

Assessment of Healthy Lifestyle Behaviors among First-Year Medical, Dentistry and Health Sciences Students in Turkey

İKİŞİK H, ARI A, MARAL I

Istanbul Medeniyet University Faculty of Medicine Public Health, Ünalán District, Üsküdar, Istanbul/Turkey, 34700

ABSTRAK

Kajian keratan rentas ini, di mana dapatan tahun pertama kajian susulan prospektif telah dijalankan di kalangan 356 pelajar yang mendaftar pada tahun pertama daripada tiga fakulti di universiti di Istanbul antara 1 November hingga 31 Disember 2019. Dengan kajian ini, ia bertujuan untuk menilai perubahan tertentu dalam tingkah laku gaya hidup sihat, tingkah laku berisiko dan tahap depresi pelajar yang mendaftar di pelbagai fakulti di universiti awam di Istanbul sepanjang tempoh di universiti. Data diperolehi melalui soal-selidik yang mengandungi 65 soalan, dan Inventori Depresi Beck, yang terdiri daripada 21 soalan. Soal-selidik ditadbir di bawah pengawasan dengan memberikan maklumat awal kepada pelajar. Min indeks jisim tubuh, min tekanan darah sistolik dan min tekanan darah diastolik pelajar adalah 23.23 ± 4.1 , 108.97 ± 15.21 dan 66.98 ± 10.08 . Min masa tidur harian adalah 6.77 ± 1.21 jam, min masa menonton TV adalah 0.77 ± 1.13 jam, dan min masa yang dihabiskan dengan telefon pintar, tablet atau komputer adalah 3.67 ± 2.50 jam. Di kalangan pelajar, 37.07% adalah perokok, 26.12% mengambil alkohol dan 4.77% menggunakan bahan ketagihan. Di kalangan pelajar, 31.46% menganggap diri mereka berisiko untuk mengalami depresi. Di universiti, terdapat keperluan untuk pelaksanaan program promosi kesihatan yang memberi tumpuan kepada menggalakkan aktiviti fizikal dan pemakanan sihat serta mengurangkan tingkah laku berisiko. Selain itu, program-program ini harus diperkasakan dengan latihan ke atas perubahan tingkah laku.

Kata kunci: depresi, gaya hidup sihat, pelajar universiti, tabiat pemakanan, tingkah laku berisiko

Address for correspondence and reprint requests: Associate Professor Hatice İkişik. Istanbul Medeniyet University Faculty of Medicine Public Health Ünalán District, Üsküdar, Istanbul/Turkey, 34700. Tel: +0905324966957 Email: drhatice.ikişik@gmail.com

ABSTRACT

This cross-sectional study, in which the first-year findings of a prospective follow-up study were presented, was conducted with 356 students enrolled in the first-year of three faculties at a state university in Istanbul between November 1st and December 31st, 2019. With this study, it was aimed to evaluate the changes in certain healthy lifestyle behaviors, risky behaviors and depression levels of students enrolled at the different faculties of a public university in Istanbul during their university life. The data were obtained through a questionnaire of 65 questions, and the Beck Depression Inventory, which consisted of 21 questions. They were administered under supervision by providing preliminary information to the students. The mean body mass index, mean systolic blood pressure and mean diastolic blood pressure values of the students were 23.23 ± 4.1 , 108.97 ± 15.21 and 66.98 ± 10.08 , respectively. The mean daily sleep time was 6.77 ± 1.21 hours, the mean TV viewing time was 0.77 ± 1.13 hours, and the mean time they spent with a smartphone, tablet or computer was 3.67 ± 2.50 hours. Among the students, 37.07% were smokers, 26.12% consumed alcohol, and 4.77% used addictive substances. Of the students, 31.46% considered themselves at risk for depression. At the universities, there is a need for the implementation of health promotion programs focusing on promoting physical activity and healthy nutrition and reducing risky behaviors. In addition, these programs should be strengthened with the trainings on changing behaviors.

Keywords: depression, dietary habits, healthy lifestyle, risky behavior, university students

INTRODUCTION

In the world, 16% of the population consists of young people between 15 and 24 years of age (UN 2019). Risky behaviors, most of which are preventable, and the accidents that occur due to drug use are among the leading causes of morbidity and mortality in this age group. Unhealthy eating habits, insufficient physical activity, consumption of alcohol, tobacco and tobacco products, unprotected sexual intercourse and exposure to violence both affect

the current health of teenagers and endanger their health as the adults of the future (WHO 2020).

