THE RELATIONSHIP BETWEEN HEALTHY LIFE STYLE BEHAVIORS AND HEALTH LITERACY: A STUDY ON UNIVERSITY STUDENTS*

İsa GÜL[1]
Aysun YEŞİLTAŞ[2]
Sibel ŞAHİN[3]

ABSTRACT

In order to create healthy societies today, individuals need to understand, develop and apply health information. In this context, the question of whether there is a relationship between health literacy level and lifestyle behaviors of individuals constitutes the research problem. A questionnaire consisting of three parts was used as a data collection tool. The first part of the questionnaire consisted of a personal information form, the second part included the Adult Health Literacy Scale and the third part included the Healthy Lifestyle Behavior Scale. The study was conducted on 18.03.2019 and 10.04.2019 in a vocational school in Kastamonu with 149 students based on the questionnaire system. SPSS statistics (v.22) package program was used in the data analysis of the study. Mann-Whitney U test, Kruskall Wallis test and correlation analysis and frequency analysis were performed.

There was a positive but weak relationship between health responsibility, physical activity, psychological development dimensions, healthy lifestyle behaviour scale and adult health literacy scale. There was also a positive but weak correlation between general health lifestyle behaviors and adult health literacy. According to these results, as health literacy increases, it can be said that healthy lifestyle behaviors show a positive development.

Keywords: Health Literacy, Healthy Lifestyle Behaviors, University Students.

[1]Lecturer, Afyonkarahisar University of Health Sciences, Faculty of Health Sciences, TURKEY
isagul233@gmail.com
Orcid Number: https://orcid.org/0000-0002-9419-4816
[2]Asst. Prof, Necmettin Erbakan University, Faculty of Health Sciences, TURKEY
pelineren78@hotmail.com
Orcid Number: https://orcid.org/0000-0002-2023-1485
[3]Lecturer, Kastamonu University, Daday Nafi & Ümit Çeri Vocational School of Higher Education, TURKEY
sibelsahin@kastamonu.edu.tr

Orcid Number: https://orcid.org/0000-0002-1834-2434

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1. INTRODUCTION

The health status of each individual living in a country determines the overall health structure of that society. Therefore, healthy societies emerge with each individual protecting and improving their health (Özenoğlu et al., 2018: 233). In this context, today's health concept envisages a health-centered care approach that protects, maintains and improves the health of both the individual and the society. This understanding is based on gaining behaviors that will protect, maintain and improve the health of the individual and enable them to make the right decisions about their own health. In this direction, protecting the health of the individual and ensuring the continuation of the well-being are the main purpose of the health professionals as well as the responsibility of the individual (Özpulat, 2010: 293-294).

In order to maintain and improve the well-being, the social and cognitive skills related to the access, understanding and use of health information are health literacy (Aras and Bayık Temel, 2017: 86). Developing health literacy can increase individuals' ability and motivation to find solutions to both personal and public health problems and these skills can be used to find solutions to various health problems throughout life (Ishikawa and Kiuchi, 2010: 1).

Health literacy is defined as "knowledge, motivation and competence that will enable people to access, understand, evaluate and use the necessary health information in order to make decisions about related to literacy, their health in their daily lives, improve their health and improve their quality of life and prevent their diseases" (Aktaş, 2019: 12). In other words, health literacy is when an individual understands, interprets, and behaves appropriately when an individual wants to give medical information to a patient (Değerli and Tüfekçi, 2018: 467). Health literacy is the capacity to receive health services, to obtain health information, to interpret and to understand health in order to protect, promote and improve the deteriorating health of people (Şahinöz et al., 2018: 74).

Health promotion varies in line with current conditions, changes in society and global developments in the world. In order to form healthy societies, it is important to choose the right health policies and implement them effectively (Madenoğlu Kıvanç, 2015: 165). In this context, creating health policies that will increase the health literacy of the society will contribute to the evaluation of health services in addition to increasing the health knowledge level of individuals.

