Samsun Sağlık Bilimleri Dergisi,
Journal of Samsun Health Sciences
e-ISSN: 2791-9722, JSHS Ağustos 2025, 10(2): 267-280

The Examination of Healthy Lifestyle Behaviors in Adolescents: A School-Based Study

Adölesanlarda Sağlıklı Yaşam Biçimi Davranışlarının İncelenmesi: Okul Temelli Bir Araştırma

Sinan DİNDAR[1], Serap AÇIKGÖZ[2]

[1]Şiran Mustafa Beyaz Vocational School, Gümüşhane University, Gümüşhane
· **dindar219@gmail.com** · ORCID > 0000-0001-8093-8979

[2]Department of Public Health Nursing, Faculty of Health Sciences, Cankiri Karatekin University, Çankırı
· **acikgoz.serap@gmail.com** · ORCID > 0000-0003-0001-3410

Makale Bilgisi/Article Information

Makale Türü/Article Types: Araştirma Makalesi/Research Article
Geliş Tarihi/Received: 06 Nisan/April 2025
Kabul Tarihi/Accepted: 10 Temmuz/July 2025
Yıl/Year: 2025 | **Cilt – Volume:** 10 | **Sayı – Issue:** 2 | **Sayfa/Pages:** 267-280

Atıf/Cite as: Dindar, S., Açıkgöz, S. "The Examination of Healthy Lifestyle Behaviors in Adolescents: A School-Based Study" Samsun Sağlık Bilimleri Dergisi 10(2), Ağustos 2025: 267-280.

Sorumlu Yazar/Corresponding Author: Serap AÇIKGÖZ

Yazar Notu/Author Note: This research was presented as an oral presentation at the 3rd International and 4th National Public Health Nursing Congress, which was held online from January 11 to 13, 2023. This research was conducted as part of the Master's thesis of Sinan Dindar in the Public Health Nursing program at the Institute of Health Sciences, Çankırı Karatekin University. Serap Açıkgöz served as the academic advisor for this thesis.

https://doi.org/10.47115/jshs.1670879

THE EXAMINATION OF HEALTHY LIFESTYLE BEHAVIORS IN ADOLESCENTS: A SCHOOL-BASED STUDY

ABSTRACT

Aim: This study aims to examine the healthy lifestyle behaviors of adolescents studying in high school.

Method: The cross-sectional study was conducted with 267 adolescents studying in a science high school in the Central Anatolia region of Turkey between January and April 2022. Data were collected through the Socio-demographic Characteristics Information Form and the Adolescent Lifestyle Profile Scale. Descriptive statistical methods independent sample t test, One-Way Analysis of Variance, and Tukey HSD Post-Hoc tests were used to evaluate the data. The statistical significance level was accepted as $p<0.05$.

Results: The Adolescent Lifestyle Scale item score average was 2.64±0.38. Among the sub-dimensions of the Adolescent Lifestyle Scale, Interpersonal Relationships has the highest item mean score with 3.04±0.51, while the Health Responsibility sub-dimension has the lowest item mean score with 2.07±0.58. Significant determinants of healthy lifestyle behaviors of adolescents are gender, age, school success, family type, perception of economic status, presence of chronic disease, and current health perception.

Conclusion and Recommendations: The study shows that health-promoting behaviors in adolescents from different cultures are above the moderate level. These findings can guide school health nurses when designing adolescent health promotion programs.

Keywords: Adolescent; Healthy Lifestyle; Health Behavior; Nursing; Public Health; School.

❋❋❋

https://doi.org/10.47115/jshs.1670879

ADÖLESANLARDA SAĞLIKLI YAŞAM BİÇİMİ DAVRANIŞLARININ İNCELENMESİ: OKUL TEMELLİ BİR ARAŞTIRMA

ÖZ

Amaç: Bu çalışmanın amacı, lisede öğrenim gören adölesanların sağlıklı yaşam biçimi davranışlarını incelemektir.

Yöntem: Kesitsel tipteki çalışma Ocak-Nisan 2022 tarihleri arasında Türkiye'nin İç Anadolu bölgesinde yer alan bir fen lisesinde öğrenim gören 267 adölesanla yürütülmüştür. Veri, Sosyo-demografik Özellikler Bilgi Formu ve Adölesan Yaşam Biçimi Ölçeği aracılığıyla toplanmıştır. Tanımlayıcı istatistiksel metotları (sayı, yüzde, min-maks değerleri, ortalama ve standart sapma), bağımsız örneklem t testi, tek yönlü varyans analizi, Post-Hoc testlerinden Tukey HSD aracılığıyla veri değerlendirilmiştir. İstatistiksel anlamlılık düzeyi $p<0.05$ olarak kabul edilmiştir.

