

**Original Article**

## **Healthy Life Behaviors and Physical Activity Level of Health College Students**

**Uzen Cura Sengul, PhD**

Assistant Doctor, Canakkale Onsekiz Mart University, Health School, Nursing Department, Department of Fundamental Nursing, Canakkale, Turkey

**Efil Sevda, PhD**

Lecturer Doctor, Canakkale Onsekiz Mart University, Health School, Nursing Department, Department of Internal Diseases Nursing, Canakkale, Turkey

**Yilmaz Kurt Fatma, PhD**

Assistant Doctor, Canakkale Onsekiz Mart University, Health School, Nursing Department, Department of Pediatric Nursing, Canakkale, Turkey

**Ogul Tanju, MNSc**

Research Assistant, Canakkale Onsekiz Mart University, Health School, Nursing Department, Department of Pediatric Nursing, Canakkale, Turkey

**Atay Selma, PhD**

Assistant Doctor, Canakkale Onsekiz Mart University, Health School, Nursing Department, Department of Fundamental Nursing, Canakkale, Turkey

**Correspondence:** Efil Sevda, Lecturer Doctor, Canakkale Onsekiz Mart University, Health School, Nursing Department, Canakkale, Turkey E-mail: sevda\_efil@hotmail.com

**Abstract**

**Aim:** This study was carried out in a descriptive and relation-seeking way in order to determine the physical activities and healthy lifestyle behaviors of the School of Health students and to examine relationship between those.

**Method:** Target population of the study was formed with the School of Health students of a public university studying during 2016-2017 academic year. No sample was selected in the study. The sample consisted of students who were at university during the specified date range and who volunteered to participate in the study. The data were collected by using the "Information Form" developed by the researchers in the direction of the literature as well as the "Healthy Lifestyle Behavior Scale" (HLBS) and the "International Physical Activity Questionnaire" (IPAQ). Ethical permits required for the study were taken. Data obtained from the study were evaluated using SPSS 19 statistical package program. The data were assessed using descriptive statistical methods such as frequency, percent, mean and standard deviation, as well as Student t test and ANOVA test. Findings from the study were assessed at the level of  $p < 0.05$  significance and 95% confidence interval.

**Results:** It was determined that 55% of the students who participated in the research belonged to Nursing, 24% Emergency Aid and Disaster Management (EADM) and 21% Midwifery departments. Although health responsibility and interpersonal relations subscales of HLBS showed a significant difference in favor of female students, it was found that physical activity subscale showed a significant difference in favor of male students. When the physical activity levels and HLBS score averages were compared, the scores of healthy lifestyle behaviors and physical activity subscale scores of the subjects with severe physical activity were found to be statistically significant.

**Conclusion:** It was observed that the total score of healthy lifestyle behaviors and physical activity subscale scores of the School of Health students with severe physical activity were significant. It is believed that students' being aware of healthy lifestyle behaviors might contribute to their developing positive healthy lifestyle behaviors and observing the effects of healthy lifestyle behaviors in the individuals they provide care.

**Keywords:** Healthy life behavior, physical activity, health promotion, health school students

## Introduction

The World Health Organization (WHO) defines health as a complete physical, mental and social well-being not merely absence of illness or disability. Today's understanding of health involves an approach to health-oriented care that, protects, maintains and improves the health of individuals, families and society. Such understanding is based on acquiring behaviors to protect, maintain and improve the individual's well-being and making right decisions on one's own health (Curcuni, Tan, & Ozdelikara, 2010).

Education plays an important role in getting individuals, families and societies adopt a habit of healthy life (Ergun & Çiftçi, 2004). The university education is a period in which individuals undergo significant changes in their life. This education leads to changes in personal development, individual life and health behaviors as well as in vocational education. Such changes are especially important for attitudes and behaviors in a healthy life. The attitudes and behaviors of a student towards well-being affect his/her family and society in his/her present and future life just as it affects his/her own life. The health level of a society is measured by majority of healthy individuals in that society (Ilhan, Batmaz & Akhan, 2010).

