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Investigation of Healthy Lifestyle Behaviors of High School Students Studying in the Field of Health Services

Sağlık Hizmetleri Alanında Öğrenim Gören Lise Öğrencilerinin Sağlıklı Yaşam Biçimi Davranışlarının İncelenmesi

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INVESTIGATION OF HEALTHY LIFESTYLE BEHAVIORS OF HIGH SCHOOL STUDENTS STUDYING IN THE FIELD OF HEALTH SERVICES

ABSTRACT

Aim: The aim of this study is to examine the healthy lifestyle behaviors of Vocational and Technical Anatolian high school (VTAHS) health services students.

Method: The research is of descriptive type and was conducted in all seven schools of a province with health services in VTAHS. The sample consisted of 681 students attending the 11th grade in the departments of assistant nurse, assistant midwife and health care technician. Data were collected with a personal information form and Adolescent Lifestyle Profile (ALP) scale. T-Test in Independent Groups, Mann-Whitney U Test, One-way ANOVA, Kruskal Wallis were used in the analysis of the data. Bonferroni was used in the post hoc analysis.

Results: The mean age of the students participating in the study was 16.73± 0.52, 74.6% were female, body mass index (BMI) of 67.3% of them was normal. While the lowest mean score was observed in the subgroup of health responsibility (2.10±0.48), the highest mean score (3.14±0.51) was observed in the interpersonal relations subgroup. Being a woman, living in a town, having a broken family member, studying in the midwife assistant department, not staying with the family, not working, having bad family or friend relations, having a diagnosis of illness, having a bad perception of health status, not having a normal weight BMI was at a disadvantage in terms of ALP scale scores.

Conclusions and Suggestions: Gender, place he/she lives, family type, department, place he/she stays, working a job outside of school, family relations, friend relations, disease diagnosis, current state of health and BMI of students were found to be effective in ALP scale scores. These students, who are on the way to become the health personnel of the future, should be made aware of healthy lifestyle behaviors and interventional studies should be carried out to develop these behaviors.

Keywords: Adolescent; Students; Health Services; Healthy Lifestyle.

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SAĞLIK HİZMETLERİ ALANINDA ÖĞRENİM GÖREN LİSE ÖĞRENCİLERİNİN SAĞLIKLI YAŞAM BİÇİMİ DAVRANIŞLARININ İNCELENMESİ

ÖZ

Amaç: Bu çalışmanın amacı Mesleki ve Teknik Anadolu Lisesi (MTAL) sağlık hizmetleri alanı öğrencilerinin sağlıklı yaşam biçimi davranışlarının incelenmesidir.

Yöntem: Araştırma tanımlayıcı tipte olup bir ilin MTAL'inde sağlık hizmetleri alanı bulunan tüm yedi okulunda yapılmıştır. Örneklem hemşire yardımcılığı, ebe yardımcılığı ve sağlık bakım teknisyenliği bölümlerinde 11. sınıfa devam eden 681 öğrenciden oluşmuştur. Veriler kişisel bilgi formu ve Adölesan Yaşam Biçimi (AYB) Ölçeği ile toplanmıştır. Verilerin analizinde Bağımsız Gruplarda T-Testi, Mann-Whitney U Testi, One-way ANOVA, Kruskal Wallis; post hoc analizlerinde ise Bonferroni ve Tamhane kullanılmıştır.

Bulgular: Çalışmaya katılan öğrencilerin yaş ortalaması 16.73± 0.52 olup %74.6'sı kadın, %67.3'ünün beden kitle indeksi (BKİ) normaldir. AYB toplam puanı 108.61±14.93'dir. En düşük puan ortalaması sağlık sorumluluğu (2.10±0.48) alt boyutunda görülürken, en yüksek puan ortalaması (3.14±0.51) kişilerarası ilişkiler alt boyunda görülmüştür. Kadın olmanın, ilçede yaşamanın, parçalanmış aile üyesi olmanın, ebe yardımcılığı bölümünde okumanın, ailesi ile kalmamanın, çalışmamanın, kötü aile ya da arkadaş ilişkilerinin, hastalık tanısına sahip olmanın, kötü sağlık durumu algısının, normal BKİ'ne sahip olmamanın AYB ölçek puanları açısından dezavantajlı duruma getirdiği saptanmıştır.

Sonuçlar ve Öneriler: Öğrencilerin cinsiyetinin, yaşadığı yerin, aile tipinin, bölümün, kaldığı yerin, okul dışında bir işte çalışma durumunun, aile ve arkadaş ilişkilerinin, hastalık tanısı varlığının, şimdiki sağlık durumunun ve BKİ'nin AYB ölçek puanlarında etkili olduğu görülmüştür. Geleceğin sağlık personeli olma yolundaki bu öğrencilere sağlıklı yaşam biçimi davranışlarına yönelik farkındalık kazandırılmalı ve bu davranışları geliştirebilmeleri için girişimsel çalışmalar yapılmalıdır.

Anahtar Kelimeler: Adölesan; Öğrenci, Sağlık Hizmetleri; Sağlıklı Yaşam Tarzı.

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INTRODUCTION

Adolescence is a period that usually begins with puberty and covers the ages of 10-24. During this period, important choices are made that can affect the rest of his/her life, such as self-discovery, self-confidence actions, and taking advantage of increased opportunities (Anderson, 2018). Healthy lifestyle behaviors are positive health behaviors that individuals should have according to the Health Promotion Model. These behaviors are self-actualization, health responsibility, exercise, nutrition, interpersonal support and stress management. In recent years, the concepts of positive life view and spiritual health have been added to these behaviors (Pender et al., 2002). The most important feature of the behaviors that negatively affect health in adolescents is that they are largely preventable. It is known that more than 3000 adolescents die each day from largely preventable causes. Many risky behaviors in adolescence have major implications for health in adulthood. Therefore, adolescent health requires special attention (World Health Organization, 2022).

In 2019, 16% of the world population consisted of young people aged 15-24 (United Nations, 2019). This rate was 10.6% for 27 member countries of the European Union and 15.4% for our country in 2020. 28.6% of this young population in our country was in the 15-17 age group When the rates of the 27 member countries of the European Union are evaluated one by one, it is seen that Turkey has the highest rate of young population (Turkish Statistical Institute, 2021).