Bulgular: Adölesan Yaşam Biçimi Ölçeği madde puan ortalaması 2.64±0.38'dir. Ölçek alt boyutlarından Kişilerarası İlişkiler 3.04±0.51 ile en yüksek madde puan ortalamasına sahip iken, Sağlık Sorumluluğu alt boyutu 2.07±0.58 ile en düşük madde puan ortalamasına sahiptir. Adölesanların sağlıklı yaşam biçimi davranışlarının anlamlı belirleyicileri; cinsiyet, yaş, okul başarısı, aile tipi, ekonomik durum algısı, kronik hastalık varlığı ve mevcut sağlık algısıdır.

Sonuç ve Öneriler: Çalışma, farklı kültürlerden gelen adölesanlarda sağlığı geliştirici davranışların orta düzeyde olduğunu göstermektedir. Çalışmanın bulguları, okul sağlığı hemşireleri için adölesan sağlığını geliştirme programlarını tasarlarken rehberlik sağlayabilir.

Anahtar Kelimeler: Adölesan; Halk Sağlığı; Hemşirelik; Okul; Sağlık Davranışı; Sağlıklı Yaşam Biçimi.

❋❋❋

INTRODUCTION

The World Health Organization defines the 10-19 age range as the adolescent period (WHO, 2025). The world population is over 7 billion, and 23.7% of this population consists of young people between the ages of 10-24. In developing countries, the population in this age range is increasing rapidly (United Nations Population Fund, 2020). In Turkey, 15.1% of the total population, which is 85 million 372 thousand 377 as of the end of 2023, consists of young people between the ages of 15-24 (Turkish Statistical Institute, 2024). Adolescence is an important

period to prepare the ground for a healthy future. Adolescents experience rapid physical, cognitive, and psychosocial growth and interact with the world around them (WHO, 2025). Although adolescence is mostly a healthy period, at least 70% of early adult deaths reflect behaviors that begin or are reinforced in adolescence (Beaglehole et al., 2011). Many risk factors that lead to non-communicable chronic diseases that occur in adulthood occur in adolescence (Gore et al., 2011; Hacialioglu, 2018). In this context, it is important that adolescents, who are the adults of the future, adopt behaviors that improve their health and move away from negative lifestyle behaviors (Sümen & Oncel, 2017).

Pender, Murdaugh, and Parsons argue that a healthy lifestyle is one of the components of health promotion and that individuals should change their lifestyles and integrate healthy lifestyle behaviors (HLBs) into their lives to improve health. According to the Health Promotion Model, HLBs are positive behaviors that individuals should adopt in their lives. These behaviors are self-actualization, health responsibility, exercise, nutrition, interpersonal relationships, stress management, positive life perception, and spiritual health (Pender, et al., 2015). Study findings are reporting that adolescents exhibit insufficient physical activity (İlhan, 2012; Ercan et al., 2011), have an insufficient perception of responsibility for their health (Aras et al., 2007), have unhealthy diets (Karagözoğlu, 2021), exhibit inadequate stress management (Öztürk, 2013), and cannot exhibit adequate interpersonal relationships (Çiçek & Çetinkaya, 2017). Knowing the factors affecting the healthy lifestyles of adolescents will be a guide for school health nurses in the planning and implementation of health protection and promotion activities to be developed in schools (Sümen & Öncel, 2017).

The National Association of School Nurses of America (2012) defines school health nurses as "a person who makes beneficial decisions to increase the individual abilities of children and young people by using their intellectual potential and to positively affect their current and future physical, social, personal, and emotional growth". The main purpose of nursing practices in school health services is to protect and improve the health of students, to contribute positively to their academic achievement by implementing practices to protect health, to replace negative health habits with positive behaviors to adopt and maintain the HLBs, and to guide them in gaining new health behaviors (Bahar, 2010; National School Nurses Association of America, 2010). In Turkey, basic data are needed to plan and implement health promotion programs for adolescents, who constitute a large and important part of the population. In this context, this study aimed to examine healthy lifestyle behaviors in adolescents studying in high school. For this purpose, answers to the following two questions were sought.

- What is the level of healthy lifestyle behaviors in adolescents studying in high school?

- According to which factors do healthy lifestyle behaviors differ in adolescents studying in high school

METHOD

Study Type: The research was descriptive and cross-sectional.

Study Group: The population of the cross-sectional study consisted of 754 students studying in a science high school in the Central Anatolia Region of Turkey in the 2021-2022 academic year. Since students are admitted to a science high school by exam, students from different settlements of the country study at the school. The inclusion criteria were: being a student at the high school where the study was conducted, volunteering to participate in the study, being literate in Turkish, being between the ages of 14-18, being present at the school on the day the data collection tools were applied, and the parental consent form being approved by the parents. Simple random sampling method was used to select the sample (Sümbüloğlu & Sümbüloğlu, 2017). When the sample number of the study was calculated according to the simple random sampling formula *(n=Nxt2xpxq/d2(N-1)+t2xpxq)* with a 95% confidence interval, 0.05 sampling error and 1.96 theoretical t value, it was concluded that the sample number that could represent the universe of 754 people should be at least 255. The power of the study was calculated using the "G Power 3.1.9.7" program. According to the results of the analysis, the number of 252 people to be reached was calculated at the $\alpha = 0.05$ level, the effect size was 0.214 (Ardic and Esin (2015) and the power of the study was 0.96. The power test is at an acceptable level. The study was completed with 267 volunteer students.