The healthcare professionals should identify prevalence of habits in the society that are likely to have adverse effects on the health and create awareness of healthy life in society so that negative behaviors can be replaced by positive behaviors that are needed for health. For this reason, each healthcare professional should comprehend the importance of improving health and exhibit behaviors to enhance motivation for individuals in society to develop positive health behaviors. Such behaviors are gained during university years usually when receiving vocational education. This leads to a necessity to identify healthy life behaviors of health college students that will provide health care service in the future and the factors affecting such behaviors (Celik, et al., 2009). Sedentary life is known to be an important risk factor for health problems such as coronary heart disease, high blood pressure, stroke, diabetes, breast and colon cancer and depression. At the same time, regular physical activity has positive effects on improving muscle and skeletal structure,

providing weight control, and increasing psychological and social well-being (Alpozgen & Ozdincler, 2016). Therefore, it is important to determine healthy life behaviors and physical activity levels in order to control risk factors for possible health problems.

In this sense, this is a descriptive research performed to identify physical activities and healthy life behaviors of Health College (HC) students. The results obtained from this research are considered to contribute to students' recognition of their healthy life behaviors that are educated as a part of health care system, students' development of positive healthy life behaviors, and observation of influences of such behaviors on the individuals that receive care from these students in their professional life.

## Methodology

This study was designed as in a descriptive and relation-seeking way. The universe of this study includes students that received education in HC of Canakkale Onsekiz Mart University in the 2016–2017 academic year (N=1240). No sample was selected for this research, thus the sample of research included students that were present in the school and agreed to participate in research during the study period (n=584). The students were informed about the research and asked to complete a questionnaire under the supervision of investigators. The questionnaires were completed in approximately 15-20 minutes. An "Information Form", which was developed by the investigators in accordance with literature, and "HLBS" and "IPAQ" were used to collect data.

**Information Form:** Developed by the investigators in accordance with literature. This form includes 16 questions to query demographic characteristics and health-related traits of students.

**Healthy Lifestyle Behaviors Scale (HLBS)** was developed by Walker et al. in 1987 and the validity and safety study of Turkish version of scale was performed by Esin et al. in 1999. The scale measures the behaviors of an individual that improve health, associated with healthy lifestyle. The scale includes a total of 52 items and 6 sub-factors. The sub-factors include spiritual development, health responsibility, physical activity, diet, interpersonal relationships and stress management. Total score of scale

provides a score for healthy lifestyle behaviors. All items of scale are positive. A 4 point Likert scale is used for grading. "Never" scores (1); occasionally scores (2); frequently scores (3); and regularly scores (4). The lowest score is 52 and the highest score is 208 for the whole scale (5,6).

**International Physical Activity Questionnaire (IPAQ)** was designed by Micheal Booth in 1996 to investigate the levels of health and physical activity in society and the relationship between them (Booth, 2000). It was adapted to Turkish by Savcı et al. in 2006. This questionnaire was used to acquire the time (in minute) spent on vigorous physical activities (such as football, basketball, aerobics, fast bicycling, heavy lifting, and carrying heavy loads), moderate physical activities (such as carrying light loads, bicycling at a regular pace, folk dance, dancing, bowling, and table tennis), walking and one-day sitting within the last 7 days. The time spent on vigorous, moderate physical activities and walking was converted into MET (basal metabolic rate) using the following calculations in order to determine total physical activity score (MET-mins./week) (Savcı, et al., 2006).

The permission of HC where the research was carried out and the permission of ethics committee of Canakkale Onsekiz Mart University were obtained for the study. The data

obtained from the study was assessed by SPSS 19 (Statistical Package for the Social Science). The descriptive statistical methods including frequency, percentage, mean and standard deviation as well as Student's t test and ANOVA were used to evaluate data. The findings from the research were assessed by significance level of  $p < 0.05$  and confidence interval of 95%.

### Ethical Approval

Prior to the collection of data, written permission was obtained from the Non-Drug Clinical Research Ethics Committee of the Faculty of Medicine, Canakkale Onsekiz Mart University (issue:2011-KAEK-27/2017-E.12989, date: 06/03/2017).