As a matter of fact, the increase in the level of health literacy provides patients to recognize doctors, to understand doctors' information, to inform doctors about the disease as necessary and it also provides doctors with the ability to carry out ideas about the diagnosis and treatment of the disease (Çatı et al., 2018: 69).

Health promotion is not only aimed at preventing diseases, but also aims to improve the individual's general health and well-being. Within the framework of this understanding; it is necessary for the individual to gain behaviors that will protect, maintain and improve individuals' well-being and to make the right decisions about their health. Healthy lifestyle behaviors that have individuals' health-enhancing effects include taking responsibility of the individual, self-realization, health control, stress management, nutrition and exercise

behaviors (Karadeniz et al., 2008: 497). When healthy lifestyle behaviors become a part of life, being healthy can be sustained and improved positively (Özenoğlu et al., 2018: 233).

Individuals are given responsibility in many health promotion models and practices related to health promotion to gain healthy lifestyle behaviors and education of individuals is considered important for health promotion (Koçoğlu, 2006: 32). As a matter of fact, according to the World Health Organization (WHO) estimates, 70-80% of deaths in developed countries and 40-50% of deaths in developing countries are caused by lifestyle diseases. The person's own attitudes and behaviors play a major role in the formation of these diseases. This situation reveals the importance of practices aimed at the development of life styles, which are the most important factors in disease prevention and health promotion (Şen et al., 2017: 7). In many countries, at national level studies, it is reported that at least fifty percent of annual deaths result from unhealthy lifestyles of individuals. This situation reveals the importance of applications for the development of life styles, which are the most important factors in disease prevention and health promotion (Zaybak and Fadiloglu, 2004: 79). There are also studies which show the increase of many problems and worries about life styles and risky behaviors of students during university period (Ansari et al., 2011: 197). In this context, health literacy levels of high school students and their relationship with healthy lifestyle behaviors will be evaluated.

2. MATERIALS AND METHODS

The aim of this study is to determine the relationship between health literacy level and healthy lifestyle behaviors of university students statistically. In addition to this aim of the study, the analysis of the scale and its subscales in terms of demographic variables are included.

The hypothesis reflecting the aim of the research is as follows;

H1: There is a positive relationship between health literacy level and healthy lifestyle behaviors.

The population of the study consisted of 175 students studying at a vocational college in Kastamonu province. As the entire universe was aimed to be reached, sampling was not taken. The questionnaire was conducted between 18.03.2019 and 10.04.2019 with 149 students who could be reached and volunteered to participate in the study.

2.1. Data Collection Tools of Research

A questionnaire was used as a data collection tool. This questionnaire consisted of three parts. In the first part demographic questions, in the second part "Adult Health Literacy Scale", in the third part "Healthy Lifestyle Behavior Scale II" were included. In the data analysis of the study, SPSS statistics (v.22) package program was used. Analysis; frequency analysis, mean, Mann-Whitney U test, Kruskall Wallis Test and correlation analysis were performed.

Adult Health Literacy Scale

The scale, which was developed by Sezer and Kadıoğlu (2014) and tested for reliability and validity, includes 22 items related to health information and drug use in order to determine the adequacy of adult individuals in health literacy and one form of knowing the location of organs in the body. 13 of the questions in the scale were yes / no, 4 were filling in the spaces, 4 were multiple choice and 2 were matching. Scoring of the questions was done separately for each question type. Yes / no answers were given 1 point for positive markers, 0 point for negative markers, 1 correct answer for gap filler questions, 0 point for wrong answer. In multiple choice questions, 1 point was given to those who mark two and more than two correct answers, and 0 point was given to those who did not know at all or those who marked the wrong answer with the correct one. In the case of matching type questions, those who matched more than two correctly were given 1 point and the others were given 0 point. The scores that can be obtained from the scale vary between 0-23. As the score obtained from the scale increases, the level of health literacy increases (Sezer and Kadıoğlu, 2014: 166-167).