In studies conducted with healthy adolescent children in Turkey, it was stated that healthy lifestyle behaviors were not at the desired level (Akgün et al., 2021; Akoğuz Yazıcı, 2022; Aktaş Özakgül, et al., 2016; Ardic & Esin, 2016; Dindar, 2022; Esatbeyoğlu & Kin İşler, 2018; Karabacak, 2019; Karagözoğlu, 2021; Kaya et al., 2016; Kazak et al., 2021; Metin Karaaslan & Çelebioğlu, 2018; Temiz & Harmankaya, 2022; Turan et al., 2021; Tuygar & Aslan, 2015; Yalçın, 2018; Yaşar et al., 2018). Indeed, according to the data of the Turkish Statistical Institute, 18.2% of the young population in our country was overweight and 4.6% was obese in 2019. It was observed that 10.1% consume fruit and 5.9% consume vegetables/salad less than once a week or not at all. In addition, the most common cause of death in total deaths (2037 out of 5441 deaths) was external injuries and poisoning (Turkish Statistical Institute, 2021). Other data on young people indicate that 97.1% of them use the internet, 45.1% consider health as a source of happiness, and 84.6% are satisfied with their general health (Turkish Statistical Institute, 2022). In a study conducted with 371 high school students, it was determined that the physical activity level of 38.8% of the students was inactive (Yalçın, 2018).

Adolescents' healthy lifestyle behaviors will provide an important power to improve individual, family and community health and to reach healthy generations. Schools are important environments where adolescents spend a large and

important part of their daily lives and also where they are as a group. In addition, schools create an important environment for the individual and his/her family to gain positive health behaviors. As a matter of fact, when the statistics of vocational students in Turkey, in general, are evaluated in terms of student density, the field of health services comes in third place with a student rate of 9.73%. (Ministry of Education, 2023). Students studying in this field undertake great responsibilities during adolescence. However, it is necessary to examine the health behaviors of the healthcare team members, who will take part in the delivery of health services and interact with the patients most, starting from the adolescent years, and be supported in the matters they need. It is very important for a healthy society for these members to understand the importance of promoting health, to be a model for society with healthy lifestyle behaviors, and to have a healthy adolescence. This research was conducted to examine the healthy lifestyle behaviors of Vocational and Technical Anatolian High School (VTAHS) health service students. The questions to be answered in the study are listed as follows: 1. What are the scores of the students from the Adolescent Lifestyle Profile (ALP) scale? 2. Is there a difference between gender, place he/she lives, family type, department, place he/she stays, working a job outside of school, family relations, friend relations, disease diagnosis, current state of health, BMI of the students and their ALP scale scores?

MATERIALS AND METHODS

Study Type

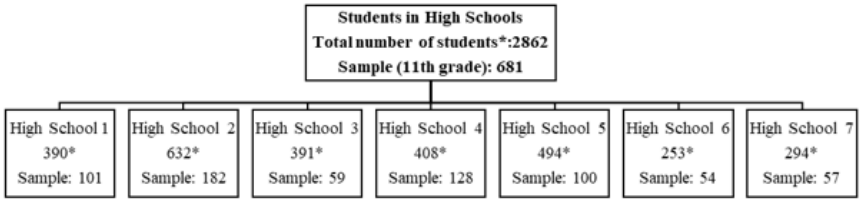
This study is a descriptive type of research.

Study Group

The research was carried out in all schools with Health Services Department from the VTAHS affiliated to the Directorate of National Education, located in seven districts of a province in the south of Turkey. The universe of the research consisted of all students enrolled in the Health Services Field of seven VTAHS in the 2016-2017 academic year (N=2862). In these high schools, branch selections are made in the 11th grade. However, since there will be only nurse assistant, midwife assistant and health care technician departments from now on, and students from other departments are in the 12th grade and there will be no more graduates, all students in the 11th grade of each school (n=745) were included in the study. However, the sample of the study consisted of a total of 681 students due to rea-

sons such as absenteeism during data collection, unwillingness to participate in the study, and incomplete data submission. As a result, 91.4% of the research sample was reached (Fig. 1).

Figure 1. The number of students studying in the field of health care in VTAHS and participating in the research



Dependent and independent variables

The independent variables of the study were some characteristics of the adolescents (gender, place of he/she lives, family type, department, place he/she stay, working a job outside of school), the dependent variables were the ALP scale score and subgroup scores (Health Responsibility-HR, Physical Activity-PA, Nutrition-N, Positive Life Perspective-PLP, Interpersonal Relations-IR, Stress Management-SM, Spiritual Health-SH).

Data Collection Tools

The data of the study were collected using the personal data form created by the researchers, using the relevant research and literature information (Bebiş et al., 2015; Bulut et al., 2016; Karadamar et al., 2014; Sümen & Öncel, 2015), and the ALP scale the validity and reliability studies of which were conducted by Ardic and Esin (Ardic & Esin, 2015).

Personal Data Form

The form consisted of 20 items that included students' socio-demographic characteristics, familial characteristics, interpersonal relationships, health perception, presence of disease, and body mass index (BMI) measurements. BMI was calculated according to the weight and height reports of the students. It was obtained by dividing the student's body weight(kilograms) by the square of the height (meters) (BMI=kg/m2). Then, the students' BMI percentile values were calculated (Neyzi et

al., 2008) and the percentile was evaluated as <5 underweight, ≥5 to <85 normal weight, ≥85 to <95 overweight, ≥95 obese (Turkish Society of Endocrinology and Metabolism, 2019).

Adolescent Lifestyle Profile

Adolescent Lifestyle Profile (ALP) is the version developed for adolescents of the Healthy Lifestyle Scale II, which was developed based on the Health Promotion Model. The scale was started to be developed by Pender in 1997 and its validity and reliability were made by Hendricks, Murdaugh and Pender in 2006. The scale allows to determine the healthy lifestyle behaviors of early, middle and late adolescents (Pender et al., 2002; Hendricks et al., 2006).

