

Original Article

## The Relationship Between the Health Behaviours and Social Networks Usage Status of Istanbul University Students

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### Abstract

**Purpose:** This study was planned as a descriptive study in order to investigate the relationship between lifestyle behaviors and social media between students of the three Faculty of the University of İstanbul.

**Methods:** Students who agreed to participate in the study, datasheets for learning ideas and habits, individual features, the International Physical Activity Questionnaire and the Dietary Pattern Index were collected. Data were analyzed with SPSS.

**Results:** According to the socio-demographic characteristics, the majority of students participating in the study of women (77%;n=755) were created. Men's breakfast ( $p<.05$ ) and dinner at the ( $p>.05$ ), while the girls lunch ( $p<.05$ ) and intermediate meals ( $p>.05$ ) were found that the skip. Of the majority of the students who participated in the study, BAU risk level at medium / high risk category were detected ( $p<.05$ ). According to the MET values, almost all of the students (99.7%;n=977) were identified as low physical activity levels ( $p<.05$ ).

The majority of students, social networking sites, a variety of information and resources to share with friends, be informed of developments related to everyday life, communicate and health, were found to use to achieve social issues. Social networks used by students and their friends, to obtain information and to share on health-related issues, primarily: youtube, facebook, wikipedia, tweeter. However, those who don't use any social media were found that in the majority.

**Conclusions:** They do not have enough information about they can access accurate information from which the source. Students don't use the right information they have learned and appears that didn't create behavior change.

**Keywords:** Social media, health behaviors, lifestyle behaviors

### Introduction

Many transformations in different areas in the light of information and communication technologies in recent years, as it happens, social transformation including social life and the environment, social communication, social relations are taking place (Karal, & Kokoc, 2010). Through social media, individuals can communicate with other individuals and groups they are associated with common interests, can share resources and experiences (Ozturk, & Akgun, 2012).

Following this transformation affects the use of technology and technology. Developments, conversions, and opportunities offered by the internet, especially young people and ways of communication, socialization tools and online motion spaces in the world were affected. Social interaction, communication, and to learn the leading and preferred environment, share their thoughts and interact with each other to facilitate the internet, an increasing young people's life will continue to find more space (Wang, Moon, Kwon, Evans & Stefanone, 2006).

The number of studies on the use of social networks in the educational context is limited in Turkey. Research related to social networking sites, is generally kind of theoretical or scanning (Ozturk, & Akgun, 2012). When the average age of individuals using social networks are examined, it is striking that a significant proportion of young users (Ozturk, & Akgun, 2012). In this context, especially young people and college students use social networks why and what needs to meet that the question comes to mind (Karal, & Kokoc, 2010).

Social media has been shown to be very effective to change their eating and exercise habits of students and to encourage the different diet between groups of friends (Childers, Haley, & Jahns, 2011), students' lifestyle behaviors have been shown in studies to be influenced by society (Hill, 2013).

University life provides significant change in the lives of individuals. University education leads to a change in personality development, individual life and health behavior as well as vocational training. This change is particularly important in terms of attitudes and behaviors in the health field; because the student's health-related attitudes and behaviors, itself, affects the present and future life, family and society. Health level of society is measured by the fact that the majority of healthy individuals in the community (Ayaz, Tezcan, & Akıncı, 2005).

Individuals spend a lot of time on social networks and their height, weight, other health-related issues, beliefs and perceptions inevitably greatly be affected by this condition (Karal, & Kokoc, 2010; Ozturk, & Akgun, 2012; Wang, Moon, Kwon, Evans & Stefanone, 2006; Hill, 2013). Specified in the work done up to now, the information spoken or shared on social media is that there are not usually health-related issues. Social networks can be used to positively affect health (Childers, & Haley, 2011).

In a study conducted in 2011, 83% of adults between 18-29 years old stated that the use of internet and social networks for health and medical information. In this study, the usefulness of a Facebook group set up to facilitate health education of college students were investigated. Students reported that is useful to improve the health information and learning in this way (Frimming, Polsgrove, & Bower, 2011).

## **Purpose**

On issues nutrition, physical activity, lifestyle behaviors and public health to seek and to spread information it is important to assess the social media usage status of the students. This is why studies at Faculty of Nursing (FN), Faculty of Science (FS), and between the students of the Faculty of Communication (FC) of an University in Istanbul, nutrition, exercise and general health and well-being in order to investigate the relationship between social networks and lifestyle behaviors was planned as a descriptive study and applied.

## **Methods**

### ***Study design***

The study, students' social, media and ideas about the relationship between health and habits, applied as an identifier to determine the physical activity and eating habits study.

### ***Setting and sample***

Research, Faculty of Nursing (FN), Faculty of Science (FS) and the Faculty of Communication (FC) of an University in Istanbul at the graduate level studying, who agreed to participate in the study was performed by students between December 2013-January 2014.

The sample of the study, developed using good sampling method, 95% confidence interval, with a margin of error of 1.87%, a total of 1920 people (500 people from all classes of the Faculty of Science, and 500 people from all classes of communication faculties, 920 people from all classes of the Faculty of Nursing) were identified. However, with 980 students who agreed to participate in the study was performed.

