



Research Article

Determination of Breakfast Habits of Health School Students and the Factors Affecting Them: Bitlis Eren University Example

Mustafa Şamil ARGUN^{1*}, Betül ZANLIER²

¹Department of Food Engineering, Akşehir Faculty of Engineering and Architecture, Selçuk University, Konya, Turkey.

²Department of Nutrition and Dietetics, School of Health, Bitlis Eren University, Bitlis, Turkey.

(Received: 15.02.2021; Accepted: 07.03.2021)

ABSTRACT: In this study, it was aimed to determine the breakfast habits of Health School students and the factors affecting them. The research was conducted with 120 students representing Bitlis Eren University Health School students. The questionnaire form was used as a data collection tool. As a result of the study, it was observed that 35.8% of the students had a regular breakfast every day, and 3.3% did not have breakfast. It was determined that 48.3% of the students who skipped breakfast skipped because of waking up late, 24.2% due to lack of appetite in the mornings, 10% because of not caring, 5% because of dislike to eat breakfast, 2.5% for economic insufficiency, and 2.5% for fear of gaining weight. They reported that the most common situations encountered by students when they did not eat breakfast were the feeling of hunger, weakness, fatigue, and decreased attention. The majority of the students think that breakfast enables a fresh start to the day, breakfast is the most important meal of the day and breakfast helps regulate blood sugar. It was observed that students whose fathers were public employees skip breakfast more ($p < 0.001$). As the monthly income of the students' families increased, the rate of skipping breakfast increased ($p < 0.05$). The effect of the smoking status on skipping breakfast was found to be significant ($p < 0.01$).

Keywords: School of health, Healthy eating, Skip meals, Breakfast habit.

1. INTRODUCTION

A healthy breakfast has positive effects on providing school-age children with essential nutrients for their activities and long-term health throughout life. Skipping breakfast, many health problems, and cognitive and psychosocial function in addition to poor performance could negatively impact learning and academic success. Children who skip breakfast have difficulty concentrating in the afternoon and feel tired at the end of the day due to reduced energy levels [1]. Parents' breakfast habits are strongly associated with their children's breakfast consumption from birth to adolescence, so parents have important responsibilities in this regard. It is recommended to eat a healthy breakfast every day, consisting of a variety of foods, especially high-fiber and nutrient-rich whole grains, fruits, and dairy products [2]. Current nutritional behaviors and practices observed in children and adolescents can have detrimental consequences on their health. Adverse health consequences that may result from excessive soda and sugary beverage intake; fast food consumption; insufficient intake of fresh fruits, vegetables, fiber-rich foods, and dairy products, and other calcium-rich foods; reduced levels

*Corresponding author: msargun@selcuk.edu.tr

ORCID number of authors: ¹ 0000-0001-8209-3164, ² 0000-0002-0358-6508

of physical activity; the increasing rates of obesity point to the need to review the diet and lifestyle characteristics of this age group [3, 4]. Studies are showing that regular breakfast habits also make adults feel healthier and contribute to their daily activities [5]. In the research conducted about the eating habits of university students in Turkey, the students' not pay attention to a regular and balanced diet, skip meals, including primarily breakfast were reported [6-10]. This study was aimed to determine the breakfast habits of the students studying at Bitlis Eren University School of Health and the influencing factors.

2. MATERIAL AND METHODS

2.1. Research Type

This research is a descriptive cross-sectional study designed to determine the breakfast habits of students studying in the first, second, third, and fourth grades of Bitlis Eren University Health School Departments.

2.2. Research Universe and Sampling

The universe of the research consists of 480 students studying in the first, second, third, and fourth grades of Bitlis Eren University School of Health. The sample size, population size was determined at a 95% confidence level by using the formula used for a certain population (taking $d = 0.08$), and the research sample consists of 120 students with the participation of 40 students from the Nutrition and Dietetics Department, 40 from the Nursing department and 40 from the Social Work department. The students were selected by a simple random sampling method.

2.3. Data Collection Tools Used in the Study

In collecting the data, a questionnaire was used, which was created by scanning the necessary literature and containing questions about the students' socio-demographic characteristics and determination of breakfast consumption habits. The questionnaires were filled in face to face with the students. The students were asked about their height and weight. The body mass index (BMI) of the students was calculated using the $[\text{weight} / (\text{height})^2]$ formula. In the evaluation of BMIs, reference values of World Health Organization (WHO) 18 years and over standards were used [11]. 18.5 and below were weak, 18.5-24.9 normal, 24.9-29.9 slightly obese, 30- 39.9 intervals were classified as obese, values 40 and above as morbidly obese.

2.4. Statistical Analysis

The data obtained as a result of the research were evaluated using the "SPSS 22.0 for Windows" statistical package program. Qualitative variables are expressed as number (n) and percentage (%). Quantitative variables are given as mean \pm standard deviation. The Chi-square test was used to evaluate qualitative data. In all statistical evaluations, a value of $p < 0.05$ was considered significant.