The scale consists of a total of 40 items and seven sub-groups that can be used independently. Health Responsibility (HR) (five items) is a subgroup that evaluates the level of responsibility of the individual on his/her own health and the level of participation in his/her own health. Physical Activity (PA) (six items) is a subgroup that evaluates the level of physical activity, which is an important part of healthy life, by the individual. Nutrition (N) (six items) is a subgroup that evaluates an individual's choice and arrangement of meals and preferences in food selection. Positive Life Perspective (PLP) (eight items) is a subgroup that evaluates the individual's positive view of life and concepts such as hope and hopelessness. Interpersonal Relations (IR) (five items) is a subgroup that evaluates the relationships of the individual with his/her family, friends, kith and kin. Stress Management (SM) (five items) is a subgroup that evaluates the individual's stress sources and level of coping with stress. Spiritual Health (SH) (five items) is a subgroup that evaluates an individual's beliefs, spiritual views, and value judgments. The scale requires a four-point Likert-type response for each item. A minimum of 40 and a maximum of 160 points can be obtained in the ALP scale. The scale does not have a limit point, as the score increases, the level of positive health behavior increases. Cronbach's alpha coefficient for the whole scale is 0.87, and its subgroup range from 0.61 to 0.81 (Ardic & Esin, 2015). In this study, the internal consistency coefficient of the whole scale was 0.88, and the internal consistency coefficient of the subgroups ranged between 0.54 and 0.77.

Data Collection

Before the research, a pre-application was made with 7 VTAHS students. Adolescents who participated in the pre-application were not included in the sample group. Data were collected between February and April 2017. The researcher communicated with the administrators before going to the schools and went to the high school in a time that would be convenient for the students. The forms were

distributed to the students in their classrooms. Filling out the forms was done under the supervision of the researcher, in line with the self-reports of the students. Data collection took 25-30 minutes for each class. It was attended the classes in the same school during consecutive class hours.

Limitations of the Study

In the study, taking the weight and height of the students based on their self-reports as a basis for calculating the BMI can be counted among the limitations.

Statistical Analysis

It was used IBM SPSS Statistics for Windows, Version 23.0 (IBM SPSS Corp.; Armonk, NY, USA) program in the analysis of the data. In order to determine whether parametric or non-parametric analyzes would be used in the comparison analyzes in the research, the scores obtained through ALP were taken into account. The normal distribution was checked with Kurtosis and Skewness values. In this direction, T-Test, Mann-Whitney U Test, One-way ANOVA, Kruskal Wallis were used in Independent Groups while making comparisons, and Bonferroni was used in post hoc analysis. In descriptive analyses, mean, median, number and percentage distributions were given. The results were evaluated at 95% confidence interval and $p<0.05$ significance level.

Ethical Considerations

In order to carry out this research, the Declaration of Helsinki of the World Medical Association (WMA) was signed by all researchers, and the permission letters were obtained from the ethics committee (dated 07.09.2016, Decision no:498), from the District Directorate of National Education (dated 08.11.2016, numbered 98057890-605-E.12540755). It was obtained informed written consent from the students and their parents participating in the study. In addition, the permissions were obtained for the use of the scale in the research.

RESULTS

When the introductory characteristics of the students participating in the study were examined, it was determined that the average age was 16.73± 0.52, 74.6% were female, 56.4% were born in the district, 50.8% had lived in the district for the last five years, 86.3% were members of the nuclear family, 51.5% were studied in the health care technician department, 69.3% of them stayed at home with their

families, 56.7% of their mothers were primary school graduates, 39.5% of their fathers were primary school graduates, 77.7% of their mothers were housewives, 49.8% of their fathers were workers, 4.7% of them were working in a job, and 52.3% of them received monthly pocket money (187.72±121.79) below the average (Table 1).

Table 1. Distribution of students according to some introductory characteristics

Characteristics		$\overline{X}$ **±SD**	
Age		16.73± 0.52	
		n	**%**
Gender	Female	508	74.60
	Male	173	25.40
Place of Birth	Village	34	5.00
	District	384	56.40
	City Center	263	38.60
Place He/She Lives	Village	105	15.40
	District	346	50.80
	City Center	230	33.80
Famillt Type	Nuclear	588	86.30
	Extended	46	6.80
	Broken	47	6.90
Department	Nurse Assistant	232	34.10
	Midwife Assistant	98	14.40
	Health Care Technician	351	51.50
Place He/She Stay	At Home with Family	472	69.30
	In the Hostel	188	27.60
	At home Without Family	21	3.10
Mother's Education Level	Illiterate	13	1.90
	Literate	11	1.60
	Primary School	386	56.70
	Middle School	111	16.30
	High School	131	19.20
	University	29	4.30

Father's Education Level	Literate	11	1.60
	Primary School	269	39.50
	Middle School	155	22.80
	High School	176	25.80
	University	70	10.30
Mother's Occupation	Housewife	529	77.70
	Civil Servant	17	2.50
	Worker	95	14.00
	Farmer	28	4.10
	Other	12	1.70
Father's Occupation	Unemployed	9	1.30
	Civil Servant	66	9.70
	Worker	339	49.80
	Tradesman	89	13.10
	Farmer	120	17.60
	Retired	58	8.50
Working a Job Outside of School	Working	32	4.70
	Not Working	649	95.30
Monthly Pocket Money	Below Average (Below 187.72 TL)	356	52.3
	Average and Above Average (187.72 TL and above)	291	42.700
	No Answer	34	5.00

Table 2 shows the distribution of students according to some features related to relationships and health. It was determined that 95.3% of the students described their family relations as good, 96.2% their relations with friends as good, and 33.2% of them met with their relatives once a week or more frequently. It was observed that 9.8% of the students were overweight, 6.2% were obese, 67.5% of the students applied to a public hospital when they had a health problem, 10.7% of them had a diagnosis of a disease and 24.7% of these diagnoses were asthma, 93.2% of them described their current health status as good.