### Results

A 73% of students included in the study were female; the mean age of students was  $21.48 \pm 1.72$ ; 48% of students lived in the Marmara Region; 75% had a body mass index ranging from 18.5 to 24.9. 55% of students studied Nursing, 24% studied Emergency and Disaster Management and 21% studied midwifery. The education level of mothers of 70% of high school students was primary school graduate, and the education level of fathers of 57% of students was again primary school graduate.

**Table-1: Comparison of mean scores of HLBS by gender**

Sub-dimensions	Gender				Test and p	
	Male (n=156)		Female (n=428)		t*	p
	$\bar{x}$	SD	$\bar{x}$	SD		
Moral development	25.16	4.22	25.82	4.87	-1.49	0.14
Health responsibilities	20.35	4.35	21.41	4.38	-2.56	<b>0.01</b>
Physical activity	18.60	4.24	17.12	4.95	3.31	<b>0.001</b>
Nourishment	20.25	4.14	20.34	3.75	-0.25	0.80
Interpersonal relations	24.49	4.59	25.78	4.24	-3.18	<b>0.002</b>
Stress management	18.97	3.31	19.33	3.81	-1.06	0.29
Total score	125.95	18.23	127.68	18.46	-0.98	0.33

\*Student t test

**Table–2: Comparison of mean scores of HLBS by departments**

	Nursing (n=323)		Midwifery (n=120)		EADM (n=140)		Test and p	
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD	F*	p
Total score	126.61	16.64	130.32	20.96	125.95	19.74	2.10	0.12
Moral development	25.59	4.23	26.63	5.41	24.93	5.02	4.29	<b>0.01</b>
Nourishment	20.25	3.58	20.53	4.27	20.22	4.08	0.26	0.77
Physical activity	17.22	5.04	17.42	4.82	18.21	4.18	2.11	0.12
Health responsibilities	21.08	4.08	21.89	4.81	20.57	4.67	2.92	0.06
Interpersonal relations	25.55	4.03	26.16	4.91	24.61	4.52	4.30	<b>0.01</b>
Stress management	19.16	3.87	19.34	3.44	19.28	3.45	0.12	0.89

\*ANOVA test

**Table–3: Comparison of physical activity level and mean scores of HLBS**

	Physical Activity Level						Test and p	
	Mild		Moderate		Severe		F*	p
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD		
Total score	122.87	14.48	126.31	16.08	129.75	17.36	3.61	<b>0.03</b>
Moral development	25.06	3.40	25.55	4.64	25.75	3.90	0.60	0.55
Nourishment	19.88	3.48	20.03	3.35	20.75	3.76	1.63	0.20
Physical activity	15.55	3.90	16.62	3.84	19.27	6.46	14.41	<b>0.001</b>
Health responsibilities	20.54	3.72	21.17	4.18	21.46	3.81	1.13	0.32
Interpersonal relations	25.46	4.73	25.71	3.74	25.41	3.70	0.19	0.83
Stress management	18.38	2.98	19.32	3.75	19.63	4.40	2.38	0.09

\* ANOVA test

The sub-dimensions of HLBS and mean of total scores were compared by gender, and no significant differences were found in the mean of total scores from the scale between two genders ( $p=0.33$ ). The sub-dimensions “health responsibility” and “interpersonal relationship”

differed in favor of female students ( $p=0.01$ ;  $p=0.002$ ) whereas the sub-dimension “physical activity” differed in favor of male students ( $p=0.001$ ) (Table–1).

The mean of total scores from HLBS was compared by the departments of students, and no

significant differences were found in the mean of total scores in three of the groups ( $p=0.12$ ). The sub-dimensions “spiritual development” and interpersonal relationship” of students studied Emergency and Disaster Management were statistically significantly lower than those of students that studied Nursing and Midwifery ( $p=0.01$ ;  $p=0.01$ ) (Table-2).

The physical activity level and mean scores of HLBS were compared, and total scores of healthy life behaviors of individuals who performed vigorous physical activity and the score from sub dimension “physical activity” were statistically significantly different ( $p= 0.03$ ;  $p=0.001$ ) (Table-3).