During the university years, while the rate of sufficient and regular nutrition, exercise, and the number of dental and medical examinations decreases, the rate of eating fast food, getting sexually transmitted diseases, smoking, and alcohol and drug abuse increase. However, tendency to take risks is higher compared to both adolescent and adult age groups. In addition, this early adulthood is a period when psychological sensitivity

increases and mental disorders begin (National Academies Press 2015). During the early periods of teenage years, factors such as moving away from the family, being in a different city or country, making new friends have a significant effect on the health status and views of university students (Arnett 2004).

Globally, the rate of tobacco use in the teenagers is 17%, and the rate of alcohol consumption is 13.6% (WHO, Global Report On Trends n Prevalence Of Tobacco Use 2000-2025; High Risk Substance Use in Youth 2020). Moreover, an estimated 10-20% of individuals experience various mental health problems in their early teenage years; however, they do not find the opportunity of sufficient diagnosis and treatment. In particular, depression is one of the leading mental health problems (Adolescent mental health 2020). Despite the fact that the international similarities in risky behaviors, which tend to increase in the second decade of life, can be explained on the basis of neurobiological development, domestic studies are needed for their environmental and cultural effects (Spear 2013).

In this study, it was aimed to evaluate the changes in certain healthy lifestyle behaviors, risky behaviors and depression levels of students enrolled at the different faculties of a public university in Istanbul during their university life, during which individuals mostly started an independent student life by moving away from parental control, and an increased experience in the social and peer interactions.

MATERIALS AND METHODS

This study is a cross-sectional study consisting of the first-year follow-up results of a study, where the students enrolled in the first-year at the different faculties of a public university in Istanbul at the 2019-2020 academic year would be monitored every year during their university years. The ethical approval for the study was obtained from Istanbul Medeniyet University Göztepe Training and Research Hospital Clinical Research Ethics Committee (Ethics Committee No: 2019/0452). In addition, written permission was obtained from the institution where the study was conducted and verbal consent was obtained from the participants. The study was conducted on first-year students enrolled at the faculties of health sciences (n=332), medicine (n=183) and dentistry (n=63) between November 1st and December 31st, 2019. No study sample was selected, and it was aimed to reach all students. The inclusion criteria was being a first-year student at the relevant faculties in the year the study was performed; and there was no criteria for exclusion. The data were obtained through a questionnaire of 65 questions that was developed by the researchers and the Beck Depression Inventory (BDI), which consisted of 21 questions. They were administered under supervision by providing preliminary information to the students. The first part of the questionnaire contained information on the blood pressure, body mass index and waist circumference measurements of the students. The measurements

were made by the researchers, and a practical training was given to the the team that would perform the measurements. A calibrated scale, height meter and sphygmomanometer were used for the measurements. The second part of the questionnaire contained questions about sociodemographic characteristics of the participants and their healthy lifestyle behaviors consisting of 4 main categories i.e. healthy lifestyle, nutrition, physical activity and risk avoidance. The categories included 5 questions for healthy lifestyle, 5 questions for nutrition, 4 questions for physical activity, and 16 questions for risk avoidance, respectively. All the responses to the questions about the habit of salt use and, daily fruit, vegetable and salad consumption in the nutrition category, all questions in the physical activity category, and the question about addictive substance use in the risk avoidance category were scored as zero (0), one (1) or two (2). All other questions were scored as zero (0) or one (1). For instance, the questions on daily "fruit consumption" and "vegetable meal or salad consumption" were scored as 2 for 2 portions or more per day, as 1 for 1 portion per day, and as 0 for not consuming on a daily basis. Thus, the lowest and highest total scores that could be obtained for each category were calculated as 0 and 5 for the life category, 0 and 7 for the nutrition category, 0 and 8 for the physical activity category and, 0 and 17 for the risk avoidance category, respectively. The last part of the questionnaire included 21 questions from the BDI.

