besides, to adopt the lifestyle that will allow them to be examples of community groups, the following suggestions are made to university students: to improve the health of university students, training programs in health issues should be established. Lack of health issues of students should be identified, the time of the training program should be determined in consultation with the student. For university students, sport and physical activity pro-

grams should be expanded and people should be in a position to take advantage of it easily.

For students, with the contribution of Physical Education and Sports Department, recreational activities should be organized, exercising should be encouraged. For the perception of the benefits of exercise and physical activity, education efforts should be made. Facilities should be provided to allow students to exercise.

In order to improve the health, health education programs should be based on a wide range of local, social and cultural characteristics and should be closer to the formation of individuals' value system. The socio-demographic factors should be taken into consideration in health promotion programs.

The community level program that aim healthy lifestyle behaviours dissemination and supported by social policy must be provided country-wide.

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Paper received for publication on May 2015
Paper accepted for publication on February 2017