### ***Ethical consideration***

First taken permission from the institution that conducted the research (University: I.U., IRB approval number: dated 18/12/2013, the number of number 743117448-399-3072).

The students were invited to work that were informed about the expectations from the study and the purpose of the study in accordance with the Declaration of Helsinki. After obtaining verbal consent to be willing to participate in the study, they were included in the study. In addition, for scales used in the study were taken permission from the authors.

### **Measurements/Instruments**

Data were collected with students' individual characteristics (12 items)", "information form (5 items)" to learn about thoughts and habits on the relationship between social networks and health (Hill, 2013; Frimming, Polsgrove, & Bower, 2011), "International Physical Activity Questionnaire-Short Form-7 day Turkish version of IPAQ (7 items)" (Craig et al., 2003; Guidelines for data of IPAQ, 2005) to learn the level of activity of students and "Dietary Pattern Index (DPI) (6 items)" (Demirezen, & Cosansu, 2005) to learn the eating habits Students' physical activity levels was scored as Low, Medium and High Activity Level (three category) and MET (metabolic equivalent) values were calculated for physical activity assessment (Craig et al., 2003; Guidelines for data of IPAQ, 2005). Risk level were evaluated according to the total score obtained from the Dietary Pattern Index (DPI). (Demirezen, & Cosansu, 2005).

### **Data collection**

After getting the IRB approval, researchers visited the university students and explained study contents and role of study participants. The researchers went to each class, students questionnaires were applied individually questionnaires.

### **Data analysis**

SPSS program (Istanbul University SPSS, Version 21) for evaluation of data was used. All statistical analyzes significance level was adopted as  $p < .05$ . In the analysis, frequency and percentage distribution, mean and standard deviation and Pearson's chi-square test, t-test and ANOVA were used.

## **Results**

### **Socio-demographic characteristics**

According to the socio-demographic characteristics, the majority of students who participated in the work ( $n = 755$ ; 77%) were occurred from women. The number of students respectively were as follows: Number of FN students; 458 (46.71%), number of FS students; 308 (31.42%), number of FC students; 214 (21.82%). In this study said that lived with the family the 494 (50.44%) of students, at home with friends the 175 (17.95%) of students, alone in the house the 34 (3.51%) of students and stayed dormitory the 277 (28.32%) of students.

129 (13.22%) students were smoked and 257 (26.23%) students were using alcohol.

### **The waist circumference and BMI rates of students and the social networks usage status on these subjects**

The majority of men (71.44%;  $n = 15$ ) and women (95.91%;  $n = 236$ ) participating in the study were found to be normal waist circumference. According to waist circumference risk status were found 3.34% of women ( $n = 8$ ) risk, 0.8% of women ( $n = 2$ ) more risky, 14.32% of men ( $n = 3$ ) risk, 14.32% of men ( $n = 3$ ) more risky. According to the assessment of students' body mass index (BMI) were found 4.2% of the students ( $n = 37$ ) poor, 86.34% ( $n = 752$ ) normal, 8.51% ( $n = 74$ ) overweight, 0.99% ( $n = 8$ ) obese. There is no students in the morbidly obese category.

Normal waist circumference students and friends mostly were prefer Facebook ( $p < .05$ ) to share and information about nutrition, physical activity habits / their loved ones. Those who do not use any social network ( $p < .05$ ) to seek support or to get advice from others about the health of those was determined to be in the majority. The majority of men with a normal waist circumference, to search and share information about their weight status are not using any site ( $p < .05$ ), while women prefer Facebook about this issue ( $p < .05$ ). While using more Facebook to make the plan of health-related group activities and research, those who do not use any social network was found to be rather more ( $p > .05$ ).

Waist circumference and BMI rate that the majority of students who are weak and normal and friends of these students to share the more knowledge and resources ( $p < .05$ ), to be informed of developments related to everyday life ( $p < .05$ ), to communicate with friends ( $p < .05$ ) and health, to achieve such topics as social ( $p > .05$ ), social networks were found to use more (Table 1). To reach and to share about of the health-related topics of these students themselves and their colleagues, mostly they use Facebook, it was found to be more than students who do not use any social network ( $p > .05$ ).

In this study was found that the majority of students regularly have breakfast every day. However, about half the students ( $n = 404$ ) was found to make their irregular or no breakfast ( $p < .05$ ).