Table 2. Distribution of students according to some features related to relationships and health

Features		**n**	**%**
Family Relations	Good	649	95.30
	Bad	32	4.70
Friend Relations	Good	655	96.20
	Bad	26	3.80

Meeting with Relatives	Once a week or more	226	33.20
	Once a month	221	32.50
	Once a year or less frequently	29	4.30
	On big holidays	190	27.90
	Whenever I want	15	2.20
BMI	Underweight	114	16.70
	Normal weight	458	67.30
	Overweight	67	9.80
	Obese	42	6.20
The First Place to Apply When There is a Health Problem	Family health center	161	23.60
	Public hospital	459	67.50
	Private hospital	56	8.20
	At home, family support etc.	5	0.70
Disease Diagnosis	Existing	73	10.70
	Not existing	608	89.30
Disease Name (n=73)	Asthma	18	24.70
	Sinusitis	12	16.40
	Arrhythmia, heart disease, aortic stenosis	9	12.30
	Gastritis, stomach ulcer	6	8.20
	Migraine	4	5.50
	Kidney, kidney stone	4	5.50
	Other	20	27.40
Current state of health	Well	635	93.2
	Poor	46	6.8

BMI=Body Mass Index

The scores of the students from ALP scale are given in Table 3, and the total scale score was found to be 108.61±14.93. When the mean scores were evaluated, it was seen that the lowest score (2.10±0.48) was in the subgroup of HR, and the highest score (3.14±0.51) was in the subgroup of IR (Table 3).

Table 3. Students' scores from the ALP scale and subgroups

Scale and Subgroups	Total Score X±SD (median)	Min-Max	Avarage Score X±SD (median)
HR	10.52±2.40 (10)	5-20	2.10±0.48 (2)
PA	14.46±3.80 (14)	6-24	2.41±0.63 (2.3)
N	15.07±3.18 (15)	6-23	2.51±0.53 (2.5)
PLP	24.33±4.15 (25)	9-32	3.04±0.52 (3.1)

IR	15.71±2.56 (16)	5-20	3.14±0.51 (3.2)
SM	14.64±2.53 (15)	5-20	2.93±0.51 (3)
SH	13.88±2.86 (14)	6-20	2.78±0.57 (2.8)
ALP	108.61±14.93 (109)	45-149	2.72±0.37 (2.7)

HR = Health Responsibility; PA = Physical Activity; N = Nutrition; PLP = Positive Life Perspective; IR = Interpersonal Relations; SM = Stress Management; SH = Spiritual Health; ALP = Adolescent Lifestyle Profile

The scale scores of the students were compared according to some descriptive features (Table 4). Accordingly, it was determined that there was a statistically significant difference in PA, N and ALP total scores according to gender. It was determined that female's PA (p=0.000), N (p=0.014) and ALP total (p=0.011) scores were lower than men's. It was determined that there was a statistically significant difference in the total scores of N (p=0.002), SM (p=0.007) and ALP (p=0.024) according to the place of residence for the last five years. In the post hoc analysis, it was seen that the N score of the people living in the district was lower than those living in the village and the city center, and the SM and total scores were lower than those living in the city center. It was observed that there was a statistically significant difference in the SH (p=0.031) subgroup according to family type, and in the post hoc analysis, it was determined that the SH score of students with extended family members was higher than those with broken family members. It was understood that there was a statistically significant difference in PA (p=0.039), N (p=0.011), IR (p=0.025) and SM (p=0.044) subgroups according to the department the studied. In the post hoc analysis, it was determined that the PA score of the midwife assistant students was lower than the health care technician students. It was seen that the N scores of the nurse assistant students were higher than the students from the other two departments, and the IR and SM scores were higher than the midwife assistant students. It was found that there was a statistically significant difference in PA (p=0.006), N (p=0.009), and IR (p=0.038) scores according to where they stayed. In the post hoc analysis, it was determined that the PA and N scores of the people staying at the hostel were lower than those who stayed at home with their families, and the IR score was lower for those who stayed at home without their family than those who stayed at the hostel. It was observed that there was a statistically significant difference in HR (p=0.047), PA (p=0.025), N (p=0.020), SH (p=0.000) and ALP total scores (p=0.003) according to the status of working outside of school. It was determined that the scores of working students were higher (Table 4).

Table 4. Comparison of scale scores according to some descriptive features of students