2.5. Ethical Aspect of the Research

To conduct the study, necessary permission was obtained from Bitlis Eren University Ethical Principles and Ethics Committee with the decision dated 13.12.2016 and numbered 2016/16-X.

3. RESULTS AND DISCUSSION

The distribution of the students participating in the study according to their anthropometric measurements is shown in Table 1. The average height of the students was found to be 168.75 ± 8.50 in the range. The average weight of the students is in the range of 60.76 ± 10.27 . The average BMI of the students is in the range of 21.24 ± 2.48 . When the BMI values of the students were examined, it was found that 14.2% were included in the classification of weak, 76.6% of normal weight, and 9.2% of slightly obese.

Table 1. Anthropometric measurements of the students participating in the study

Variables	Number (n)	(%)
Height (mean \pm sd)	168.75\pm8.50	
Weight (mean \pm ss)	60.76\pm10.27	
BMI (mean \pm sd)	21.24\pm2.48	
BMI Classification		
Weak (<18.5)	17	14.2
Normal (18.5-24.9)	92	76.6
Slightly obese (24.9-29.9)	11	9.2
Obese (30-39.9)	0	0
Morbidly obese (>40)	0	0
Total	120	100

52.5% of the students are female and 47.5% are male. 40% of the students are in the age range of 18-20, 56.9% in the age range of 21-23, and 4.1% in the age range of 24 and above. The average age of the students is 20.96 ± 1.82 . When the monthly income of the students' families is examined, it is seen that 12.5% of them are less than 1000 TL, 45.8% are between 1000-2000 TL, and 41.8% are more than 2000 TL. Fathers of 10.8% of students are workers, 18.3% are public servants and 20.8% are retired (Table 2).

Table 2. Socio-Demographic characteristics of the students participating in the study

Variables	Number (n)	%
Gender		
Female	63	52.5
Male	57	47.5
Age (mean \pm sd)	20.96 \pm 1.82	
Age Classification		
18-20 years	48	40
21-23 years	66	56.9
24 years and over	6	4.1
Monthly Income (Turkish Lira)		
Less than 1000	15	12.5
Between 1000-2000	55	45.8
More than 2000	50	41.7
Father's Profession		
Has no father	9	7.5
Public servant	22	18.3
Worker	13	10.8
Retired	25	20.8
Self-employment	18	15
Tradesman	11	9.1
Private sector	3	2.5
Driver	6	5
Farmer	13	10.8

The distribution of the students participating in the study according to the number of daily main meals and snacks, the meals they skip the most, and the reasons for skipping breakfast are shown in Table 3. When the number of daily main meals of the students is examined, it is seen that 4.2% of the students have one, 54.2% two, 41.6% three main meals. Looking at the number of daily snacks, it is seen that 36.2% of the one, 26.7% two, 11.7% three, 25% four, 22.5% did not eat any snacks. It is observed that the most frequently skipped meals are lunch (47.5%) and breakfast (40%), with 7.5% of those who never skipped a meal.

Arslan et al. (1994) reported that the most skipped meal among higher education students was breakfast (51.9%) [12].

It was determined that 48.3% of the students' reasons for skipping breakfast were waking up late, 5% did not like having breakfast, 24.2% had no appetite in the morning, 2.5% was economically inadequate, and 10% did not care.

Table 3. Number of daily main and snack meals, the most often skipped meal, and the reasons for skipping breakfast of the students participating in the study

Variables	Number (n)	%
Number of Main Meals		
1 main meal	5	4.2
2 main meals	65	54.2
3 main meals	50	41.6
Number of Snacks		
No snacks	27	22.5
1 Snack	44	36.2
2 Snacks	32	26.7
3 Snacks	14	11.7
4 Snacks	3	2.5
The Most Frequently Missed Main Meal		
Breakfast	48	40
Lunch	57	47.5
Dinner	6	5
Not skipping meals	9	7.5
Reason for skipping breakfast		
Waking up late in the morning	58	48.3
Dislike to have breakfast	6	5
Lack of appetite in the morning	29	24.2
Economic insufficiency	3	2.5
Not to give importance	12	10
Fear of weight gain	3	2.5
Never skips meals	9	7.5

It was determined that 35.8% of the students had a regular breakfast every day, and 3.3% did not have breakfast. The most common situations encountered by students when they do not eat breakfast were the feeling of hunger (82.5%), weakness (74.2%), fatigue (71.7%), and decreased attention (71.7%), and the least common situation they encountered was palpitations (36.7%). 89.2% of the students consider breakfast as the most important meal of the day (Table 4).