**Table 1. The relationship between the social networks usage status with waist circumference and BMI risk categories of students (N=980).**

Variables	Categories	Absolutely I agree (n)	I agree (n)	Undecided (n)	Disagree (n)	I strongly disagree (n)	+ $\chi^2$	P	
I use a variety of information and resource sharing with my friends.	WC:W*	Normal	96	123	9	8	0	10.23	.110
		Risk	3	3	2	0	0		
		High Risk	0	2	0	0	0		
	WC:M**	Normal	5	8	1	1	0	5.13	.520
		Risk	2	1	0	0	0		
		High Risk	3	0	0	0	0		
	BMI**	Weak	17	18	1	1	0	29.51	<b>.003</b>
		Normal	278	412	35	24	2		
		Overweight	33	35	4	2	0		
Obese		3	4	0	0	1			
Morbidly obese		0	0	0	0	0			
I use to be informed of developments related to daily life.	WC:W*	Normal	110	115	6	4	1	15.24	<b>.051</b>
		Risk	4	2	2	0	0		
		High Risk	0	2	0	0	0		
	WC:M**	Normal	1	13	1	0	0	8.23	.080
		Risk	0	3	0	0	0		
		High Risk	2	1	0	0	0		
	BMI**	Weak	17	17	1	1	1	22.75	<b>.031</b>
		Normal	325	375	35	11	6		
		Overweight	35	33	2	3	1		
Obese		5	0	2	1	0			
Morbidly obese		0	0	0	0	0			
I use to communicate with my friends.	WC:W*	Normal	111	106	7	12	0	5.13	.520
		Risk	4	3	1	0	0		
		High Risk	0	2	0	0	0		
	WC:M**	Normal	6	6	2	1	0	4.25	.640
		Risk	3	0	0	0	0		
		High Risk	2	1	0	0	0		
	BMI**	Weak	16	18	0	0	3	36.02	<b>&lt; .001</b>
		Normal	342	356	25	25	4		
		Overweight	39	29	4	2	0		
Obese		4	2	1	1	0			
Morbidly obese		0	0	0	0	0			
I use to achieve health and social etc. issues.	WC:W*	Normal	82	123	23	8	0	4.00	.670
		Risk	3	3	1	1	0		
		High Risk	0	2	0	0	0		
	WC:M**	Normal	4	8	2	0	1	7.09	.311
		Risk	0	2	0	0	1		
		High Risk	2	0	0	0	1		

<b>BMI***</b>	Weak	10	21	3	1	2	14.93	.241
	Normal	218	388	80	50	16		
	Overweight	25	33	11	4	1		
	Obese	5	0	2	1	0		
	Morbidly obese	0	0	0	0	0		

\***WC-W:** Women Waist Circumference Risk Category: <80cm normal, 80-88cm risk, >88cm high risk.

\*\***WC-M:** Men Waist Circumference Risk Category: <94cm normal;94-102cm risk;>102cm high risk.

\*\*\***BMI:** Body Mass Index Risk Category: <18 weak, 18-25 normal, 25-30 Overweight, 30-40 obese, > 40 morbidly obese.

<sup>+</sup> $\chi^2$ : Pearson ki kare.

**Table 2. The relationship between the causes of skipping meals with sex, waist circumference and BMI of students and The frequency of eating meals of students (N=980).**

	To lose weight		I do not want to eat		I forget / I can not think		I can not find opportunities		I do not skip meals		<sup>+</sup> $\pi$ M±SD	<sup>+</sup> p
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)		
<b>W*</b>	50		235		102		274		94		3.16±1.18	
<b>M**</b>	8	(5.91)	74	(31.52)	26	(13.13)	84	(.27)	33	(13)	3.26±1.16	
<b>WC-W*</b>												
Normal	12		73		30		91		30		-	.740
Risk	0		5		1		2		0			
High Risk	0		1		0		0		0			
<b>WC-M**</b>												
Normal	0		7		0		5		3		-	.761
Risk	0		1		0		2		0			
High Risk	0		1		0		1		1			
<b>BMI***</b>												
Weak	0		16		7		9		5		-	.580
Normal	50		231		94		284		93			
Overweight	4		24		11		26		9			
Obese	0		2		2		4		0			
Morbidly obese	0		0		0		0		0			
<b>Frequency of eating meals</b>	<b>Sex</b>	<b>Every day</b>	<b>Irregular</b>	<b>Never</b>					<sup>+</sup> $\pi$ M±SD	<sup>++</sup> $\chi^2$	<b>p</b>	
Breakfast	W	444	297	14				1.45±0.91	17.48	<b>.001</b>		
	M	105	107	13			1.59±0.59					
	Total	549	404	27								
Lunch	W	317	420	18			1.61±0.64	12.61	<b>.011</b>			
	M	123	100	2			1.46±0.51					
	Total	440	520	20								
Dinner	W	616	135	4			1.18±0.40	0.77	<b>.670</b>			
	M	178	46	1			1.21±0.42					
	Total	794	181	5								
Snack	W	173	502	80			1.88±0.57	8.76	<b>.031</b>			
	M	67	126	32			1.84±0.64					
	Total	240	628	112								

\***WC-W:** Women Waist Circumference Risk Category: <80cm normal, 80-88cm risk, >88cm high risk.

\*\***WC-M:** Men Waist Circumference Risk Category: <94cm normal;94-102cm risk;>102cm high risk.

\*\*\***BMI:**Body Mass Index Risk Category:<18 weak;18-25 normal;25-30 Overweight;30-40 obese;>40 morbidly obese.