Data Collection Tools: The researcher prepared the Socio-Demographic Characteristics Information Form by reviewing the relevant literature (Ardic & Esin, 2015; Hendricks et al., 2006;). The form includes 13 variables related to the descriptive characteristics of adolescents, such as age, gender, family type, family education, social security, relationships with family and friends, perception of economic status, and perception of current situation.

The Adolescent Lifestyle Profile Scale (ALPS) is the version of the Healthy Lifestyle Behaviors Scale II developed by Hendricks, Murdaugh, and Pender (2006) for adolescents. Ardic and Esin (2015) conducted the Turkish adaptation of the scale in adolescents aged 14-18 years.

Data Collection Process: The study was conducted in collaboration with the school administration, who were informed about the purpose of the study and

were told that their participation was voluntary and that their answers would remain confidential. The response time for the data collection tools was 25-30 minutes.

Statistical Analysis: The research data were processed and analyzed using the SPSS 23 package program. Descriptive statistical methods (number, percentage, min-max values, mean, and standard deviation) were used to evaluate the data. "Reliability Analysis" was conducted to test the reliability of the scales. The data used were tested for conformity to normal distribution. The values to be considered in normality tests are skewness (Skewness) and kurtosis (Kurtosis) values. If these values are between -1 and +1, the data are considered to be normally distributed (Hair et al., 2013). As a result of the normality analysis of the research data, the skewness value was found to be 0.065 and the kurtosis value was found to be 0.515, and the normality assumption was accepted. In data analysis, descriptive statistical methods (number, percentage, min-max values, mean and standard deviation), independent sample t-test, One-Way Analysis of Variance, and Tukey HSD Post-Hoc tests were used. In data analysis, the difference was considered statistically significant when $p<0.05$.

Validity and Reliability: The scale consists of a total of 40 items and seven sub-dimensions that can be used independently of each other. These are Health Responsibility (HR; 5 items), Physical Activity (PA; 6 items), Nutrition (N; 6 items), Positive Life Perception (PLP; 8 items), Interpersonal Relationships (IR; 5 items), Stress Management (SM; 5 items) and Spiritual Health (SH; 5 items). The scale requires a four-point Likert-type response and is graded as 'Never=1', 'Sometimes=2', 'Often=3', and 'Always=4'. The scale does not have a cut-off point, and all items are positive. The maximum score obtained from the scale is 160, and the minimum score is 40. The scale does not have a cut-off point; as the score increases, the level of positive health behavior increases. Cronbach's alpha coefficient for the total scale is 0.87, while this value varies between 0.61-0.87 for the sub-dimensions (Ardic & Esin, 2015). In the current study, Cronbach's alpha coefficient for the total scale was 0.88, while the coefficients for the sub-dimensions ranged from 0.46 to 0.78.

Ethical considerations: Ethical approval was obtained from the ethics committee of Çankırı Karatekin University in Turkey (Date: 02.12.2021, No: 23), institutional permission was obtained from the provincial directorate of national education in the province where the research was conducted, and permission to use scale used in the research was obtained from the authors via e-mail. Informed consent was obtained from parents and adolescents who volunteered to participate in the study.

RESULTS

34.5% of the participants were 16 years old and 86.9% lived in nuclear families. The mothers of 35.6% of the adolescents were university graduates, while the fathers of 40.4% were university graduates. Among the adolescents, 41.9% perceived their economic situation as good, 70% stated that their family relations were good, and 77.5% stated that their relationships with friends were good. The rate of adolescents with chronic diseases was 6.7%, and the rate of those who perceived their current health status as good was 76% (Table 1).

Table 1. Distribution of descriptive characteristics of the research group (n= 267)

Variables		n	%
Gender	Male	132	49.4
	Female	135	50.6
Age	14	48	18.0
	15	73	27.3
	16	92	34.5
	17	54	20.2
Place of Birth	Village	21	7.8
	District	37	13.9
	Province	53	19.9
	Metropolitan	156	58.4
Perception of School Success	Good	135	50.6
	Middleeç	118	44.2
	Bad	14	5.2
Employment Status	Working	14	5.2
	Not working	253	94.8
Family Type	Nuclear	232	86.9
	Extended	24	9.0
	Broken	11	4.1
Mother's Education Level	Primary school	31	11.6
	Middle school	42	15.7
	High school	81	30.3
	University	95	35.6
	Master's degree and above	18	6.8

Father's Education Level	Primary school	14	5.2
	Middle school	23	8.7
	High school	85	31.8
	University	108	40.4
	Master's degree and above	37	13.9
Perception of Economic Status	Good	112	41.9
	Middle	144	53.9
	Bad	11	4.2
Family Relationship	Good	187	70.0
	Middle	66	24.7
	Bad	14	5.3
Friend Relationship	Good	207	77.5
	Middle	55	20.6
	Bad	5	1.9
Presence of Chronic Disease	Yes	18	6.7
	No	249	93.3
Perception of Current Health Status	Good	203	76.0
	Middle	60	22.5
	Bad	4	1.5

The mean score of the adolescents in the ALPS was 105.68±15.25 (min-max=40-160), while the mean item score was 2.64±0.38. The sub-dimension with the highest item mean score was IR (3.04±0.51) and the sub-dimension with the lowest item mean score was HR (2.07±0.58; Table 2).