Feature / Scale	HR $\overline{X}$ ±SD (med)	PA $\overline{X}$ ±SD (med)	N $\overline{X}$ ±SD (med)	PLP $\overline{X}$ ±SD (med)	IR $\overline{X}$ ±SD (med)	SM $\overline{X}$ ±SD (med)	SH $\overline{X}$ ±SD (med)	ALP $\overline{X}$ ±SD (med)
Gender								
Female	10.62±2.28 (11)	13.80±3.56 (13)	14.90±3.12 (15)	24.31±4.07 (24)	15.80±2.55 (16)	14.54±2.52 (15)	13.80±2.86 (14)	107.77±14.42 (108)
Male	10.24±2.71 (10)	16.40±3.80 (16)	15.58±3.32 (16)	24.40±4.37 (25)	15.44±2.58 (16)	14.91±2.57 (15)	14.11±2.86 (14)	111.09±16.15 (113)
Test	39779.00†	**26328.00†**	**2.466††**	0.235††	40055.50†	39642.50†	-1.249††	**-2.535††**
p value	0.060	**0.000**	**0.014**	0.814	0.080	0.053	0.212	**0.011**
Place he/she lives								
Village	10.88±2.40 (11)	14.04±3.78 (14)	15.55±3.20 (15)	24.52±4.07 (25)	15.78±2.62 (16)	14.64±2.41 (15)	14.20±3.24 (14)	109.61±15.58 (110)
District	10.54±2.35 (10)	14.35±3.84 (14)	14.66±3.14 (15)	23.97±4.24 (24)	15.47±2.62 (16)	14.37±2.53 (14)	13.74±2.90 (14)	107.10±14.93 (108)
City Centre	10.33±2.47 (10)	14.82±3.72 (14)	15.47±3.17 (15)	24.79±4.01 (25)	16.04±2.41 (16)	15.03±2.58 (15)	13.93±2.61 (14)	110.43±14.44 (110)
Test	3.376†††	3.791†††	**6.075††††**	2.827††††	5.920†††	**9.972†††**	1.130††††	**3.763††††**
p value	0.185	0.150	**0.002*** **2<1.3**	0.060	0.052	**0.007*** **2<3**	0.324	**0.024*** **2<3**
Family type								
Nuclear	10.53±2.39 (10)	14.42±3.72 (14)	15.11±3.16 (15)	24.43±4.06 (25)	15.65±2.50 (16)	14.63±2.51 (15)	13.85±2.86 (14)	108.61±14.76 (109)
Extended	10.63±2.50 (10)	15.30±4.06 (15)	15.35±3.35 (15)	24.46±4.45 (26)	16.35±2.47 (16)	15.13±2.62 (15)	14.80±2.76 (15)	112.02±14.62 (114)
Broken	10.30±2.45 (10)	14.21±4.45 (14)	14.30±3.23 (14)	23.02±4.71 (23)	15.89±3.20 (16)	14.23±2.73 (14)	13.28±2.81 (13)	105.23±16.83 (103)
Test	0.128†††	1.941†††	1.609††††	2.545††††	4.410†††	2.180†††	**3.500†††† **	2.412††††
p value	0.938	0.379	0.201	0.079	0.110	0.336	**0.031*** **3<2**	0.900
Deparment								
Nurse assistant	10.64±2.35 (10)	14.38±3.59 (14)	15.56±3.16 (15)	24.75±4.00 (25)	16.03±2.39 (16)	14.94±2.49 (15)	13.83±2.74 (14)	110.13±14.29 (110)
Midwife assistant	10.61±2.35 (10.5)	13.65±3.97 (13)	14.56±2.94 (14)	23.56±4.31 (24)	15.14±2.98 (15)	14.19±2.76 (15)	14.07±2.85 (14)	105.80±15.56 (107.5)
Health care technician	10.42±2.45 (10)	14.74±3.85 (14)	14.89±3.23 (15)	24.27±4.18 (25)	15.66±2.51 (16)	14.56±2.48 (14)	13.85±2.95 (14)	108.39±15.08 (109)
Test	0.984†††	**6.494†††**	**4.556††††**	2.947††††	**7.413†††**	**6.239†††**	0.271††††	2.996††††
p value	0.611	**0.039*** **2<3**	**0.011*** **2.3<1**	0.053	**0.025*** **2<1**	**0.044*** **2<1**	0.763	0.051
Place he/she stays								
At home with family	10.57±2.48 (11)	14.69±3.83 (14)	15.31±3.24 (15)	24.38±4.04 (25)	15.72±2.54 (16)	14.67±2.47 (15)	13.81±2.87 (14)	109.15±14.56 (110)
At home without family	10.43±2.79 (10)	15.67±3.92 (16)	14.05±3.22 (14)	23.48±4.14 (25)	14.67±1.56 (14)	14.33±2.78 (15)	14.00±2.32 (14)	106.62±14.63 (106)
At hostel	10.41±2.16 (10)	13.77±3.60 (13)	14.58±2.96 (14.5)	24.32±4.42 (25)	15.81±2.68 (16)	14.57±2.67 (14)	14.02±2.91 (14)	107.48±15.85 (108)

Test	0.957†††	**10.096†††**	**4.724††††**	0.475††††	**6.524†††**	0.431†††	0.356††††	1.028††††
p value	0.620	**0.006***	**0.009***	0.622	**0.038***	0.806	0.701	0.358
		3<1	**3<1**		**2<3**			
Working a job outside of school								
Working	11.56±2.79 (11.5)	15.91±3.77 (15.5)	16.34±3.10 (16)	25.19±3.47 (25)	16.47±2.44 (17)	15.06±2.54 (15)	15.63±2.62 (16)	116.16±13.33 (116)
Not Working	10.47±2.37 (10)	14.39±3.79 (14)	15.01±3.18 (15)	24.29±4.18 (25)	15.67±2.56 (16)	14.61±2.53 (15)	13.79±2.85 (14)	108.24±14.92 (109)
Test	**8240.50†**	**7958.00†**	**2.326††**	1.192††	8563.50†	9356.00†	**3.573††**	**2.945††**
p value	**0.047**	**0.025**	**0.020**	0.234	0.092	0.341	**0.000**	**0.003**

* Differences between groups were determined by Bonferroni.

HR = Health Responsibility; PA = Physical Activity; N = Nutrition; PLP = Positive Life Perspective; IR = Interpersonal Relations; SM = Stress Management; SH = Spiritual Health; ALP = Adolescent Lifestyle Profile. Mann Whitney U†, t test††, Kruskal Wallis†††, One Way ANOVA††††

It was given a comparison of the scale scores of the students according to some features related to relationships and health in Table 5. There was a statistically significant difference in HR (p=0.023), N (p=0.000), PLP (p=0.012), IR (p=0.014), SM (p=0.000) and ALP total (p=0.000) scores according to family relationships and, it was specified that those with good family relations had higher scores. It was observed that there was a statistically significant difference in the total scores of N (p=0.007), PLP (p=0.000), IR (p=0.000), SM (p=0.000), SH (p=0.000) and ALP (p=0.000) according to friend relations, and it was determined that those with good friendship relations had higher scores. It was seen that there was a statistically significant difference in PLP (p=0.019) and SM (p=0.002) scores according to the presence of disease diagnosis, and it was found that the scores of those who were not diagnosed with the disease were higher. It was observed that there was a statistically significant difference in the total scores of HR (p=0.004), PA (p=0.004), N (p=0.001), PLP (p=0.000), SM (p=0.000) and ALP (p=0.000) according to the perception of current health status, and it was specified that those with a good perception of health status had higher scores. It was seen that there was a statistically significant difference in the N (p=0.009) subgroup compared to the BMI, and in the further analysis, the score of underweight sudents was lower than that of obese students (Table 5).