<sup>+</sup> $\pi$ M±SD:Mean±Standart Deviation; <sup>+</sup>T:Independent samples T testi; <sup>++</sup> $\chi^2$ : Pearson ki kare.

**Table 3. Evaluation according to the DPI of students (N=980).**

DPI*	Sex	Never		Rarely		Sometimes		Often		Always		<sup>+</sup> $\chi^2$	p
		n	(%)	n	(%)	n	(%)	n	(%)	n	(%)		
I consume fatty and sugary foods.	W**	41	(5.61)	253	(33)	262	(34.55)	176	(23.11)	21	(3.72)	7.73	.102
	M***	14		70		76		50		15			
I add salt to food.	W	64	(8.33)	158	(21.15)	185	(25.72)	215	(26.91)	131	(17.88)	5.29	.258
	M	17		49		67		49		43			
I consume more than three cups of coffee, cola or tea a day.	W	80	(10.42)	164	(22.19)	130	(18.37)	164	(22.12)	215	(26.87)	5.89	.207
	M	22		153		49		53		48			
I eat salami, sausage etc. made from and beef, mutton.	W	40	(7.30)	120	(17)	259	(34)	263	(33.23)	70	(8.54)	22.04	< .001
	M	29		47		74		62		13			
I eat sold out menu like burgers, fries, pizza etc.	W	38	(6.04)	147	(19.82)	275	(36.15)	241	(30.65)	52	(7.22)	7.98	.091
	M	21		47		79		59		19			
I eat food made with dry beans, peas, beans, wheat, vegetables and fruits.	W	196	(24.91)	364	(46.34)	122	(18.23)	59	(8.61)	12	(1.84)	14.55	.006
	M	48		90		56		25		6			

\*DPI: Dietary Pattern Index; \*\*W: Women; \*\*\*M: Men; <sup>+</sup> $\chi^2$ : Pearson ki kare

**Table 4. The relationship between physical activity MET levels with waist circumference and BMI risk categories of students, and the social networks usage status of students according to the faculties (N=980).**

		Absolutely I agree	I agree	Undecided	Disagree	I strongly disagree	Physical Activity MET Levels			<sup>b</sup> χ <sup>2</sup>	p	
		n	n	n	n	n	LAL*	MAL*	HAL***			
It plays an important role for my overall health physical activity.	WC:W <sup>+</sup>	Normal	95	118	22	1	0	234	1	0	44.41	< .001
		Risk	3	2	2	0	1	8	0	0		
		High Risk	1	0	1	0	0	2	0	0		
	WC:M <sup>++</sup>	Normal	6	6	3	0	0	15	0	0	5.04	.281
		Risk	3	0	0	0	0	3	0	0		
		High Risk	1	2	0	0	0	3	0	0		
	BMI <sup>+++</sup>	Weak	12	22	2	0	1	37	0	0	42.08	.001
		Normal	294	368	79	9	0	750	2	0		
		Overweight	21	37	13	0	3	74	0	0		
Obese		4	3	1	0	0	8	0	0			
	Morbidly obese	0	0	0	0	0	0	0	0			
<b>The social networks usage status of students</b>		<b>Faculties</b>										
I use to share a variety of information and resources with my friends.	FN <sup>μ</sup>	163	256	22	15	2				17.02	.031	
	FS <sup>μμ</sup>	126	168	9	3	2	-	-	-			
	FC <sup>μμμ</sup>	85	102	13	13	1						
I use to be informed of developments related to daily life.	FN	189	243	12	10	4				18.87	.016	
	FS	148	137	16	3	4	-	-	-			
	FC	97	93	17	6	1						
I use to communicate with my friends.	FN	201	228	12	15	2				23.17	.003	
	FS	150	135	10	12	1	-	-	-			
	FC	101	86	15	6	6						
I use to achieve health, social, etc. topics.	FN	139	255	38	21	5				25.27	.001	
	FS	84	151	45	20	8	-	-	-			
	FC	66	90	29	22	7						

<sup>+</sup>WC-W: Women Waist Circumference Risk Category <80cm normal, 80-88cm risk, >88cm high risk.

<sup>++</sup>WC-M:Men Waist Circumference Risk Category: <94cm normal; 94-102cm risk; >102cm high risk.

<sup>+++</sup>BMI: Body Mass Index Risk Category: <18 weak, 18-25 normal, 25-30 Overweight, 30-40 obese, > 40 morbidly obese.

\*LAL: Low Activity Level: <600 MET; \*\*MAL: Moderate Activity Level: 600-1500 MET; \*\*\*HAL: High Activity Level: >1500MET.