BDI

It is a self-report rating inventory that consists of 21 items measuring the characteristic behaviors and symptoms of depression. Among the 21 items of the inventory, there were two items for emotions, eleven items for cognition, two items for behavior, five items for physical symptoms, and there was one item for interpersonal symptoms. The items were scored between 0 and 3, which yielded total scores varying between 0 and 63. The scale was adapted to Turkish by Hisli (18). Total scores were evaluated as normal (0-9 points), mild (10-18 points), moderate (19-29 points) and severe depression (30-63 points) (Beck et al. 1961; Hisli 1989).

Statistical analysis

Data were analysed using the SPSS 22.0 package software. Descriptive tables included mean and standard deviation, or percentages and numbers. In the analysis of the data, in addition to significance tests such as chi-square, student's t test and the one-way analysis of variance, the Pearson correlation coefficient (r) was used for investigating the relationship between the BDI score and the total scores of some variables as well as behavior categories. A regression analysis was performed to examine the relationship between the BDI score, which was also determined as the dependent variable, and the behavior scores. Logistic regression analysis was performed in order to examine the relationship of the moderate and severe depression,

which were obtained according to the scale, with certain variables. The level of statistical significance was accepted as $p < 0.05$.

RESULTS

Demographic and Anthropometric Characteristics

The demographic and anthropometric characteristics of the 356 (61.6%) university students participating in the study were presented in table. The mean age of the students was 19.9 ± 1.33 , and 61.8% (n=220) of them were female. The mean body mass index (BMI) calculated by dividing body mass (kg) by the square of height was 23.23 ± 4.1 . According to blood pressure measurements taken once from both arms, the mean systolic blood pressure was 108.97 ± 15.21 mmHg, and the mean diastolic blood pressure was 66.98 ± 10.08 mmHg. Of the students, 91.02% (n=324) did not have any diagnosis for a chronic disease.

Almost all of the students were found to be single by 99.16% (n=353). The education level of the mother was primary school and below in 39.05% (n=139) of the students, and the education level of the father was higher education in 39.61% (n=141). Of the students, 65.73% (n=24) evaluated the economic status as of their families as "moderate". The percentage of the students, who lived with their families or relatives, was 52.52% (n=187). (Table 1).

Healthy Lifestyle

When evaluated in terms of healthy lifestyle behaviors, 59.83% (n=213) of the students brushed their teeth 2 or 3 times a day. Of the students, 33.70% (n=120) had not been to the dentist in the last 24 months. The mean daily TV watching time of the students was 0.77 ± 1.13 hours. The mean time they spent with a smartphone, tablet or computer per day was found to be 3.67 ± 2.50 hours. The mean daily sleep time of the students was found to be 6.77 ± 1.21 hours.

The mean score obtained by the participants according to the answers given to the questions about healthy lifestyle behaviors (mean daily sleep time, frequency of tooth brushing and going to the dentist, time spent per day for watching television and using a smartphone or computer on weekdays) was 3.54 ± 0.82 (min.0-max.5) (Table 2).

Dietary Habits

In terms of the eating habits; 85.67% (n=305) of the students had the habit of having breakfast in the morning. Of the students, 35.39% (n=226) consumed one portion of fruit a day, and 41.01% (n=146) consumed one portion of vegetables a day. While 20.5% of the students (n=73) did not add salt after cooking, 7.02% (n=25) added salt without even tasting the food. According to the self-evaluations of the students on nutrition, it was "poor" in 16.85% (n=25) and "good" in 24.71% (n=98).

The mean score obtained by the participants according to the answers given to the questions on nutritional

Table 1: Certain sociodemographic and anthropometric characteristics of the students

Characteristics	Total (n = 356)	
	Mean	sd
Age (year)	19.97	1.33
Body Mass Index (kg/m ²)	23.23	4.10
Waist circumference (cm)	76.21	11.24
Systolic Blood Pressure (mmHg)	108.97	15.21
Diastolic Blood Pressure (mmHg)	66.98	10.08
Daily Sleep Time (hours)	6.77	1.21
	n	%
Marital Status		
Single	353	99.16
Married	3	0.84
Education Level of the Mother		
Primary School and Below	139	39.05
Middle School or High School	124	34.83
Higher Education Degree	93	26.12
Education Level of the Father		
Primary School and Below	74	20.78
Middle School or High School	141	39.61
Higher Education Degree	141	39.61
Economic Status of the Family		
Poor	24	6.74
Moderate	234	65.73
Good	103	28.93
Place of Residence		
State or Private Dormitory	138	38.76
At Home (With Family or Relatives)	187	52.52
At Home (Alone or With Friends)	31	8.70

M=Mean; sd=Standard Deviation

behavior (the habit of eating breakfast and using salt, the amount of daily fruit and vegetable or salad consumption) was 3.64 ± 1.38 (min.0-max.7) (Table 2).