Table 5. Comparison of scale scores according to some features of students related to relationships and health

Feature / Scale	HR $\bar{X}$ ±SS (med)	PA $\bar{X}$ ±SS (med)	N $\bar{X}$ ±SS (med)	PLP $\bar{X}$ ±SS (med)	IR $\bar{X}$ ±SS (med)	SM $\bar{X}$ ±SS (med)	SH $\bar{X}$ ±SS (med)	ALP $\bar{X}$ ±SS (med)
Family relations								
Good	10.57±2.40 (10)	14.49±3.79 (14)	15.19±3.15 (15)	24.42±4.13 (25)	15.78±2.49 (16)	14.76±2.48 (15)	13.92±2.85 (14)	109.13±14.74 (109)
Bad	9.47±2.18 (9.5)	14.00±4.00 (14)	12.72±2.94 (12)	22.53±4.13 (22)	14.31±3.47 (14.5)	12.13±2.38 (12)	12.97±3.02 (12.5)	98.13±15.23 (97.5)
Test	**7935.00†**	9950.50†	**4.338††**	**2.530††**	**7727.50†**	**4504.00†**	1.838††	**4.117††**
p value	**0.023**	0.689	**0.000**	**0.012**	**0.014**	**0.000**	0.066	**0.000**
Friend relations								
Good	10.55±2.39 (10)	14.50±3.77 (14)	15.14±3.15 (15)	24.46±4.09 (25)	15.82±2.48 (16)	14.71±2.48 (15)	13.95±2.84 (14)	109.14±14.63 (110)
Bad	9.81±2.68 (9)	13.46±4.43 (12.5)	13.42±3.71 (12)	21.12±4.37 (19.5)	12.96±3.08 (13)	12.65±2.99 (12)	11.88±2.86 (11.5)	95.31±16.48 (94)
Test	6687.00†	6891.00†	**2.704††**	**4.083††**	**3984.00†**	**4977.50†**	**3.649††**	**7.704††**
p value	0.061	0.098	**0.007**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
Disease diagnosis								
Existing	10.45±2.33 (10)	13.93±3.53 (14)	14.48±2.97 (15)	23.26±4.10 (24)	15.66±3.07 (16)	13.76±2.46 (14)	13.82±3.02 (14)	105.97±13.80 (106)
Not Existing	10.53±2.41 (10)	14.53±3.82 (14)	15.14±3.20 (15)	24.46±4.14 (25)	15.72±2.49 (16)	14.74±2.52 (15)	13.88±2.85 (14)	109.00±15.03 (109)
Test	21557.00†	20479.50†	-1.682††	**-2.351††**	21674.50†	**17271.50†**	-0.168††	-1.967††
p value	0.687	0.279	0.093	**0.019**	0.743	**0.002**	0.867	0.050
Current state of health								
Well	10.60±2.40 (10)	14.59±3.79 (14)	15.18±3.16 (15)	24.52±4.08 (25)	15.77±2.48 (16)	14.78±2.45 (15)	13.93±2.82 (14)	109.37±14.56 (110)
Poor	9.48±2.18 (10)	12.74±3.42 (13)	13.57±3.09 (14)	21.80±4.25 (21)	14.87±3.36 (16)	12.59±2.84 (12)	13.11±3.35 (13)	98.15±16.21 (96)
Test	**10938.00†**	**10932.00†**	**3.347††**	**4.342††**	12773.50†	**7656.50†**	1.624††	**5.006††**
p value	**0.004**	**0.004**	**0.001**	**0.000**	0.152	**0.000**	0.111	**0.000**
BMI								
Underweight	10.46±2.58 (10)	14.48±3.74 (14)	14.38±3.27 (14.5)	24.62±4.62 (25)	15.99±2.76 (16.5)	14.49±2.84 (14)	13.75±3.04(14)	108.18±16.21 (109.5)
Normal weight	10.55±2.36 (10)	14.55±3.87 (14)	15.14±3.17 (15)	24.31±4.02 (25)	15.62±2.52 (16)	13.87±2.82 (14)	13.87±2.82 (14)	108.65±14.71 (109)
Overweight	10.27±2.23 (10)	13.91±3.29 (14)	15.03±2.95 (15)	24.18±4.20 (24)	15.87±2.53 (16)	15.21±2.29 (15)	14.12±2.73 (14)	108.58±13.72 (110)
Obese	10.74±2.67 (10.5)	14.36±3.97 (14)	16.26±3.16 (16)	24.12±4.13 (24)	15.71±2.51 (16)	14.38±2.58 (15)	13.88±3.16 (13)	109.45±16.03 (110)
Test	1.071†††	0.918†††	**3.891††††**	0.259††††	3.275†††	3.549†††	0.230††††	0.077††††
p value	0.784	0.821	**0.009* 1<4**	0.855	0.351	0.314	0.875	0.972

*Differences between groups were determined by Bonferroni.

HR = Health Responsibility; PA = Physical Activity; N = Nutrition; PLP = Positive Life Perspective; IR = Interpersonal Relations; SM = Stress Management; SH = Spiritual Health; ALP = Adolescent Lifestyle Profile. BMI=Body Mass Index. Mann Whitney U†, t test††, Kruskal Wallis†††, One Way ANOVA††††

DISCUSSION

It is now known that the importance of healthy lifestyle behaviors in adolescence is more evident because they affect health in adulthood. With this study, it was seen that healthy lifestyle behaviors in adolescence were not at a very good level. It was very significant to reach this result, especially in a group with a high potential to serve in the field of health. In addition, almost all of the adolescents answered as "well" to the question of family and friend relations related to the social aspect, which is at the forefront of adolescents, and this was found to be compatible with the literature (Ardic & Esin, 2016). In addition, although findings related to direct health problems could not be acquired in this study, some important results were obtained. For example, it was observed that the rate of students who were overweight or obese according to BMI, which was one of the important health indicators, was close to the rate of our country (Turkish Statistical Institute, 2021), although it was not the same, in some studies it was observed to be very similar (Akgün et al., 2021) or high (Ardic & Esin, 2016; Coşkun & Karagöz, 2021; Kaya et al., 2016). Approximately one-tenth of the students had a diagnosis of a disease. Fortunately, far fewer students rated their current state of health as poor. While this general question was not very decisive, scores on the ALP were an important indicator of health.