<sup>μ</sup>FN:Faculty of Nursing; <sup>μμ</sup>FS:Faculty of Science; <sup>μμμ</sup>FC:The Faculty of Communication. <sup>b</sup>χ<sup>2</sup>: Pearson ki kare

While the majority of students skip lunch and snacks (p < .05), were detected that showed more attention to their evening meal (p > .05). study, men breakfast (p < .05) and dinner meals (p > .05), girls were also found to skip lunch (p < .05) and snacks meals (p > .05) (Table 2). In this study, the majority of students skip meals but

men were found to skip more meals compared to women (p > .05). This study was found that not had a chance to eat of 284, did not want to eat of 231, has forgotten of 94, the skip meals to lose weight of 50 of students with normal body mass index (BMI), (p > .05) (Table 4). In the study, the women said, physical activity plays an

important role for public health, that were found normal waist circumference ( $p < .05$ ).

### ***The nutritional habits and physical activity levels of students***

Fatty and sugary foods often consumed of 23.11 % of the students ( $p > 0.05$ ), in the majority, more than three cups of coffee cola or tea consumption a day ( $p > .05$ ), to be consuming more of products such as salami sausage made from red meat. ( $p < .001$ ), the amount of fruit and vegetable consumption that is less level ( $p < .05$ ) was determined (Table 3).

DPI risk level of FN students were found to be at medium/high risk category and higher points from FC and FS students. But generally DPI risk level of the majority of students were found to be at moderate/high risk category ( $p < .05$ ).

Most of the students said that It plays an important role for my overall health physical activity. Nevertheless, it is the physical activity level of students majority (according to waist circumference risk category; women:  $p < .001$ , men:  $p > .05$ ; BMI:  $p < .05$ ) were found to be low (Table 4).

According to the MET values, only two of those in medium activity level said that consumed coffee, cola or tea more than 3 cups per day ( $p > .05$ ), the majority of students who lower activity levels said that consumed coffee, cola or tea often more than 3 cups per day ( $n = 482$ ) ( $p > .05$ ); they said that ate beef, sheep meat and sausage, salami, sausages ( $n = 400$ ); ate fast food like burgers, fries, pizza ( $n = 484$ ) and added salt to foods ( $n = 64$ ) ( $p > .05$ ). However, there are no students in the high activity level.

### ***The social networks usage status for health status of students and their friends***

The majority of students, social networks, to share a variety of information and resources with colleagues, be informed of developments related to everyday life, communicating with friends, and to achieve a variety of topics such as health, social areas were observed to use. Resources to share with colleagues or students of the Faculty of Communication social networks to get information about daily developments were observed to use less than the other two schools ( $p < .05$ ), to achieve a variety of topics such as health, social areas were observed more frequent

using of social networks by FN students ( $p < .05$ ) (Table 4).

They prefer nutrition and physical activity habits / likes and what they can do, weight status, to look at health related topics, to make plans for group activities, to get and to share information about fitness goals of students and their friends respectively Facebook, Tweeter and Instagram. However, about these issues was determined that do not use any social network the majority of students ( $p < .05$ ) (Table 5).

### ***Physical activity levels of students and the social network usage status on this subject***

Generally the majority of students with low activity level, it was observed that do not use social network to gain and maintain healthy lifestyle behaviors, to share necessary topics (on nutrition and physical activity) and / or to receive information. Low activity level of students who "to share information about their weight and interested ( $n = 64$ ) ( $p < .001$ )", "to post about physical activity habits/likes of their friends ( $n:214$ ) ( $p < .05$ )", "To look at health topics ( $n = 139$ ) ( $p < .05$ )", "to seek advice from others regarding Health ( $n = 92$ ) ( $p < .05$ )" and "to make plans for group activities on health ( $n = 170$ ) ( $p < .05$ )" was identified that preferred primarily Facebook and Twitter. Students in middle activity level were few. "To share information about their weight ( $n = 9$ ) ( $p < .05$ )", "to seek advice or support from others regarding their health ( $n = 10$ ) ( $p < .05$ )", "to post about about their friends' physical activity habits/like ( $n = 6$ ) ( $p < .001$ )" that used pinterest and "to look about health topics ( $n = 9$ ) ( $p < .05$ )" were determined that used instagram (Table 5).

### ***The relationship between the social networks usage status and nutritional level according to DPI of students***

More than 3 cups per day of coffee, cola and tea consuming and beef, mutton and are made from these sausage, salami, etc. consuming for students, "to post about physical activity habits/likes ( $p > .05$ )", "to post about fitness goals of theirself ( $p > .05$ ) and friends ( $p < .05$ )", "to get and to share nutrition habits/likes of friends ( $p > .05$ )", "to get information and to share about weight status of their friends and sharing ( $p > .05$ )", "to look up health-related topics ( $p < .05$ )", "to post about what I do in regard to food or physical activities ( $p < .05$ )", it

was found that were used respectively Facebook ( $p > .05$ ), Tweeter ( $p < .05$ ), YouTube ( $p < .05$ ) and wikipedia ( $p < .05$ ), but were found that were not use any site of the majority.

## Discussion

The majority of students who participated in the study, normal waist circumference ratio (women 95.51%, men 71.44%) and BMI ratio of the weak (4.22%) and normal (86.34%) is on the border, especially female students suggests that a reflection of the importance given to body image issues. Similar to the results of a study (Aksoydan, & Cakır, 2011) in this study, women students in the study may consume smaller amounts of food although not active and therefore they could be considered in the normal range of BMI. This study did not examine the frequency of food consumption, has not made a determination on this issue. In several studies, the eating disorder rate of those with normal BMI were significantly higher (Erol, Toprak, & Yazıcı, 2002). Students suggests that they were in an unhealthy way of life to appear weak.