Physical Activity

When the physical activity habits in the last week were evaluated, 57.86% (n=206) of the students did not do an activity that required strong breathing such as basketball, football, volleyball, running or cycling and 74.43% (n=265) did not do any physical activity that

lasted less than 60 minutes.

The mean score obtained by the students according to the answers given to the questions on their physical activities within the last one week (requiring strong breathing and lasting at least 20 minutes, not requiring strong breathing and lasting at least 30 minutes, taking at least 60 minutes to increase heart rate, or a physical activity to stretch muscles or increase muscle frequency) was 2.28 ± 1.92 (min.0-max.8) (Table 2).

Risk Avoidance

Table 2: Distribution of the scores related to lifestyles obtained by the students

Sub-categories	Mean Scores (Mean \pm Sd)	Base and Top Values
Healthy Lifestyle (0 - 5)	3.54 \pm 0.82	0 - 5
Nutrition (0 - 7)	3.64 \pm 1.38	1 - 7
Physical Activity (0 - 8)	2.28 \pm 1.92	0 - 8
Risk Avoidance (0 - 17)	13.06 \pm 2.18	4 - 16

M=Mean; sd=Standard Deviation

The habits of smoking, electronic smoking, smoking hookah, alcohol consumption, addictive substance use, sexual intercourse, drinking alcohol, exceeding the speed limit while driving, wearing seat belts while driving, wearing seat belts while sitting in the front seat, wearing seat belt sitting in the back seat, being a passenger in a vehicle driven by a person who consumed alcohol, wearing a helmet while riding a bicycle or motorcycle, carrying a knife or stick-like tool/weapon, getting involved in a physical fight, and being exposed to physical violence by a partner were evaluated as the risky behaviors. The answers given by the students to the questions about their various habits were presented in Table 3.

According to the responses of the student to the questions with multiple options on the behaviors that were perceived by the students as risk factors, 31.46% (n=112) of the students perceived themselves at risk for depression. This was followed by traffic accident by 15.44% (n=55), smoking addiction by 10.11% (n=36), getting involved in a fight by 9.83% (n=35), committing suicide by 5.33% (n=19), alcohol addiction by 4.49% (n=16), sexually transmitted diseases by 3.37% (n=12), substance addiction by 3.08%

(n=11), and undesired pregnancy by 1.68% (n=6), respectively.

When risk avoidance habits were evaluated, it was determined that 1.68% of the students (n=6) drove vehicles while they were drunk, and 11.23% (n=40) of them exceeded the speed limits while driving. Of the participants, 91.57% (n=326) wore seat belts while driving. In addition, 32.02% (n=114) wore seat belts while sitting in the front seat, and 91.01% (n=324) wore seat belts while sitting in the back seat. The proportion of the participants that drove in a vehicle driven by a person who consumed alcohol in the last 12 months, was 14.88% (n=53), and the rate of those who wore a helmet when riding a bicycle or a motorcycle was 3.65% (n=13). While 3.93% (n=14) of the students carried a knife or stick-like tool/weapon in the last 30 days, it was determined that 9.26% (n=33) of them were involved in a physical fight in the last 12 months. Of the participants, 3.65% (n=13) were exposed to physical violence by their girlfriend or boyfriend in the last 12 months.

The risk avoidance behaviors of the participants were evaluated with the questions about smoking, electronic smoking (vaping), hookah, alcohol and addictive substance use, experiencing sexual intercourse, driving under the

Table 3: Distribution of the self-evaluations of the students related to certain risky behaviors, physical activity and health.