Lifestyle Behavior Scale II

The Healthy Lifestyle Behavior Scale was developed by Walker, Sechrist and Pender (1987), revised again in 1996 and named the "Healthy Lifestyle Behavior Scale II ((Walker et al., 1996). The scale measures health-promoting behaviors of an individual in relation to a healthy lifestyle. The scale consists of 52 items and has 6 sub-factors. Sub-dimensions are spiritual development, health responsibility, physical activity, nutrition, interpersonal relationships and stress management. The general score of the scale indicates healthy lifestyle behaviors. All statements in the scale have a positive meaning. The rating is 4-point likert. It is accepted as Never (1), sometimes (2), often (3), regularly (4). The lowest score is 52 and the highest score is 208 for the whole scale. The Turkish validity and reliability study of the scale was conducted by Bahar, Beşer, Gördes, Ersin and Kıssal (2008). In this study, the reliability value of the scale was found to be Cronbach Alpha 0.88.

Table 1. Lifestyle Behavior Scale II Scoring

Sub- dimensions and Scale	Question No. in the Scale	The Lowest Score	The Highest Score	Score Obtained in the Study
Health Responsibility	*3,9,15,21,27,33,39,45, 51*	*9*	*36*	*20.62*
Physical Activity	*4,10,16,22,28,34,40,46*	*8*	*32*	*17.47*
Nutrition	*2,8,14,20,26,32,38,44, 50*	*9*	*36*	*20.14*
Spiritual Development	*6,12,18,24,30,36,42,48 ,52*	*9*	*36*	*27.17*
Interpersonal Relations	*1,7,13,19,25,31,37,43, 49*	*9*	*36*	*25.61*
Stress Management	*5,11,17,23,29,35,41,47*	*8*	*32*	*20.00*
Total Scale	*1-52 Scale Items*	*52*	*208*	*131.02*

Health responsibility is individuals' feeling of responsibility actively for their own well-being. It is to take care of their health, to learn about health, to apply for professional help when necessary. Physical activity involves the regular practice of light, moderate and heavy exercises. It is carried out in a planned manner as part of daily life. Nutrition determines the value of an individual in selecting, organizing and choosing food. Spiritual development focuses on the development of internal resources. Development can take place through relationship and transcendence. Transcendence provides inner peace, creating the possibility to provide opportunities for new experiences other than who we are and what we do. Establishing relation is to be in relation to the universe and feel in harmony. Improvement is to work for purposes in life and maximize the power of the individual towards the state of well-being. Interpersonal relationships are relationships with others. It requires the use of communication to establish a meaningful relationship other than causal requirements. Communication involves sharing thoughts and feelings through verbal and non-verbal messages. Stress management is the ability of an individual to identify and activate physiological and psychological resources to reduce or effectively control tension (Bahar et al., 2008).

2.2. Findings

The distribution of the students participating in the study according to demographic characteristics is shown in Table 2.

Table 2. Distribution of Participants by Demographic Characteristics

Demographic Features		Frequency (f)	Percent (%)
Age Variable	18	18	12.2
	19	37	25.0
	20	47	31.8
	21 and Over	34	23.0
Gender Variable	Male	55	37.2
	Female	93	62.8
Department Type Variable	Cookery	21	14.2
	Horse Breeding	17	11.5
	Banking and Finance	24	16.2
	Public Finance	37	25.0
	Accounting and Tax Practices	11	7.4
	Health Institutions Management	38	25.7
Class Level Variable	Class I	106	71.6
	Class II	42	28.4
Family Income Status (TL) Variable	0-1999	28	18.9
	2000-3499	67	45.3

	3500 and Over	42	28.4
Chronic Disease Condition Variable	Yes (have chronic disease)	17	11.5
	No (no chronic disease)	131	88.5
Health Related Course Status Variable	Yes (took lessons)	48	32.4
	No(didn't take lessons)	98	66.2
Presence of Health Workers in the Family Variable	Yes	19	12.8
	No	129	87.2
Use of Technology Status in Obtaining Health Related Information Variable	Yes	109	73.6
	No	39	26.4

According to Table 2, 31.8% of the students are in the 20-year age group, 62.8% are women, 25.7% are in the associate degree department of Health Institutions Management and 71.6% are in the first grade. 45.3% of the students who participated in the study had a family income of 2000-3499 TL and 11.5% had chronic disease. It is seen that 66.2% of the students did not take any courses related to health, 87.2% did not have health workers in their families and 73.6% did not use technology to obtain information about health.