As another similar study (Gul, 2011), in our study was found that the majority of the students skip meals and male students skip meals the ratio is higher than female students ( $p > .05$ ) (Table 4). While the girls pay attention to breakfast ( $p < .05$ ) and diner ( $p > .05$ ), men pay attention much more to lunch ( $p < .05$ ) and snacks ( $p > .05$ ) (Table 2).

In the literature, 91% of university students (women) stated that they are on a diet for weight control (Kurt, Krahn, Nairn, & Drownowski, 1995). US National Institute of Mental Health, 25% of university students reported that they battle with eating disorders. 2013 working committee of the national eating disorder, eating disorders has increased more in the university, as well as recent statistics also show that men also experience problems of eating disorders (NEDA, 2013). Therefore, students, and the importance of basic nutrition principles, identification of missing and informed, and behavioral changes need to be created.

In a study (Korkmaz, 2010), unlike other studies, the majority of students do not skip breakfast, they eat regularly for lunch. However, as a common result of many studies, the students are giving more importance to the evening meal (Korkmaz, 2010; Orak, Akgun, & Orhan, 2006).

Researchers in several studies, that most of the students skip meals, that mostly skip breakfast (Vancelik, Onal, Guraksin, & Beyhun, 2007; Ermis, Doğan, Erilli, & Satici, 2015) and lunch meals (Ermis, Doğan, Erilli, & Satici, 2015), they stated that they often skip meals because of they could not find the time (Orak, Akgun, & Orhan, 2006).

In our study as similar to other studies (Korkmaz, 2010; Orak, Akgun, & Orhan, 2006), The majority of students do not want to eat meals, can not find time and because of financial difficulties (Gul, 2011), first, they skip breakfast and lunch meals (Orak, Akgun, & Orhan, 2006; Ermis, Doğan, Erilli, & Satici, 2015) and the evening meals were found to pay more attention (Table 2). As similar to the results of a study (Gul, 2011), in this study was found to be lower than the number of people who skip meals to lose weight (Table 4). However, those regularly breakfast or no breakfast and skip meals, according to those who every day breakfast regularly and do not skip meals, it is known that the more fat trend. (Snoek, Strien, Janssens, & Engels, 2007) In our study as in many studies (Sweeting, & West, 2005; Howard, & Reeves, 2005), students are mostly fat and with more carbohydrate content of foods were found to consume fast food, but fruits and vegetables, and dry beans was determined they did not choose ( $p < .05$ ) (Table 3).

The primary factors in the formation of young people's eating habits; personal food choices, eat family style, being a model about the choice of eating of mother and father, the networks and society are the norm (Neumak-Sztainer, French, Hannan, Story, & Fulkerson, 2005). However, personal factors that influence dietary habits; attitudes, beliefs, information, self-esteem, meals and snacks pattern is effective in weight control. The social environmental factors that affect their eating habits if are friends and other nearby (Story, Neumark-Sztainer, & French, 2002).

BMI and waist circumference percentage of individuals is a desirable be normal. Despite low levels of physical activity of students, it suggests that result from skipping meals, irregular and unhealthy diet of the low level of BMI and waist circumference. However, there is a known fact that will lead to an increased risk of critical illness in the future to lose weight with without

physical activity and insufficient, irregular eating, skipping meals (Anon, 1997).

Physical inactivity is responsible ranks fourth among the risk factors that cause death and for 6% of deaths in the world. 3.2 million people die every year due to inactivity. Regular physical activity; reduce the risk of depression with diabetes, breast and colon cancer and cardiovascular diseases such as hypertension (Irmak, Torunoğlu, Yardım, & Keklik, 2013).

In a study conducted by the Health Ministry data (Irmak, Torunoğlu, Yardım, & Keklik, 2013), only 3.5% of individuals regularly at least 3 days a week, doing 30 minutes of moderate intensity physical activity have been identified. According to Health Ministry data, the prevalence of obesity in men and women in the 19-30 age group in Turkey was found at the lowest rates (men = 7.7%; women = 13.8%). The most commonly seen age group of obesity who were 51-64 (men = 30.7%; women = 64.4%) and 65 and over (men = 24.8%; women = 53.5%) age groups (Irmak, Torunoğlu, Yardım, & Keklik, 2013). In our study also in accordance with the literature, waist circumference and BMI ratio of the majority of students were within normal limits.