Characteristics	Total (n = 356)	
	n	%
Smoking		
Yes	132	37.07
No	224	62.93
Electronic Smoking (Vaping)		
Yes	45	12.64
No	311	87.36
Hookah		
Yes	123	34.55
No	233	65.45
Alcohol Consumption		
Yes	93	26.12
No	263	73.88
Addictive Substance Use (Excluding Smoking and Alcohol)		
Yes	17	4.77
No	339	95.23
Sexual Intercourse Experience		
Yes	20	5.61
No	305	85.67
Brushing Teeth		
I don't brush every day	16	4.49
At least once a day	340	95.51
Self-Evaluation of Physical Activity		
Poor	143	40.17
Moderate	148	41.57
Good	65	18.26
Self-Evaluation of Health		
Poor	8	2.25
Moderate	79	22.19
Good	269	75.56

influence of alcohol, exceeding the speed limit while driving, wearing a seat belt while sitting in the front seat and sitting in the back seat of when driving, driving in a vehicle driven by a person who consumed alcohol, wearing a helmet when riding a bicycle or motorcycle, carrying a knife or stick-like tool/weapon in the last 30 days, getting involved in a physical fight in the last 12 months and being exposed to violence by a partner. According to the answers

given to these questions, the mean score obtained by the participants was 13.06 ± 2.18 (min.0-max.17) (Table 2). The distribution of the mean scores obtained by the students about healthy lifestyle, nutrition, physical activity and risk avoidance behaviors, and the total behavior scores by gender and accommodation was presented in Table 4.

Depression

Table 4: Distribution of lifestyle behavior scores by gender and accommodation

Variables	Healthy Lifestyle (0 - 5)	Nutrition (0 - 7)	Physical Activity (0 - 8)	Risk Avoidance (0 - 17)	Total Score (0-37)
	(Mean ± Sd)	(Mean ± Sd)	(Mean ± Sd)	(Mean ± Sd)	(Mean ± Sd)
Gender					
Female	3.59 ± 0.85	3.69 ± 1.35	2.01 ± 1.75	13.65 ± 1.53	22.95 ± 4.10
Male	3.47 ± 0.77	3.58 ± 1.44	2.71 ± 2.11	12.09 ± 2.67	21.86 ± 3.02
p	0.199	0.468	0.001	<0.001	0.004
Place of Residence					
Dormitory (State or Private)	3.47 ± 0.81	3.40 ± 1.32	2.25 ± 1.92	12.93 ± 2.21	22.07 ± 3.75
At Home (With Family or Relatives)	3.58 ± 0.83	3.92 ± 1.38	2.26 ± 1.95	13.32 ± 2.05	23.10 ± 3.13
At Home (Alone or With Friends)	3.62 ± 0.82	3.03 ± 1.29	2.51 ± 1.78	11.96 ± 2.48	21.13 ± 4.02
p	0.420	<0.001	0.793	0.005	0.002

M=Mean; sd=Standard Deviation

The mean score obtained by the students from the BDI was 9.99 ± 0.35 . There was no statistically significant difference in the BDI scores according to gender, place of accommodation, faculty of education and presence of chronic disease ($p > 0.05$) (Table 5).

The Pearson Correlation coefficients (r) calculated for the scores obtained from the BDI, and the total scores of healthy lifestyle, nutrition, physical activity and risk avoidance were $r = -0.061$ ($p = 0.252$), $r = -0.175$ ($p < 0.001$), $r = -0.047$ ($p = 0.373$) and $r = -0.160$,

Table 5: Distribution of BDI scores according to certain socio-demographic characteristics

Characteristics	Mean BDI Score		p
	Mean	Standard Error	
Gender			
Female	9.80	0.44	0.498
Male	10.30	0.57	
Place of Residence			
State or Private Dormitory	9.69	0.54	0.208
At Home (With Family or Relatives)	9.90	0.48	
At Home (Alone or With Friends)	12.06	1.42	
Faculty of Enrolment			
Faculty of Medicine	9.86	0.50	0.616
Faculty of Dentistry	9.50	0.83	
Faculty of Health Sciences	10.45	0.61	
Presence of Diseases			
None	9.94	0.36	0.650
Present	10.51	1.25	
Total	9.99	0.35	

Table 6: Multiple regression analysis for BDI score significantly associated with the behaviors related to health

	B	SE	(95% CI)		p
Risk Score	-0.418	0.147	-0.707	-0.129	<0.005
Activity Score	-0.102	0.168	-0.432	0.229	0.545
Nutrition Score	-0.663	0.235	-1.125	-0.202	<0.005
Healthy Lifestyle Total Score	-0.310	0.390	-1.077	0.457	0.428

respectively ($p=0.003$). The results of the regression analysis indicated that risk avoidance and nutrition scores had a negative and significant relationship with the Beck Depression score ($p<0.05$; $p<0.05$) (Table 6).