Table 2. Distribution of the mean scores of adolescents in the ALBS and its sub-dimensions

	Min	Max	$\overline{X}$±SD*	Item Score Mean±SD	Cronbach Alpha Coefficient
ALPS	40	160	105.68±15.25	2.64±0.38	0,883
Health responsibility	5	20	10.37±2.93	2.07±0.58	0,668
Physical activity	6	24	14.71±3.86	2.45±0.64	0,757
Nutrition	7	24	15.17±3.24	2.53±0.54	0,600
Positive life perception	10	32	22.52±4.51	2.81±0.56	0,781
Interpersonal relationships	8	20	15.21±2.57	3.04±0.51	0,610
Stress management	8	20	14.31±2.43	2.86±0.48	0,462
Spiritual health	5	20	13.37±2.71	2.67±0.54	0,587

*SD: Standard deviation

A statistically significant difference was found between the PA, N, and IR sub-dimension scores of the ALPS based on the gender of the adolescents ($p<0.05$). PA and N scores of male adolescents were higher than those of female adolescents, and IR scores of female adolescents were higher than those of male adolescents. A statistically significant difference was found between the scores of ALPS and HR sub-dimensions according to the age of the adolescents ($p<0.05$). There is a difference between fifteen-year-old adolescents and 17-year-old adolescents. Seventeen-year-old adolescents had higher ALPS scores than 15-year-old adolescents. For the HR sub-dimension, there was a difference between 15-, 16-, and 17-year-old adolescents. Seventeen-year-old adolescents had a higher score than those in the other age group. According to the school achievement of the adolescents, a statistically significant difference was found between the scores of the ALPS and HR, N, and PLP sub-dimensions ($p<0.05$). Adolescents who stated that their school achievement was good from the options of good, bad and moderate for the ALPS had higher scores, adolescents who stated that their school achievement was good from the options of good and moderate for the HR sub-dimension had higher scores, adolescents who stated that their school achievement was good from the options of good and moderate for the B sub-dimension had higher scores, and adolescents who stated that their school achievement was good from the options of good, bad and moderate for the PLP sub-dimension had higher scores (Table 3)

A statistically significant difference was found between the ALPS and HR and PA sub-dimension scores according to the family type of the adolescents ($p<0.05$). The score of adolescents living in an extended family among the nuclear family and extended family options for ALPS was higher. For the HR sub-dimension, the score of adolescents living in extended family was higher among nuclear family, extended family, and broken family options, and for the PA sub-dimension, the score of adolescents living in extended family was higher among nuclear family and extended family options (Table 3).

A statistically significant difference was found between the scores of HR, PLP, and IR scores from the sub-dimensions of ALPS according to the perception of economic status of the adolescents ($p<0.05$). For the HR sub-dimension, the score of the adolescents who stated that their economic status was moderate among the good and moderate options was higher, for the PLP sub-dimension, the score of the adolescents who stated that their economic status was good among the good and moderate options was higher, and for the IR sub-dimension, the score of the adolescents who stated that their economic status was good among the good and moderate options was higher. A statistically significant difference was found between the scores of adolescents according to the presence of chronic disease among the sub-dimensions of the ALPS ($p<0.05$). For the SM sub-dimension, the scores of those with chronic diseases were higher than those without chronic diseases (Table 3).

A statistically significant difference was found between the ALPS and PA, N, PLP, and IR sub-dimension scores according to the current health status perceptions of the adolescents ($p<0.05$). Adolescents with good and moderate perceptions of current health status had higher scores for ALPS, adolescents with good and moderate perceptions of current health status had higher scores for PA sub-dimension, adolescents with good and moderate perceptions of current health status had higher scores for N sub-dimension, adolescents with good and moderate perceptions of current health status had higher scores, adolescents with good, poor and moderate perceptions of current health status had higher scores for PLP sub-dimension, and adolescents with good and poor perceptions of current health status had higher scores for IR sub-dimension (Table 3).