Table 3. Findings for Comparison of Adult Health Literacy and Healthy Lifestyle Behaviors Scale and Subscales by Gender

Scale and Subscales	Gender Variable			
	Male n:55 $\bar{x}\pm sd*$	**Female n:93** $\bar{x}\pm sd$	*Z-Value*	**p**
General Health Literacy	13.69±2.25	14.03±2.87	-0.875	0.382
Health Responsibility	20.37±5.82	20.77±3.97	-0.849	0.396
Physical Activity	19.15±4.92	16.47±4.49	-3.165	**0.002**
Nutrition	20.69±4.33	19.81±3.91	-1.413	0.158
Spiritual Development	27.39±4.99	27.04±4.13	-0.794	0.427
Interpersonal Relationships	24.90±5.37	26.03±6.01	-0.867	0.386
Stress Management	19.76±3.71	20.13±3.40	-0.536	0.592
General Healthy Lifestyle Behaviors	132.29±23.03	130.27±17.67	-0.859	0.390

*sd:Standart Deviation.

The statistical results for the comparison of adult health literacy and healthy lifestyle behaviors scale and subscales by gender are presented in Table 3. When Table 3 is analyzed, the responses of the participants to the physical activity dimension show a significant difference according to gender (p <0.05). When the arithmetic means are examined, it is found that male participants have higher scores. The physical activity dimension generally includes exercises, muscle strengthening and physical actions. In this respect, male students' willingness to muscle strengthening, sports organizations and weight loss applications can be relatively effective in this way. General health literacy, health responsibility, nutrition, spiritual development, interpersonal relationships, stress management and general healthy lifestyle behaviors scales do not show significant differences according to gender (p> 0.05).

Table 4. Findings for the Comparison of Adult Health Literacy and Healthy Lifestyle Behaviors Scale and Subscales by Age

Scale and Subscales	Age Variable				Chi Square	p
	18 Age n:18 $\overline{x}\pm sd$	**19 Age n:37** $\overline{x}\pm sd$	**20 Age n:47** $\overline{x}\pm sd$	**21 and Over n:34** $\overline{x}\pm sd$		
General Health Literacy	13.22±1.69	13.43±2.84	14.02±2.55	14.32±2.82	5.643	0.130
Health Responsibility	19.14±4.27	20.78±4.40	20.76±4.67	20.41±5.39	1.609	0.657
Physical Activity	17.74±3.72	16.33±4.34	17.76±5.34	17.89±5.30	1.910	0.591
Nutrition	18.94±3.42	20.19±4.24	19.90±4.19	20.88±4.34	1.568	0.667
Spiritual Development	26.01±5.48	26.04±4.64	27.73±3.58	27.53±4.56	5.129	0.163
Interpersonal Relationships	27.55±10.55	25.37±5.22	25.85±4.63	24.89±4.85	1.426	0.699
Stress Management	20.72±3.72	19.46±2.89	20.37±3.69	19.50±3.76	5.045	0.169
General Healthy Lifestyle Behaviors	130.13±23.39	128.20±19.79	132.39±18.24	131.12±21.07	2.512	0.473

The results of the analysis of the comparison of adult health literacy and healthy lifestyle behaviors scale and subscales according to age variable are presented in Table 4. When Table 4 is analyzed, general health literacy, health responsibility, physical activity, nutrition, spiritual development, interpersonal relationships, stress management and general healthy lifestyle behaviors do not show significant differences according to age (p> 0.05).