The Pearson Correlation coefficients (r) calculated for the scores obtained from the BDI, and the total values of BMI, waist circumference, systolic and diastolic blood pressure, daily sleep duration, the mean time spent on smartphone, computer and tablet, the mean time spent in front of the television were $r=-0.03$ ($p=0.286$), $r=0.013$ ($p=0.403$), $r=-0.082$ ($p=0.061$), $r=-0.074$ ($p=0.082$), $r=-0.028$ ($p=0.299$), $r=0.126$ ($p<0.05$) and $r=-0.095$, respectively ($p<0.05$). The Depression Inventory score had a significant relationship with the mean daily time spent in front of the TV, and the time spent with the devices such as smartphones, computers or tablets. As the time spent in front of the television increased, the Beck depression score decreased; and the depression score increased as the time spent with the smartphone, computer and tablet increased.

In addition, logistic regression analysis was performed to evaluate the effects of certain variables on moderate and severe depression in students. The model included seven

independent variables (presence of a chronic disease, smoking, alcohol consumption, sexual experience, having breakfast, fruit consumption and vegetable consumption). The model was found to be statistically significant, $\chi^2(7, N=286) = 29.156$, $p<0.001$. This indicated that this model could distinguish between moderate depression and severe depression in students. The model was able to explain 13% of the variance related to depression (Nagelkerke's R squared). Only two independent variables contributed significantly to the model (smoking and vegetable consumption). Smoking was the predictor of reporting moderate and severe depression, and the odds ratio was 2.45. In other words, when other elements in the model were maintained under control, the probability of severe depression in smokers was 2.45 times higher compared to non-smokers. Likewise, the model demonstrated that the participants, who did not consume vegetables were 1.73 times more likely to have severe depression compared to the participants, who consumed vegetables (Table 7).

DISCUSSION

According to the results of the study, the mean BMI of the students was

Table 7: Logistic regression analysis predicting the likelihood of moderate and severe depression

Variables	B	S.E	Wald	df	p	Probability Ratio	95% CI	
							Low	High
Gender	-0.508	0.288	3.107	1	0.078	0.602	0.342	1.058
Smoking	0.898	0.302	8.837	1	0.003	2.454	1.358	4.437
Alcohol consumption	0.261	0.341	0.587	1	0.444	1.299	0.665	2.535
Sexual experience	0.637	0.428	2.215	1	0.137	1.891	0.817	4.376
Having breakfast	0.486	0.364	1.787	1	0.181	1.626	0.797	3.317
Fruit consumption	0.150	0.263	0.325	1	0.568	1.162	0.694	1.943
Vegetable Consumption	0.548	0.274	4.000	1	0.046	1.730	1.011	2.959
Presence of a chronic disease	0.525	0.456	1.324	1	0.250	1.691	0.691	4.137

determined as 23.23 ± 4.1 . It was observed that the mean BMI values of both genders were higher compared to the results of similar studies conducted in our country and in the world (Özkan 2020; Myint et al. 2016). The mean systolic blood pressure was 108.97 ± 15.21 mmHg, and the mean diastolic blood pressure was 66.98 ± 10.08 mmHg. In addition, 6.4% of the students had high blood pressure levels, and this was similar with the literature (Tadesse & Alemu 2014). The mean daily sleep duration of the students was 6.77 hours. This result, which was less than the 8-10 hour period associated with good health, may be due to the adaptation to new living conditions, different education styles, anxiety and adaptation process of students who were still in the first 3 months of their higher education (Sivertsen et al. 2019; Kabrita & Hajjar-Muçça 2016).

Participants spent much less time in front of the television compared to the results of a meta-analysis study (Castro

et al. 2020). According to the results of the same study, it was observed that the mean daily time that students spent with their smartphones, tablets or computers was less. This difference may be due to the fact that the population of the study was selected from the students of the faculties with intensive curricula.