Table 3. Comparison of Adolescent Lifestyle Profile Scale scores according to some socio-demographics characteristics of adolescents

Variables		ALPS	HR	PA	N	PLP	IR	SM	SH
		X±SD	X±SD	X±SD	X±SD	X±SD	X±SD	X±SD	X±SD
Gender									
Male		106.84±16.23	10.18±3.05	15.79±4.01	15.59±3.29	22.61±4.54	14.66±2.75	14.49±2.63	13.50±2.85
Female		104.54±14.19	10.55±2.80	13.65±3.41	14.77±3.16	22.42±4.49	15.74±2.26	14.13±2.21	13.24±2.56
	Test Statistic	t=1.233	t=-1042	t=4.688	t=2.057	t=0.333	t=-3.506	t=1.205	t=0.791
	p	0.219	0.299	0.000*	0.041*	0.740	0.001*	0.229	0.430
Age									
14[1]		107.39±15.14	10.81±3.02	14.54±3.75	15.18±3.46	23.00±4.58	15.41±2.35	14.75±2.13	13.68±2.40
15[2]		102.36±16.94	9.53±2.66	14.24±4.34	15.02±3.39	21.39±4.90	14.97±2.60	13.95±2.59	13.23±3.06
16[3]		104.93±16.19	9.72±2.76	14.64±4.02	14.93±3.14	22.60±4.65	15.39±2.87	14.42±2.66	13.20±2.92
17[4]		109.92±9.32	12.20±2.63	15.62±2.80	15.79±3.02	23.46±3.24	15.05±2.15	14.20±2.00	13.57±2.05
	Test Statistic	F=2.875	F=12.227	F=1.414	F=0.875	F=2.531	F=0.525	F=1.130	F=0.491
	p	0.037*	0.000*	0.239	0.454	0.058	0.666	0.337	0.689
		2>4	4>3>2						
Perception of school success									
Good[1]		109.88±14.24	11.00±2.62	15.25±3.95	16.14±3.02	23.66±4.24	15.52±2.70	14.60±2.52	13.68±2.68
Middle[2]		101.59±13.87	9.73±2.95	14.16±3.68	14.19±3.10	21.53±4.18	14.95±2.26	13.99±2.10	13.00±2.58
Bad[3]		99.64±23.71	9.64±4.23	14.07±3.95	14.21±3.96	19.78±6.45	14.35±3.38	14.14±3.73	13.4286±3.73
	Test Statistic	F=11.278	F=6.559	F=2.741	F=13.027	F=10.450	F=2.379	F=2.063	F=1.995
	p	0.000*	0.002*	0.066	0.000*	0,000*	0.095	0.129	0.138
		1>2>3	1>2		1>3	1>2>3			
Family type									
Nuclear[1]		104.90±15.59	10.12±2.76	14.48±3.98	15.04±3.29	22.46±4.63	15.26±2.64	14.26±2.48	13.25±2.70
Extended[2]		113.25±8.67	13.16±2.38	16.45±2.51	16.04±2.52	23.62±3.41	15.12±1.48	14.62±1.95	14.20±2.04
Broken[3]		105.54±15.82	9.45±4.20	15.72±2.64	16.18±3.34	21.36±3.69	14.27±2.90	14.54±2.58	14.00±3.87
	Test Statistic	F=3.308	F=13.411	F=3.275	F=1.580	F=1.102	F=0.799	F=0.286	F=1.643
	p	0.038*	0.000*	0.039*	0.208	0.334	0.451	0.751	0.195
		2>1	2>1>3	2>1					
Perception of economic status									
Good[1]		107.94±15.98	10.22±2.88	15.26±4.14	15.11±3.57	23.35±4.82	15.82±2.58	14.53±2.61	13.62±2.75
Middle[2]		10393±13.87	10.31±2.83	14.27±3.56	15.22±2.95	21.99±4.04	14.81±2.42	14.15±2.24	13.16±2.65
Bad[3]		105.54±22.41	12.63±3.90	14.81±4.40	15.27±3.71	20.90±5.90	14.27±3.196	14.09±2.94	13.54±3.04
	Test Statistic	F=2.195	F=3.520	F=2.087	F=0.038	F=3.687	F=5.814	F=0.824	F=0.920
	p	0.113	0.031*	0.126	0.963	0.026*	0.003*	0.440	0.400
			3>2>1			1>2	1>2		
Perception of current health status									
Good[1]		107.79±14.80	10.59±2.93	15.18±3.88	15.46±3.20	23.27±4.05	15.43±2.55	14.49±2.36	13.34±2.71
Middle[2]		99.48±14.39	9.71±2.88	13.23±3.40	14.21±2.99	20.41±4.96	14.66±2.40	13.81±2.56	13.41±2.73
Bad[3]		91.50±21.51	9.00±1.63	13.00±4.32	15.25±6.55	15.75±4.64	12.00±3.36	12.50±3.10	14.00±3.16
	Test Statistic	F=9.165	F=2.533	F=6.578	F=3.473	F=15.384	F=5.426	F=2.946	F=0.121
	p	0.000*	0.081	0.002*	0.032*	0.000*	0.005*	0.054	0.886
		1>2		1>2	1>2	1>2>3	1>3		