Table 5. Findings for the Comparison of Adult Health Literacy and Healthy Lifestyle Behaviors Scale and Subscales According to Class Variable

Scale and Subscales	Class Variable			
	Class I n:106 $\overline{x}\pm$sd	Class II n:42 $\overline{x}\pm$sd	*Z-Value*	P
General Health Literacy	13.65±2.71	14.54±2.40	-1.929	0.054
Health Responsibility	20.39±4.72	21.22±4.74	-1.050	0.294
Physical Activity	17.53±4.94	17.30±4.56	-0.030	0.976
Nutrition	19.84±4.09	20.88±4.02	-1.736	0.083
Spiritual Development	26.89±4.47	27.87±4.40	-1.392	0.164
Interpersonal Relationships	25.50±6.28	25.87±4.34	-1.344	0.179
Stress Management	19.98±3.64	20.03±3.22	-0.038	0.969
General Healthy Lifestyle Behaviors	130.16±20.39	133.19±18.18	-1.487	0.137

The results of the analysis of the comparison of adult health literacy and healthy lifestyle behaviors scale and subscales according to class variable are presented in Table 4.. When Table 5 is analyzed, general health literacy, health responsibility, physical activity, nutrition, spiritual development, interpersonal relationships, stress management and general healthy lifestyle behaviors scales do not show statistically significant differences according to the level of education of students ($p > 0.05$).

Table 6. Findings for the Comparison of Adult Health Literacy and Healthy Lifestyle Behaviors Scale and Subscales According to Chronic Disease Variable

Scale and Subscales	Chronic Disease Variable			
	Have Chronic Disease n:17 $\bar{x}\pm sd$	No Chronic Disease n:131 $\bar{x}\pm sd$	*Z-Value*	P
General Health Literacy	14.58±3.41	13.81±2.54	-0.925	0.355
Health Responsibility	23.94±5.35	20.19±4.49	-2.759	**0.006**
Physical Activity	18.05±6.04	17.39±4.66	-0.142	0.887
Nutrition	21.14±5.09	20.01±3.94	-0.320	0.749
Spiritual Development	27.41±5.75	27.14±4.29	-0.247	0.805
Interpersonal Relationships	24.55±5.74	25.75±5.80	-0.931	0.352
Stress Management	19.67±4.21	20.04±3.43	-0.754	0.451
General Healthy Lifestyle Behaviors	134.78±26.49	130.54±18.81	-0.253	0.801

The statistical results for the comparison of adult health literacy and healthy lifestyle behaviors scale and subscales according to chronic disease variable are presented in Table 6. When Table 6 is analyzed, the responses of the students to the health responsibility dimension shows a significant difference according to the presence or absence of chronic disease in the students (p <0.05).

According to the results, the arithmetic mean of the responses of the students with chronic illness to the health responsibility dimension is higher. The health responsibility dimension includes the individuals' consultation with a doctor or health personnel, reading health-related books and watching TV programs, and physical control of their body. Consulting with doctors or other health stuff about drugs that should be used continuously, receiving training from health care providers on chronic diseases (diabetes education, etc.), using this service with relatively greater need for health care, being in the hospital or other health institutions during the use of the service may raise self-awareness and awareness about healthy living to students with chronic illness. General health literacy, physical activity, nutrition, spiritual development, interpersonal relationships, stress management and general healthy lifestyle behaviors scales do not show significant difference according to chronic disease variable (p> 0.05).

Table 7. Findings for Comparison of Adult Health Literacy and Healthy Lifestyle Behaviors Scale and Subscales According to Health Related Course Variable

Scale and Subscales	Health Related Course Variable			
	Took Lessons n:48 $\overline{x}\pm$sd	Didn't take lessons n:98 $\overline{x}\pm$sd	*Z-Value*	P
General Health Literacy	14.87±2.54	13.45±2.61	-2.891	**0.004**
Health Responsibility	22.44±4.75	19.78±4.52	-3.086	**0.002**
Physical Activity	18.26±5.67	17.16±4.34	-0.983	0.326
Nutrition	21.00±4.39	19.79±3.89	-1.834	0.067
Spiritual Development	28.83±4.42	26.41±4.29	-2.890	**0.004**
Interpersonal Relationships	26.38±4.67	25.28±6.29	-1.680	0.093
Stress Management	20.10±3.25	19.99±3.67	-0.008	0.993
General Healthy Lifestyle Behaviors	137.05±19.35	128.43±19.49	-2.550	**0.011**