Considering that the World Health Organization recommended consuming at least 400 g or five portions of fruit and vegetables per day for a healthy diet, the fruit and vegetable consumption of the participants was quite low (WHO, Fact Sheet On Healthy Diet 2020). It was observed that living with the family or relatives had a positive effect on nutritional behavior.

More than 40% of the students rated their physical activities as “poor”. The high mean BMI values of the students also supported this result. International studies demonstrated that almost half of the students did not do physical activity, and more than three

quarters of them led a sedentary life (Awadalla et al. 2014). However, with regular physical activity, it is possible for individuals to get rid of some undesired risky behaviors, cope with mental problems such as stress and depression, and provide gains that increase the quality of life (Republic of Turkey Ministry of Health, Turkish Public Health Institute Physical Activity Guidelines of Turkey 2014).

In our study, it was seen that the rate of smoking was higher and alcohol consumption was lower compared to the results of various studies conducted with university students (Milic et al. 2020; Steptoe et al. 2002; Tembo et al. 2017). The changing frequencies of smoking and alcohol consumption across societies can be explained by the effects of religious and cultural differences on lifestyles. In line with the results of some studies, it was observed that the frequency of smoking and alcohol consumption was higher in the males compared to the females (Öztoprak & Günay 2013). This result can be interpreted as an expected consequence in terms of religion and gender in our country regarding smoking and especially alcohol consumption (Öztoprak & Günay 2013; Terzioğlu 2018).

In the study, the frequency of hookah and addictive substance use (other than smoking and alcohol) was found to be higher compared to a similar domestic studies (Koca & Oğuzönüçül 2015). With the widespread prohibitions on smoking around the world, it is expected that there will be an increase in the use of hookah, which is a traditional tobacco

smoking tool and whose popularity has increased especially among young people.

According to the study, the proportion of students, who stated that they were drunk or exceeded the speed limit while driving, was quite low compared to a similar study (Jahangard et al. 2019). Compared to the same study, it was observed that the habit of wearing seat belts while driving was higher, and the habit of wearing seat belts while sitting in the front seat was similar. The proportion of the participants, who stated that they had been involved in a physical fight at least once in the last 12 months, was similar to the results reported in the previous study, while the rate of the participants, who were exposed to physical violence by their partner, was lower (Jahangard et al. 2019). Studies demonstrate that the awareness of health sciences students about risky health behaviors is higher compared to the students of other faculties (Peltzer et al. 2016). In addition, according to the results of the study, it was observed that risk avoidance rates of the female students and the students living at home with their family or relatives were higher. In our country, it is common for the female to be more conservative compared to the male about risky behaviors due to their socio-cultural status. It can also be thought that living with an adult or a parent can be protective of risky behaviors due to the presence of an external control.

Antidepressants and anxiety medications are widely used among university students (Holt & Powell 2017). In our study, 31.46 of the students

felt at risk for depression, and this rate was expected to increase over time. As a matter of fact, a study demonstrated that emotional and mental disorders increased in university students according to the academic year (Holt & Powell 2017). According to the study, smoking and insufficient vegetable consumption are factors associated with depression. The hypotheses that may explain the link between smoking and insufficient consumption of vegetables and depressive symptoms can be listed as follows. First, cigarette consumption causes vitamin C deficiency in the body, and vitamin C deficiency in the brain may also trigger depression. The second is instead of the consumption of fresh fruits and vegetables; Consumption of foods such as biscuits, sweets and cookies, which contain a lot of processed sugar, may also trigger depression by reacting negatively to serotonin.

The students of the university, where the study was conducted, were studying in the field of health; therefore, they were more likely to be interested in healthy lifestyle behaviors compared to the younger populations at other faculties. In this sense, the results cannot be generalised to the entire youth at the university. In addition, although the students are assured about the confidentiality of the data, objectivity may not be ensured in the answers given, due to cultural and religious reasons, especially due to the sensitive content of some questions.

CONCLUSION

This study revealed that the university

students in question exhibited healthy lifestyle behaviors such as healthy eating, physical activity and risk aversion to some extent. According to the study, it was observed that depression could be related to smoking and nutrition habits of the students, and the time spent in front of the television. The physical activity levels of the students were relatively low; however, there were large variations in this finding in other countries. Therefore, health promotion programs that focus on healthy eating and reducing risky behaviors should be implemented in universities, with physical activity being the priority; and these programs should be strengthened with behavior change training for students.

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