*p<0.05, SD; Standard Deviation. t: independent sample t test, F: One way ANOVA, ALPS: Adolescent Lifestyle Profile Scale, HR: Health Responsibility, PA: Physical Activity, N: Nutrition, PLP: Positive Life Perception, IR: Interpersonal Relationships, SM: Stress Management, SH: Spiritual Health

DISCUSSION

In this study, which aimed to examine the HLBs in adolescents studying in high school, the ALPS total score of the adolescents participating in the study was 105.68±15.25, and the mean item score was 2.64±0.38. It can be said that the level of HLBs in adolescents is moderate. Similar results were obtained by Gaete et al. in high school students studying in Chile, Çiçek and Cetinkaya in high school students studying in the Central Anatolia region of Turkey, Aras et al. in adolescents in the Central Anatolia region of Turkey, Ardıç in adolescents studying in the northwestern region of Turkey (Aras et al., 2007; Ardıç, 2008; Çiçek & Cetinkaya, 2017; Gaete et al., 2021; İlhan, 2012). Unlike the findings of this study, Sousa et al. found that the mean item score of the ALPS was lower in high school students studying in Portugal, and Karagözoğlu found that the mean item score of the ALPS was lower in adolescents studying in the northwestern region of Turkey (Karagözoğlu, 2021; Sousa et al., 2015). The difference between the study findings may be because the study was conducted during the COVID-19 pandemic. After the COVID-19 pandemic was declared a public health emergency, significant effects were observed in various social, economic, and cultural areas in Turkey, leading to the implementation of radical decisions. Education in primary, middle, and high schools was suspended, and online education was continued at home. The difficulties brought by the pandemic negatively impacted the health behaviors of adolescents (Avci et al., 2023).

The adolescents who participated in the study received the highest score from the IR sub-dimension of the ALPS. The mean score of the IR sub-dimension was 15.21±2.57, and the mean item score was 3.04±0.51. The fact that adolescents are willing to take responsibility for adult roles in society such as acquiring a professional identity and developing close relationships, that there is a strong interaction between them and their peers in terms of social relationships in adolescence, that they have fewer problems in establishing new relationships, that they have a desire to stand out easily, attract attention and play a role, and that they want to prove to their environment the thoughts, actions and attitudes they adopt to be respected and to have a place in society may explain the high scores in the IR scores. In addition, it comes to mind that adolescents who spend enough time together in the school environment are more likely to establish and develop good relationships (Ercan, 2005; Koç, 2004; San, 2006; Story & Stang, 2005). Similar to the findings of the current study, Sousa et al. found that the highest item score average belonged to the IR sub-dimension and was 3.08±0.50 in high school students studying in Portugal (Sousa et al., 2015). In the study conducted by Karagözoğlu on adolescents studying in the northwestern region of Turkey, the highest item mean score belonged to the IR subscale and was 2.92±0.40 (Karagözoğlu, 2021). Similar results were obtained by Gaete et al. in high school students in Chile, İlhan in adolescents

in the northwestern region of Turkey, and Ardıç in adolescents in the northwestern region of Turkey (Ardıç, 2008; Gaete et al., 2021; İlhan, 2012). Unlike the findings of the present study, Çiçek and Çetinkaya, and Aras et al. found that the mean score of the items of the IR subscale was lower in high school students in the Central Anatolia region of Turkey (Aras et al., 2007; Çiçek & Çetinkaya, 2017).

Adolescents who participated in the study received the lowest score from the HR sub-dimension of the ALPS. The mean score of the HR sub-dimension was 10.37±2.93, and the mean item score was 2.07±10.58. Similarly, in studies conducted by Aras et al. on high school students studying in the Central Anatolia region of Turkey, Karagözoğlu on adolescents studying in the northwestern region of Turkey, and Ardıç on adolescents studying in the northwestern region of Turkey, it was determined that the lowest mean item score was HR (Aras et al., 2007; Ardıç, 2008; Karagözoğlu, 2021). Another finding of this study was that HR improved in direct proportion to increasing age. As a matter of fact, the HR level of 17-year-old adolescents was higher than that of adolescents under the age of 17. Approximately 80% of the study group was under the age of 17. Unlike the findings of this study, Sousa et al. found that the mean HR item score was higher in high school students studying in Portugal, Gaete et al. in high school students studying in Chile, Çiçek and Çetinkaya in high school students studying in the Central Anatolia region of Turkey, İlhan in adolescents in the northwestern region of Turkey (Çiçek & Çetinkaya, 2017; Gaete et al., 2021; İlhan, 2012; Sousa et al., 2015).