The results of the analysis for comparing adult health literacy and healthy lifestyle behaviors scales and subscales according to the students' taking health related course variable are presented in Table 7. When Table 7 is analyzed, the responses of the students to the dimensions of general health literacy, health responsibility, spiritual development and general healthy lifestyle behaviors scale show a statistically significant difference according to the variable of taking health related courses (p <0.05). When the arithmetic means are examined, it is seen that the average scores of the students taking courses for all dimensions and scales are higher. In health related courses; activities such as providing information about diseases, providing information about health protection and promotion, promotion of first aid and similar practices might have positive effects on students' attitudes and behaviors related to health. On the other hand, physical activity, nutrition, interpersonal relationships and stress management dimensions do not show statistically significant difference according to the health related course variables (p> 0.05).

Table 8. Findings for Comparison of Adult Health Literacy and Healthy Lifestyle Behaviors Scale and Subscales According to Presence of Health Workers in the Family

Scale and Subscales	Presence of Health Workers in the Family			
	Yes n:19 $\bar{x}\pm$sd	No n:129 $\bar{x}\pm$sd	*Z-Value*	P
General Health Literacy	13.05±3.29	14.03±2.54	-1.214	0.225
Health Responsibility	21.93±5.85	20.43±4.53	-1.467	0.142
Physical Activity	19.53±4.83	17.16±4.76	-1.829	0.067
Nutrition	21.21±4.27	19.98±4.04	-0.848	0.397
Spiritual Development	27.86±4.65	27.07±4.44	-0.730	0.465
Interpersonal Relationships	25.14±4.19	25.68±5.99	-0.442	0.658
Stress Management	20.65±3.76	19.90±3.48	-0.641	0.521
General Healthy Lifestyle Behaviors	136.34±21.63	130.24±19.46	-1.387	0.165

The results of the analysis for comparing adult health literacy and healthy lifestyle behaviors scales and subscales according to presence of health workers in the family variable are presented in Table 8. When Table 8 is analyzed, general health literacy, health responsibility, physical activity, nutrition, spiritual development, interpersonal relationships, stress management and general healthy lifestyle behaviors scales do not show a significant difference according to the presence of health workers in the family (p> 0.05).

Table 9. Findings for Comparison of Adult Health Literacy and Healthy Lifestyle Behaviors Scale and Subscales According to Use of Technology Status in Obtaining Health Related Information Variable

Scale and Subscales	Use of Technology Status in Obtaining Health Related Information Variable			
	Yes n:109 $\bar{x}\pm sd$	No n:39 $\bar{x}\pm sd$	*Z-Value*	p
General Health Literacy	14.28±2.54	12.84±2.71	-2.439	**0.015**
Health Responsibility	20.87±4.60	19.93±5.06	-1.123	0.262
Physical Activity	17.31±4.78	17.91±4.96	-0.523	0.601
Nutrition	20.12±4.10	20.20±4.08	-0.223	0.824
Spiritual Development	27.20±4.42	27.07±4.62	-0.024	0.981
Interpersonal Relationships	25.38±4.92	26.23±7.76	-0.092	0.927
Stress Management	20.00±3.39	19.97±3.89	-0.035	0.972
General Healthy Lifestyle Behaviors	130.91±18.92	131.34±22.25	-0.279	0.781

The results of the analysis for the comparison of adult health literacy and healthy lifestyle behaviors scales and subscales according to use of technology status in obtaining health related information are presented in Table 9. When Table 9 is analyzed, the responses to the general health literacy scale differ significantly according to use of technology status in obtaining health related information (p <0.05). According to the results, the scores of the students using technology to obtain health information are found to be higher. It can be said that the use of technology in health-related issues is becoming more and more widespread and accelerating day by day. In addition, a lot of health-related information can be accessed by using technology today. The fact that such information contributes to the health literacy of the participants may have been effective in producing such results. Health responsibility, physical activity, nutrition, spiritual development, interpersonal relationships, stress management and general healthy lifestyle behaviors scales do not show a significant difference according to the use of technology variable in obtaining information about health (p> 0.05).