According to results of Turkey Nutrition and Health Survey 2010 (Besler et al., 2014) were found to have insufficient of physical activity levels of 9.1% and sedentary of 71.9% of 12 years and over individuals. One other study (Vural, Eler, & Guzel, 2010), working at a desk in both sexes mostly determined that the low level of physical activity levels or it is not active ( $p < .01$ ). In the same study (Vural, Eler, & Guzel, 2010), the majority of individuals with weak BMI (52.6%) was found to have "low" levels of physical activity. The 21.3% of individuals with poor BMI was found to have a "sufficient" level of physical activity. In individual with BMI greater than 25 kg/m<sup>2</sup> were found to have 41.2% of the "low" levels and 35.3% of the "sufficient" levels of physical activity. The majority of students in the study said that are low of physical activity levels ( $n = 237$ ) or insufficient ( $n = 471$ ). According to the MET value was determined almost all of the students ( $n = 977$ ) in low level of physical activity ( $< 600$  MET) and only two students in level of moderate physical activity (600-1500 MET). However the students no found high levels of physical activity. While BMI ( $p < .05$ )

and waist circumference categories (women:  $p < .001$ , men:  $p > .05$ ) of the most of the students is low and normal, most of the students said that It plays an important role for my overall health physical activity. The majority of students were found to have low physical activity levels (Table 4).

According to WHO data it is consumed more than the recommended amount of salt in the world (WHO Guideline, 2012). It doesn't reflect generally Turkey, however in our study, the number of students who add salt to food have been found to be higher ( $p < .05$ ) (Table 3).

Saturated and trans fats consumed in excess leads to heart disease. According to WHO data, oil consumption in low-middle income countries are rapidly increasing since the 1980s (Irmak, Torunoğlu, Yardım, & Keklik, 2013). In the study, students outside selling food such as burgers, fries, pizza ( $p > .05$ ), beef, mutton and are made from these sausage, salami, etc. which consume more ( $p < .001$ ), dishes made with fruit, vegetables and dried beans that consume less ( $p < .05$ ) was determined (Table 3).

Our country in terms of nutritional status has a view including the problem of both developing and developed countries. In Turkey, people's nutritional status shows significant differences according to regions, seasons, the socio-economic level and urban and rural areas. Considering the nutritional status of the Turkish people, basic food is bread and other grain products.

However, recently decreased consumption of bread and other grain products, meat, fish, fruit, and fats and increased the consumption of milk, yogurt, poultry meat and eggs has been found (Irmak, Torunoglu, Yardım, & Keklik, 2013).

The WHO is recommended to consume fruits and vegetables 400 grams per day (Robertson et al., 2004). The Turkey Nutrition Guide recommend to consume fruits and vegetables at least 5 servings per day for sufficient and balanced nutrition (Besler et al., 2015). According to these data, the consumption of fruits and vegetables in our country has been found to be within normal ranges. In this study, men and women students nutrition index risk ratios were found in moderate and high risk levels ( $p < .05$ ) (Table 3).

### **The students' social networks usage status for the health of themselves and friends**

University life is a time of significant change in the lives of individuals. During this period, in addition to vocational training, personality development, the changes consist of individual life and health behavior. It is especially important in health attitudes and behaviors (Ayaz, Tezcan, & Akıncı, 2005). Therefore, the purpose of this study, it has to learn how to follow a path to receive and disseminate information in the field of health of students. In this study, the majority of students stated that they use the social networks to share the variety information and resources with colleagues (91.8%) (1.11±.42), to be informed of developments related to everyday life (92.6%) (1.10±.38), to communicate with friends (91.9%) (1.12±.44), to reach issues such as the health and social (80.1%) (1.28±.61). For this purpose, social networks areas often used by the majority of the student, respectively; YouTube (91.2%) (1.91±.28), Facebook (87.7%) (1.87±.32), Wikipedia (65.3%) (1.65±.47), Tweeter (63.3%) (1.63±.47), Instagram (40.1%) (1.40±.49), Forsquare (33.7%) (1.33±.47), Tumblr (13.4%) (1.13±.34), Pinterest (7.4%) (1.07±.26), Blogmag (7.1%) (1.07±.25).

### **Conclusions**

In this study, more than 3 cups per day of coffee, cola and tea consumed, saturated and trans fats fed up with students and colleagues, to look at issues related to health and about diet or physical activity to get information and to share about what they can do are using social networking sites. In this case; (1)The social networks which search and share of students to obtain information on health-related issues do not show the correct information, (2)Students are not directed correctly, (3)They do not have enough information about they can access accurate information from which the source, (4)Students don't use the right information they have learned and appears that didn't create behavior change.

While waist circumference and BMI were more weak and in the normal range, they were the low level of physical activity and mostly medium and high risk levels to be at nutritional risk index score, this situation indicate that were have irregular and unbalanced eating habits and physical activity and they didn't continue and develop healthy lifestyle behaviors.

Students have also poor levels of waist circumference and BMI index is a worrisome situation. This suggests that they are in an unhealthy way of life for the students to look weak.

In the study was determined that did not prefer often social networks to receive and share information on health-related issues.

### **Recommendations**

In visual media and social networks, to creation informative initiatives such as short films, advertising about the importance of healthy eating and physical activity and to set up groups through social networks that help to the individuals to receive updated information from the right source and raises awareness. This programs will be developed behavioral changes and the health of individuals will be influenced positively.