Among adolescents, ALB varies according to the perception of economic status ($p<0.05$). HR is higher in adolescents who perceive their economic status at a moderate level, while PLP and IR are higher in those who perceive their economic status at a good level. Çiçek and Çetinkaya found similar findings to those of the present study among high school students in the Central Anatolia region of Turkey, and Gaete et al. found similar results in high school students studying in Chile (Çiçek & Çetinkaya, 2017; Gaete et al., 2021). Low socioeconomic status can complicate living conditions and negatively affect health. The deepening of problems related to economic hardship may cause family discord. Therefore, priority may be given to family living conditions, while health status may be overlooked (Koçoğlu & Akin, 2009). In this context, adolescents who perceive their economic situation as poor may exhibit lower HLBs. As in this study, studies supporting significant relationships between income level and HLBs have been reported (Vançelik et al., 2007; Wardle & Steptoe, 2003). School health nurses can be an example of planning in cooperation with the school administration to ensure that the basic needs of adolescents are met and that adolescents can benefit from activities related to HLBs, such as exercise, at a minimum or free of charge.

In adolescents, HLBs differ according to current health perception ($p<0.05$). Adolescents who perceived their current health status as good had higher levels of

ALBS, PA, N, PLP, and IR. Similarly, Karagözoğlu found that adolescents studying in the northwestern region of Turkey who perceived their current health status as good had higher levels of PA, N and PLP, and IR (Karagözoğlu, 2021). Similarly, Ardıç found that the levels of PA, N and PLP, and IR were higher in adolescents studying in the northwestern region of Turkey (Ardıç, 2008). Health perception can affect health responsibility, health behaviors, and the implementation of effective interventions in health education (Leventhal et al., 2001). In this context, developing and supporting a positive health perception is important for maintaining adolescents' ability to take responsibility for their own health. Determining the period-specific needs of adolescents from a holistic perspective may allow them to increase their awareness and positive beliefs about their health and to protect and improve their health. School health nurses can assume important roles in improving the health perception of adolescents.

CONCLUSION AND RECOMMENDATION

In this study, which was carried out to examine the level of HLBs in adolescents studying in high school, HLBs were determined at a moderate level, and the highest health-promoting behavior was found to be the IR, and the lowest health-promoting behavior was found to be the HR. According to age, gender, school achievement, family type, perception of economic status, presence of chronic disease, and perception of current health status, the level of HLBs of adolescents differed. Within the framework of the findings obtained by school health nurses; It is recommended to organize training programs for teachers and other school personnel, who are important role models, to acquire adequate knowledge on health protection and development for adolescents, to organize training programs for their families in the development of HLBs in adolescents since a significant part of health-related behaviors are acquired in the family environment, to create environments where adolescents can exhibit HLBs in the school environment or in social areas outside the school and to provide ease of access, to plan activities on certain days and hours concerning issues that will draw attention to the issue of HLBs.

LIMITATIONS

At the time of the study, it was difficult to reach the sample because education was carried out under the conditions of the COVID-19 pandemic, and some classrooms were closed due to quarantine. Adolescents whose parental consent could not be obtained but who were willing to participate in the study could not be included in the study. The questions regarding smoking and alcohol use in the Sociodemographic Characteristics Information Form were removed from the data collection tools as the school administration, who granted permission to conduct the study, deemed them inappropriate to ask the students.

Acknowledgments:

We would like to thank the school administrators, teachers, and students who participated in the study.

Funding:

The authors declared that this study has received no financial support.

Conflict of Interest:

There is no conflict of interest between the authors.

Author contribution:

Design of Study: SD (50%), SA (50%)

Data Acquisition: SD (100%)

Data Analysis: SD (50%), SA (50%)

Writing Up: SD (50%), SA (50%)

Submission and Revision: SD (%30), SA (%70)

REFERENCES

American National School Nurses Association. (2010). Delegation—Position statement. ERIC. Access Link: https://files.eric.ed.gov/fulltext/ED540406.pdf Access Date: 06.02.2025.

Aras S., Günay T., Özan S., and Orçın E. (2007). Risky behaviors among high school students in Izmir. Anatolian Journal of Psychiatry, 8, 186-196.

Ardıç, A. (2008). Healthy lifestyle behaviors of adolescents (Unpublished Master's Thesis). Istanbul University Institute of Health Sciences, Istanbul.

Ardic, A., & Esin, M. N. (2015). The Adolescent Lifestyle Profile scale: Reliability and validity of the Turkish version of the instrument. *Journal of Nursing Research, 23*(1), 33-40. https://doi.org/10.1097/jnr.0000000000000053

Avci, G., Avci Aydın, İ., Soyanit, S., & Çabar, H. D. (2023). Healthy lifestyle behavior of adolescents during home stay due to the COVID-19 pandemic. *TJFMPC, 17*(1), 132-138.

Bahar, Z. (2010). School health nursing. *Dokuz Eylül University Nursing School Electronic Journal, 3*(4), 195-200.

Beaglehole, R., Bonita, R., Horton, R., Adams, C., Alleyne, G., Asaria, P., ... Watt, J. (2011). Priority actions for the non-communicable disease crisis. *Lancet, 377*, 1438-1447. https://doi.org/10.1016/S0140-6736(11)60393-0

Çiçek, E., & Çetinkaya, F. (2017). Healthy lifestyle behaviors of high school students in a selected district center. *Health Sciences Journal, 26*(1), 29-38.