Table 10. Findings for Comparison of Adult Health Literacy and Healthy Lifestyle Behaviors Scale and Subscales According to Family Income Status

Scale and Subscales	Family Income Status			Chi Square	p
	0-1999 TL n:28 $\overline{x}\pm sd$	2000-3499 TL n:67 $\overline{x}\pm sd$	3500 and Over n:42 $\overline{x}\pm sd$		
General Health Literacy	14.07±2.46	13.71±2.52	14.45±2.94	0.745	0.689
Health Responsibility	21.22±4.23	20.22±5.06	20.74±4.80	1.757	0.415
Physical Activity	17.58±4.07	16.75±4.51	18.91±5.52	3.798	0.150
Nutrition	19.65±4.05	20.38±4.34	19.95±4.05	0.356	0.837
Spiritual Development	26.79±3.85	26.98±4.68	27.92±4.48	1.696	0.428
Interpersonal Relationships	25.06±4.64	25.98±4.64	24.76±5.40	2.020	0.364
Stress Management	20.45±3.28	19.60±3.27	20.41±4.05	1.185	0.553
General Healthy Lifestyle Behaviors	130.89±16.98	129.94±20.48	132.72±20.65	0.745	0.689

The results of the analysis for comparing adult health literacy and healthy lifestyle behaviors scale and subscales according to the income status variable of the participants' family are presented in Table 10. When Table 10 is analyzed, general health literacy, health responsibility, physical activity, nutrition, spiritual development, interpersonal relationships, stress management and general healthy lifestyle behaviors scale and sub-dimensions do not show a significant difference according to the family income status variable ($p > 0.05$).

Table 11. Findings for Comparison of Adult Health Literacy and Healthy Lifestyle Behaviors Scale and Subscales According to Department Type Variable

Scale and Subscales	Department Type Variable						Chi Square	p
	Cookery n:21 $\bar{x}\pm sd$	Horse Breeding n:17 $\bar{x}\pm sd$	Banking and Finance n:24 $\bar{x}\pm sd$	Public Finance n:37 $\bar{x}\pm sd$	Accounting and Tax Practices n:11 $\bar{x}\pm sd$	Health Institutions Management n:38 $\bar{x}\pm sd$		
General Health Literacy	12.95±2.90	14.11±1.96	13.62±2.91	13.59±2.94	13.36±2.20	14.97±2.18	9.794	0.081
Health Responsibility	23.27±5.80	20.78±4.45	19.80±4.32	19.30±4.43	19.24±4.92	21.30±4.20	8.957	0.111
Physical Activity	18.46±4.86	20.78±5.45	17.20±4.48	16.58±4.71	16.77±3.67	16.66±4.65	10.954	0.052
Nutrition	21.82±4.75	21.31±4.07	18.45±4.10	19.76±3.38	20.54±4.59	20.00±3.90	10.468	0.063
Spiritual Development	27.34±5.07	27.53±4.35	27.54±4.51	26.08±4.31	25.00±5.03	28.37±3.89	7.326	0.198
Interpersonal Relationships	26.60±5.86	24.68±4.12	25.86±9.29	24.74±4.75	25.18±5.87	26.29±4.46	3.004	0.699
Stress Management	20.85±4.41	20.44±3.94	19.93±3.43	19.90±3.21	19.05±4.27	19.73±2.96	1.407	0.924
General Healthy Lifestyle Behaviors	138.36±26.13	135.55±19.12	128.80±21.04	126.38±18.28	125.80±23.20	132.38±14.36	7.009	0.220

The results of the analysis for comparing adult health literacy and healthy lifestyle behaviors scale and subscales according to the variable of department of participants in which they receive education are presented in Table 11. According to Table 11; general health literacy, health responsibility, physical activity, nutrition, spiritual development, interpersonal relationships, stress management and general healthy lifestyle behaviors scale and dimensions do not differ significantly according to department variable ($p > 0.05$).