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**TABLE 5.** The relationship between MET values and social networks used in health-related issues of students (N=980).

	<sup>+</sup> MET category	Facebook	Twitter	Pinterest	Instagram	Other	I do not use any site and do not share	<sup>*</sup> χ <sup>2</sup>	p
		n	n	n	n	n	n		
I use this site to post about my food habits or likes.	<600 MET	238	68	2	66	93	512	6.83	.371**
	600-1500 MET	-	-	-	-	-	-		
	>1500 MET	-	-	-	-	-	-		
	<b>++W</b>	184	57	2	57	71	384		
I use this site to post about my physical activity habits/likes.	<600 MET	224	117	4	54	88	492	8.60	.197*
	600-1500 MET	-	-	-	-	-	-		
	>1500 MET	-	-	-	-	-	-		
	<b>W</b>	169	98	2	44	66	376		
I use this site to share information about my weight and about this topic interested.	<600 MET	64	40	-	9	99	760	7.47	.188*
	600-1500 MET	-	-	7	-	-	-		
	>1500 MET	-	-	-	-	-	-		
	<b>M</b>	55	20	2	10	22	115		
I use this site to share information about my fitness goals or about this topic interested.	<600 MET	74	49	8	13	116	719	3.79	.579*
	600-1500 MET	-	-	-	-	-	-		
	>1500 MET	-	-	-	-	-	-		
	<b>W</b>	55	38	5	8	88	561		
My friends use this site to post about their food habits or likes.	<600 MET	181	81	4	79	88	546	12.04	.034*
	600-1500 MET	-	-	-	-	-	-		
	>1500 MET	-	-	-	-	-	-		
	<b>M</b>	34	16	3	13	23	136		
My friends use this site to post about their physical activity habits/likes.	<600 MET	214	126	-	65	84	484	21.11	.001*
	600-1500 MET	-	-	6	-	-	-		
	>1500 MET	-	-	-	-	-	-		
	<b>M</b>	25	13	3	2	58	124		

<sup>+</sup>MET: Metabolic equivalent; <sup>++</sup>W: Women; <sup>+++</sup>M: Men; <sup>\*</sup>χ<sup>2</sup>: Pearson ki kare; <sup>\*\*</sup>p: Anova, **Post Hoc Tests:** B Tukey Alfa.

**TABLE 5.** The relationship between MET values and social networks used in health-related issues of students (N=980). (more of Table 5)

	<sup>†</sup> MET category	Facebook	Twitter	Pinterest	Instagram	Other	I do not use any site and do not share	* $\chi^2$	p
		n	n	n	n	n	n		
My friends use this site to post about their weight or about this topic interested.	<600 MET	95	80	9	28	79	685		.170**
	600-1500 MET	-	-	-	-	-	-		
	>1500 MET	-	-	-	-	-	-		
	<b>W</b>	88	64	4	21	78	500	15.59	<b>.029*</b>
	<b>M</b>	20	18	6	8	29	144		
My friends use this site to post about their fitness goals or about this topic interested.	<600 MET	108	82	10	29	106	644		.209**
	600-1500 MET	-	-	-	-	-	-		
	>1500 MET	-	-	-	-	-	-		
	<b>W</b>	78	59	3	18	61	532	10.52	.062*
	<b>M</b>	17	21	6	10	19	152		
I use this site to look up health-related topics or interests.	<600 MET	139	59	6	-	388	379		< .001**
	600-1500 MET	-	-	-	9	-	-		
	>1500 MET	-	-	-	-	-	-		
	<b>W</b>	113	47	2	7	314	272	16.72	<b>.005*</b>
	<b>M</b>	25	12	4	2	76	106		
I use this site to seek advice or support from others regarding my health.	<600 MET	92	54	-	6	287	530		< .001**
	600-1500 MET	-	-	10	-	-	-		
	>1500 MET	-	-	-	-	-	-		
	<b>W</b>	73	41	4	5	226	406	8.59	.126*
	<b>M</b>	19	13	6	1	62	124		
I use this site to make plans for group activities regarding my health (i.e.going to the gym, to participate in the bicycle and walking group)	<600 MET	170	53	4	6	216	530		.09**
	600-1500 MET	-	-	-	-	-	-		
	>1500 MET	-	-	-	-	-	-		
	<b>W</b>	132	43	2	3	167	408	4.67	.457*
	<b>M</b>	38	10	2	3	50	122		
I use this site to post about what I do in regard to my diet or physical activities (i.e.going out to eat or to the gym)	<600 MET	124	57	7	10	259	522		.573**
	600-1500 MET	-	-	-	-	-	-		
	>1500 MET	-	-	-	-	-	-		
	<b>W</b>	99	44	4	8	202	398	2.41	.789*

<sup>†</sup>MET: Metabolic equivalent; <sup>++</sup>W: Women; <sup>+++</sup>M: Men; \* $\chi^2$ : Pearson ki kare; \*\*p: Anova, **Post Hoc Tests:** B Tukey Alfa.