In this study, adolescents' mean ALP score (2.72±0.37) is similar to the mean score of Ardic and Esin's (2016) study (2.75 ± 0.33), Dindar's (2022) study (2.64±0.38), and Sousa et al.'s (2015) study (2.54±0.36). These similarities are also in question in terms of the subgroups in the studies of Ardic and Esin (2016) and Dindar (2022), only the PLP (22.52±4.51) subgroup in Dindar's (2022) study appears to be lower than this study (24.33±4.15). In addition, it can be said that the total score of this study (108.61±14.93) is lower than the total scores of Esatbeyoğlu and Kin İşler (2018) (111.77±11.81), Kaya et al. (2016) (111.34±16.61), and Turan et al. (2021) (112.11±14.66). These differences are also noticeable in various subgroup. Adolescents' PA (16.08±3.76) (Kaya et al., 2016) subgroup in one study and PLP (18.28±2.93) (Turan et al., 2021) subgroup in another study had lower scores than this study. In two studies HR (11.21±2.63, and 12.56±2.56, respectively) (Esatbeyoğlu & Kin İşler, 2018; Turan et al., 2021), in another study SM (17.62±2.74) and SH (17.09±3.02) (Turan et al., 2021), and PLP subgroup (25.74±3.30) (Esatbeyoğlu & Kin İşler, 2018) in another study seem to have higher scores than this study. Since these various results were studied with different sample groups, it can be said that this is an expected situation. Although the scale does not have a cutoff point, it is known that the maximum score can be 160. The score obtained in this study (108.61±14.93) indicates that adolescents' healthy lifestyle behaviors are moderate. In the study, it was seen that the subgroup with the highest mean score was IR with 3.14±0.51 and the subgroup with the lowest mean score was HR with 2.10±0.48. In other studies, it was determined that the subgroup IR had the highest mean score

(3.26±0.49; 3.04±0.51; 3.06± 0.52, respectively) and the lowest was HR (1.98±0.47; 2.07±0.58; 1.86±0.64, respectively) (Ardic & Esin, 2016; Dindar, 2022; Sousa et al., 2015). These results once again reveal the importance of social relations in adolescence. However, unfortunately, it can be said that the sensitivity about health responsibility also shows its inadequacy. The fact that the HR subgroup, which evaluates the level of responsibility of the individual on his health and the level of participation in his health, has the lowest average and this is seen in health personnel candidates is a result that should be taken into consideration. Unlike this study, Çiçek and Çetinkaya's (2017) study found that the highest subgroup score was PLP, and the lowest subgroup score was PA.

It is thought that the scale scores make more sense when compared with some characteristics of the students. These results can guide the support that can be given to students to develop healthy lifestyle behaviors. In this study, it has been determined that being a female, living in a district, having a broken family member, studying in the midwife's assistant department, not staying with their family, not working, having bad family or friend relations, having a diagnosis of illness, having a bad perception of health status, not having a normal weight BMI makes people disadvantageous in different dimensions of healthy lifestyle behaviors. In this study, total ALP, PA, and N scores were found to be higher in males than females. Similarly, in many studies, the PA subscale score was found to be higher in men than in women (Ardic & Esin, 2016; Çiçek & Çetinkaya, 2017; Dindar, 2022; Karagözoğlu, 2021; Sousa et al., 2015). In addition, it was observed that the N subscale score was higher in men than women (Çiçek & Çetinkaya, 2017; Dindar, 2022; Karagözoğlu, 2021), and the IR subscale score was higher in women than in men (Ardic & Esin, 2016; Dindar, 2022; Karagözoğlu, 2021; Sousa et al., 2015; Turan et al., 2021). In addition, there were also some studies that total ALP, HR, SH (Sousa et al., 2015), HR, PLP, SM (Ardic & Esin, 2016), HR (Karagözoğlu, 2021) and PLP, IR (Çiçek & Çetinkaya, 2017) scores were higher in females than males. However, it was seen that total ALP and subscale scores did not differ according to gender in studies of Kaya et al. (2016) and Esatbeyoğlu and Kin İşler (2018). In studies using different scales, it was observed that scale scores in various dimensions differed according to gender (Aktaş Özakgül et al., 2016; Bebiş et al., 2015; Coşkun & Karagöz, 2021; Karadamar et al., 2014; Kazak et al., 2021; Turan et al., 2021; Yaşar et al., 2018).

In the study, it was seen that the total ALP, N and SM scores of those living in the district in the last five years were lower than those living in the village and/or city. However, other studies in the literature showed different results from the current study. In the study of Karagözoğlu (2021), it was seen that the total ALP, HR, PLP, IR and SM scores of the adolescents who spent the longest part of their lives in the city and in the district were higher than those living in the village. In another study, it was seen that adolescents who spent most of their lives in the district scored higher on the scale than those who spent the majority of their lives in the town/village

(Aktaş Özakgül et al., 2016). In the study of Çiçek and Çetinkaya (2017), those who spent the last five years of their life in a town and city had a higher PA score than those who spent their life in a village. The difference with the literature can be explained by the fact that the study sample was taken from schools in all districts of a province and it affected the distribution of the place where adolescents live. As a matter of fact, most of the adolescents (50.8%) who participated in this study stated that they lived in the district. According to the comparison made according to family type, it was seen that adolescents with extended families scored higher on the SH subgroup than those with broken families. Similarly, It was observed that adolescents with extended family types had higher total ALP, HR and PA subgroup scores compared to adolescents with other family types (Dindar, 2022), adolescents with extended family had higher HR scores than those with broken families (Ardic & Esin, 2016), and those with broken families had lower total ALP, N, and SM scores than those with the other types (Karagözoğlu, 2021). It can be considered as an expected result that this result is in the large family type with a large number of family members. In the evaluation made according to the department, it was seen that the students of assistant nurses were advantageous in the subgroup of N, IR, and SM. In the subgroup of PA, Health care technicians had higher scores than assistant midwives. This can be explained by the fact that the members of the Health Care Technician department are mostly men. According to the study of Bulut et al. (2016), emergency medical technician students scored higher than nursing students in the nutritional habits subgroup. In a study conducted with university students, it was determined that midwifery students scored higher than medical laboratory techniques, dialysis and physiotherapy students, and medical laboratory techniques students scored higher than nursing students, unlike this study (Kazak et al., 2021). From another point of view, in a study conducted with university students, it was determined that health vocational high school graduates have higher HR (Tuygar & Arslan, 2015). As a result, since the departments were related to health, it was expected that healthy lifestyle behaviors were acquired by the students enrolled in these schools. When the ALP scores of the adolescent were evaluated according to the place of residence, it was seen that those who stayed at home with their families scored higher on the PA and N subgroups compared to those who stayed at the hostel, and those who stayed at the hostel got higher scores on the IR subgroup than those who stayed at home without their families. This suggests that adolescents staying with their families have better opportunities for their social environment, while adolescents staying in hostels for their health. In Yalçın's (2018) study, similar to this study, the nutrition subscale score of those staying with their families was found to be higher. On the other hand, in the study of Turan et al. (2021), it was observed that the IR score was higher in those living at home with their family than in those living with others. Adolescents working in a job other than school were found to have higher total ALP and HR, PA, N and SH scores compared to those who did not. This result can also be explained as the