Table 12. Correlation Analysis (n = 148)

Healthy Lifestyle Behaviors Scale and Subscales	Adult Health Literacy Scale	
Health Responsibility	r=0.208[*]	p=**0.011**
Physical Activity	r=0.186[*]	p=**0.023**
Nutrition	r=0.132	p=0.110
Spiritual Development	r=0.210[*]	p=**0.010**
Interpersonal Relationships	r=0.095	p=0.249
Stress Management	r=0.080	p=0.333
General Healthy Lifestyle Behaviors	r=0.214[**]	p=**0.009**

* = Correlation is significant at 0.05 level.
** = Correlation is significant at 0.01 level.

The findings for the correlation analysis between Adult Health Literacy Scale and Healthy Lifestyle Behavior Scale and their sub-dimensions are shown in Table 12. According to Table 12, there is a positive-weak but significant correlation between health responsibility, physical activity, spiritual development dimensions of healthy lifestyle behaviors scale and adult health literacy scale of health lifestyle behaviors scale. A positive, significant but weak relationship is found between general healthy lifestyle behaviors and adult health literacy. In this direction, H1 hypothesis is accepted. According to these results, as health literacy increases, it can be said that healthy lifestyle behaviors have improved positively.

3. DISCUSSION AND CONCLUSION

In the study conducted on the sample of university students studying at the Vocational School, the average score of adult health literacy of the students included in the research was 13.90 ± 2.65 and the average score of healthy lifestyle behavior scale was 131.02 ± 19.78. According to the results, it can be said that the total scale score of the participants had a moderate value. In the study of İnkaya and Tüzer (2018), the average health literacy scale was found to be 16.9 ± 3.2. In the study of Sezer (2012), the average score of adult health literacy scale was found to be 13.10 ± 4.22 and the average score of healthy lifestyle behaviors scale was 130.83 ± 21.22. In the study of İnkaya and Tüzer (2018), adult health literacy scale score of female students was found to be higher than male students (p <0.05). In the same study, as the health literacy increased, the health literacy scale score increased, too. In the study of Sezer (2012), in the statistical comparison of the health literacy scale according to the demographic variables and the mean scores, only significant difference was found in the variables of education level and occupational group of the participants (p<0.005). While the level of health literacy was found to be higher in the participants with a university degree and a graduate degree, the participants with an academic profession had higher scores (Sezer, 2012). In the study conducted by Şimşek et al. (2012) with healthy lifestyle behaviors scale, the general scale score and sub-dimensions did not show significant difference according to gender and chronic disease variable, whereas the participants with poor economic status perception was found to be lower on spiritual development, interpersonal relations and scale overall scores. In the study conducted by Bostan and Beşer (2017) on nurses, female nurses had higher scores in the nutrition dimension and the result was found to be significant. In the same study, nurses with higher income than expenditure were found to be statistically significantly higher in all subscales and overall scale scores. Yalçınkaya et al. (2007) conducted a study in the health care workers sample, and the female health workers had higher scores in health responsibility and nutrition dimensions. In addition, the overall healthy lifestyle behaviors scale score of health care workers with undergraduate education level was found to be higher (Yalçınkaya et al., 2007). Özyazıcıoğlu et al. (2011) found that female students' health responsibility, nutrition, interpersonal relations and general scale scores were higher. On the other hand, it was found that those who had a good income according to income status had higher nutritional scores. In line with these results, as health literacy increases, it can be said that healthy lifestyle behaviors have improved positively. In this context;

• Increasing the participation of students in sports activities during the education process and being supported for such sports and social programs by the administrations.

• Developing education policies for health promotion, organizing trainings to increase health knowledge,

• Evaluating the effect of trainings on behavior change,

• Increasing public education for health promotion may be suggested.

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