### **Discussion**

This study investigated healthy life behaviors and physical activity level of HC students and found that sub-dimension “doing exercises” had the lowest score in both of the genders and the sub-dimension “spiritual development” had the highest score. The mean of scores from sub-dimension “health responsibility” of female students was significantly higher than that of male students, and the score from sub-dimension “physical activity” was significantly higher in favor of male students. In Wei et al.’s (2012) research in which they examined the healthy life profile of students, it was found that responsibility of health was higher for female students, and the level of physical activity was higher for male students, which is similar to the results of our study. Similar results were obtained in some studies on this subject (Tambag, 2011; İlhan, Batmaz & Akhan, 2010; Celik, et al., 2009; Curcani, Tan & Ozdelikara, 2009). Although the study was conducted at a HC, the reason for the health responsibility sub-dimension was significantly higher in female students than in male students could be considered because of health responsibility’s being regarded as a role of woman in traditional society and she has played an active role in this role. Although the scores from the sub-dimension “physical activity” were significantly higher in male students as compared to female students, both of the genders had the lowest score from this sub-dimension. In a study performed by Genc et al. (2011) to investigate the differences in physical activity and quality of life between the female and male young adults, and they found that males had a higher score from physical activity. In a study performed by

Vatansever et al. to explore physical activity and healthy life behaviors in middle-aged men and women, and they suggested that physical activity level of men was significantly higher than that of women, and there was a significant relationship between the scores of physical activity and the scores of quality of life in men (Vatansever, et al, 2015). Although the results of that study indicated that there were significant differences between the scores of physical activity in favor of men, and an emphasis was placed that scores of both genders from physical activity were not at the desired level. The reason for this in Turkish society is thought that women take part in house works and child care more than men, therefore they might spare less time for physical activity. In addition, these results suggest that due consideration is not given to physical activity in Turkish society. Today, sedentary lifestyle remains as a major community health problem as it has negative impacts on the health. In a study by Esatbeyoglu et al. which investigated the physical activity levels of adolescents they found that there were no gender differences in physical activity levels unlike other similar studies (Esatbeyoglu, & Isler, 2018). In a study performed by Ozturk including university students, they found that only few of healthy young adults participated in physical activities to maintain their health (Ozturk, 2005). It is an important step to explain the importance of physical activities to students studying health during their undergraduate education in order to avoid future social problems that may arise from a sedentary lifestyle.

Although there were no significant differences in total scores from the scale in three of the groups when the mean of HLBS scores was compared by departments of students, the sub-dimensions “spiritual development” and “interpersonal relationship” of students studying Emergency and Disaster Management were statistically significantly lower than that of students studying Nursing and Midwifery. The reason for this might be that students studying Emergency and Disaster Management will deal with health problems of individuals and community that arise from emergency and disaster, and the pressure on them as they would race against time.

The physical activity levels and mean of HLBS scores were compared, and total scores from healthy life behaviors of individuals who performed vigorous physical activity and the

scores of sub-dimension “physical activity” were statistically significantly different. In a study performed by Yalcinkaya et al. to assess healthy lifestyle of healthcare professionals, they found that those who did not smoke and drink alcohol, and who had on a healthy diet and performed physical activities had healthy lifestyle behaviors that were more favorable than all of the sub-dimensions (Yalcinkaya, Ozer & Karamanoglu, 2007). It has been shown in different studies that individuals who have healthy life behaviors have higher rates of physical exercise (Dil, Senturk & Girgin, 2015; Stacey, James, Chapman & Lubans, 2016; Ornek & Kurku, 2017). In our study, total scores of healthy life behaviors of those who performed vigorous physical activities among the students that will be a healthcare professional in the future and the scores from the sub-dimension “physical activity” were significant. This is considered to contribute to students’ recognition of their healthy life behaviors that are educated as a part of health care system, students’ development of positive healthy life behaviors, and observation of influences of such behaviors on the individuals that receive care from these students in their professional life.

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