responsibility of working can be effective in taking responsibility for one's own health. However, in the study of Karagözoğlu (2021), it was seen that working in a job outside of school did not cause a difference in ALP scores, and in the study of Tuygar and Arslan (2015), working in an income-generating job did not cause a difference in health lifestyle behaviors.

In the study, it was determined that the total ALP and HR, N, PLP, IR and SM scores of adolescents with good family relationships were higher than those with poor family relationships. In the study of Ardic and Esin (2016), the total ALP, N, PLP, IR, SM and SH scores of adolescents with good family relationships were higher, similar to this study. In the study, it was determined that the total ALP and N, PLP, IR, SM and SH scores of the adolescents with good friendship relations were higher than those with poor friendship relations. A similar result was also seen in the study of Ardic and Esin (2016). It was observed that the total ALP, PA, N, PLP, IR and SH scores were higher in those who described their friendship as good (Ardic & Esin, 2016). As a result, it can be stated that positive family and friend relationships, with which adolescents often socialize, have important effects on health. In the study, it was observed that the PLP and SM scores of the adolescents who did not have a diagnosis of a disease were higher than those who had a diagnosis of the disease. In the study of Karagözoğlu (2021), the PA score was found to be higher in those without chronic disease. In three studies, the opposite was observed in various scores. Adolescents with chronic disease had higher SM score (Dindar, 2022), total ALP, PA, IR, SM and SH scores (Ardic & Esin, 2016), SR score (Karagözoğlu, 2021) than those without chronic disease. Having a diagnosis of a disease in an individual can be interpreted in different ways by herself/himself and cause different reactions in the person. Moreover, these differences can be perceived as normal in a sensitive period such as adolescence. In the study, it was determined that the total ALP and HR, PA, N, PLP and SM scores of the adolescents who evaluated their health as good were higher than those who evaluated their health as bad. In fact, this result coincides with the results of having a diagnosis of a disease. Similar to this study, it was seen that those who evaluated their health status as good had higher total ALP, PA, N, PLP and IR scores in Dindar's (2022) study, and higher total ALP, HR, PA, N and SM scores in Ardic and Esin's (2016) study. In the study of Karagözoğlu (2021), it was seen that the total score and HR, PA, N, PLP, IR, SM, SH scores were higher in those who evaluated their health status as very good. As a result, it can be said that a positive health perception leads to positive healthy lifestyle behaviors. In the study, the N score of those with weak BMI was found to be lower than those who were obese. Unlike this study, in Karagözoğlu's (2021) study, it was seen that obese students have lower PLP scores than thin, normal and overweight students. In the study of Ardic and Esin (2016), it was stated that there was no difference between BMI and ALP scores. It has been observed that different results have been obtained in other studies comparing BMI and healthy lifestyle

behaviors without using ALP (Akoğuz Yazıcı, 2022; Bebiş et al., 2015; Coşkun & Karagöz, 2021; Yalçın, 2018).

CONCLUSIONS

As a result, it can be considered as an advantage that the sample of the research is selected from students in all health services of a province, the number of samples is high, and the comparison of ALP scale scores with many variables. Accordingly, in the introductory information, it was seen that the sample showed various features, and only 67.3% of them had normal weight BMI. However, it was determined that the students' scores on the ALP scale were not very good, and the lowest score was in the HR subgroup and the highest score in the IR subgroup. It has been determined that being a female, living in a district, having a broken family member, studying in the midwife's assistant department, not staying with their family, not working, having bad family or friend relations, having a diagnosis of illness, having a bad perception of health status, not having a normal weight BMI makes people disadvantageous in different dimensions of healthy lifestyle behaviors. The fact that students are a group with a high potential to work as health personnel makes these results even more special. Most of the students studying in the high schools where the study was conducted will most likely serve in the health sector after graduation. Therefore, first of all, they should have healthy lifestyle behaviors so that they can be the role models for the individuals they serve. For this reason, it is necessary to bring this awareness to students and interventional studies should be carried out so that they can develop healthy lifestyle behaviors. In these initiatives, priority can be given to areas such as HR, PA and N, in which they receive low scores. Schools are important opportunity areas where these initiatives can be planned and implemented. In schools, it may be appropriate to plan initiatives for students to take responsibility for their health and value themselves, and to develop social support systems. In this direction, it will be beneficial to carry out activities with peers and to create environments that will reinforce each other's healthy behaviors. In addition, practices that cooperate with school administrators, teachers, and parents can be included so that they can implement healthy nutrition programs at school and their place of residence, and participate in activities that encourage physical activity. For this reason, the participation of provincial national education and provincial health directorates in joint practices will contribute greatly to achieving successful results. As research, it can be suggested that the needs of adolescents on these issues be learned in more detail through qualitative research. It may be recommended to plan interventions with a multidisciplinary approach and measure the results together with sports faculties, nutrition and dietetics, and child and adolescent mental health departments in line with the needs they stated later.

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Conflict of Interest

The authors declare no conflicts of interest.

Author Contribution Rates:

Design of Study: AA (%50), FU (%50)

Data Acquisition: AA (%20), FU (%80)

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