Ercan, O. (2005). Psychosocial development of adolescents. *Adolescent Health*, Istanbul University Cerrahpaşa Medical Faculty Continuing Medical Education Activities Adolescent Health II Symposium Series, 43, 17-21.

Ercan, O., Alikaşifoğlu, M., Erginöz, E., Uysal, Ö., & Kaymak, D. A. (2011). Health behaviors of school-age children survey. *Turkish Pediatric Archive, 46*(11), 15-18.

Gaete, J., Olivares, E., Godoy, M. I., Cárcamo, M., Montero-Marín, J., Hendricks, C., & Araya, R. (2021). Adolescent Lifestyle Profile-Revised 2: Validity and reliability among adolescents in Chile. *Jornal de Pediatria, 97,* 52-60. https://doi.org/10.1016/j.jped.2020.07.015

Gore, F. M., Bloem, P. J., Patton, G. C., Ferguson, J., Joseph, V., Coffey, C., ... & Mathers, C. D. (2011). Global burden of disease in young people aged 10–24 years: A systematic analysis. *Lancet, 377*(9783), 2093-2102. https://doi.org/10.1016/S0140-6736(11)60512-6

Hacıalioğlu, N. (2018). Risky behaviors of nursing students. *STED/Continuous Medical Education Journal, 27*(2), 73-79.
Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2013). *Multivariate data analysis* (7th ed.). Pearson Education Limited.
Hendricks, C. S., Murdaugh, C., & Pender, N. J. (2006). The adolescent lifestyle profile: Development and psychometric characteristics. *Journal of National Black Nurses Association, 17*(2), 1-5.
İlhan, N. (2012). The effect of brief interviews based on the behavior image model on health behaviors of adolescents (Doctoral Thesis). Marmara University Institute of Health Sciences, Istanbul.
Karagözoğlu, M. (2021). Determining the relationship between health literacy and healthy lifestyle behaviors in adolescents. Bezmialem Vakıf University Institute of Health Sciences, Istanbul.
Koç, M. (2004). Adolescence period and its general characteristics from a developmental psychology perspective. *Journal of Social Sciences Institute, 17*(2), 231-256.
Koçoğlu, D., & Akın, B. (2009). The relationship of socio-economic inequalities with healthy lifestyle behaviors and quality of life. *Dokuz Eylül Nursing School Electronic Journal, 2*(4), 145-154.
Leventhal, H., Leventhal, E. A., & Cameron, L. (2001). Representations, procedures, and affect in illness self-regulation: A perceptual-cognitive model. In A. Baum, T. A. Revenson, & J. E. Singer (Eds.), *Handbook of health psychology* (pp. 19-48). Lawrence Erlbaum.
Öztürk, Ö. (2013). Determining health behaviors in adolescents living in a prison and the effect of health promotion model-based education on behavior change (Master's Thesis). Marmara University Institute of Health Sciences, Istanbul.
Pender, N. J., Murdaugh, C. L., & Parsons, M. A. (2015). *Health promotion in nursing practice* (7th ed.). Pearson Education.
Sousa, P., Gaspar, P., Fonseca, H., Hendricks, C., & Murdaugh, C. (2015). Health promoting behaviors in adolescence: Validation of the Portuguese version of the Adolescent Lifestyle Profile. *Journal de Pediatria, 91*(4), 358-365. https://doi.org/10.1016/j.jped.2014.06.005
Story, M., & Stang, J. (2005). Nutrition needs of adolescents. In J. Stang & M. Story (Eds.), *Guidelines for adolescent nutrition services* (pp. 21-34). University of Minnesota.
Sümbüloğlu, K., & Sümbüloğlu, V. (2017). *Biostatistics* (18th ed.). Hatipoğlu Publications.
Sümen, A., & Öncel, A. (2017). Factors affecting healthy lifestyle behaviors of high school students in Turkey: A systematic review. *Eur J Ther, 23*, 74-82. https://doi.org/10.5152/EurJTher.2017.04044
Turkish Statistical Institute. (2024). Youth statistics, 2023. Access Link: https://data.tuik.gov.tr/Bulten/Index?p=Istatistiklerle-Genclik-2023-53677 Access Date: 06.02.2025.
United Nations Population Fund. (2020). World population dashboard. Access Link: https://www.unfpa.org/data/world-population-dashboard Access Date: 06.02.2025.
Vançelik, S., Gürsel Önal, S., Güraksın, A., & Beyhun, E. (2007). Factors associated with university students' nutrition knowledge and habits. *TAF Preventive Medicine Bulletin, 6*(4), 242-248.
Wardle, J., & Steptoe, A. (2003). Socioeconomic differences in attitudes and beliefs about healthy lifestyles. *J Epidemiol Community Health, 57*, 440-443. https://doi.org/10.1136/jech.57.6.440
World Health Organization. (2025). Adolescent health. Access Link: https://www.who.int/health-topics/adolescent-health#tab=tab_1 Access Date: 06.02.2025.