Faydaoğlu et al. (2013) reported in a study they conducted that 27.2% of university students had breakfast every day and 1.4% did not have breakfast [10]. They found that 61.2% of the students did not have breakfast because they could not catch the class or did not have time.

Çetik Yıldız (2020), in his study examining the breakfast habits of university students, reported that the most skipped meal (47.9%) was breakfast [13]. In the same study, as the cause of students skipping meals, lack of time (37.0%), get up late in the morning (24.0%) and lack of breakfast habits (19.0%) were identified as. Çinibulak (2018) stated in his study that there is a statistically strong, significant, and positive relationship between having breakfast and lesson motivation [14].

Table 4. The answers of the students participating in the study to the frequency of having breakfast, how long they have breakfast after waking up, and the information about breakfast

Variables	Number (n)		%	
Frequency of Having Breakfast in the Morning				
Regular every day	43		35.8	
Sometimes	58		48.3	
Weekend only	15		12.5	
Never	4		3.3	
How long after waking up do you have breakfast?				
<30 minutes	28		23.3	
30 minutes -1hour	60		50	
1 hour- 2 hours	21		17.5	
>2 hours	11		9.2	
The Situation Encountered When Not Having Breakfast				
	Yes		No	
	Number (n)	%	Number (n)	%
Fatigue	86	71.7	34	28.3
Weakness	89	74.2	31	25.8
Feeling of hunger	99	82.5	21	17.5
Dizziness	65	54.2	55	45.8
Decreased attention	86	71.7	34	28.3
Staggers	67	55.8	53	44.2
Palpitations	44	36.7	76	63.3
Unrest	72	60	48	40
Feel cold	48	40	72	60
Headache	77	64.2	43	35.8
Breakfast is the most important meal of the day	107	89.2	13	10.8

The relationship between the meals skipped by students according to their father's profession was found to be statistically significant ($p < 0.001$). The relationship between the meals skipped by the students according to their family's monthly income ($p < 0.05$) and smoking status ($p < 0.01$) was found to be statistically significant (Table 5). It was observed that students whose fathers were public servants skip breakfast more often. It was observed that students who smoke more often skip breakfast, while non-smokers skip lunch. As the family income of the students increased, the rate of skipping breakfast increased.

Table 5. Distribution of which meals were skipped by the students participating in the study according to father's occupation, family's monthly income, and smoking status

	Skipped Meal								χ^2 and p-Value
	Breakfast		Lunch		Dinner		I don't skip meals		
	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	
Father's Profession									
Public servants	16	13.3	4	3.3	1	0.8	1	0.8	$\chi^2=59.700$ p=0.000
Retired	11	9.2	10	8.3	1	0.8	3	2.5	
Self-employment	4	3.3	12	10	1	0.8	1	0.8	
Tradesman	3	2.5	7	5.8	0	0	1	0.8	
Private sector	0	0	1	0.8	2	1.7	0	0	
Farmer	1	2.1	12	21.1	0	0	0	0	
Worker	6	5	6	5	0	0	0	0	
Driver	2	1.7	2	1.7	0	0	2	1.7	
Has no father	5	4.2	3	2.5	1	0.8	0	0	
Family's monthly income(Turkish Lira)									
<1000	1	0.8	11	9.2	2	1.7	1	0.8	$\chi^2=15.481$ p=0.017
1000-2000	19	15.8	28	23.3	2	1.7	6	5	
>2000	28	23.3	18	15	2	1.7	2	1.7	
Smoking Status									
Yes	17	14.2	8	6.7	3	2.5	0	0	$\chi^2=11.797$ p=0.008
No	31	25.8	49	40.8	3	2.5	9	7.5	
Total (n)					120				
Total (%)					100				

4. CONCLUSIONS

It was determined that students skip breakfast and lunch as the main meal most frequently. It was observed that the most common situations encountered by students when they did not eat breakfast were the feeling of hunger (82.5%), weakness (74.2%), fatigue (71.7%), and decreased attention (71.7%). It was understood that the most important reasons for students to skip breakfast were waking up late, lack of appetite in the morning, and not caring.

As a result, students do not eat breakfast regularly, although they see its negative effects. In addition to the role of parents in the acquisition of breakfast habits, it has been understood that bad habits such as sleep patterns and smoking have an important role. The great task falls to parents in acquiring the habit of regular breakfast and meals.

Conflict of Interest

The authors declare that there are no conflicts of interest.

REFERENCES

- [1] ALBashtawy, M. (2017). Breakfast Eating Habits among Schoolchildren, *Journal of Pediatric Nursing*, 36: 118-123.
- [2] Rampersaud, G.C., Pereira, M.A., Girard, B.L., Adams, J. and Metz, J.D. (2005). Breakfast Habits, Nutritional Status, Body Weight, and Academic Performance in Children and Adolescents, *Journal of the American Dietetic Association*, 105(5): 743-760.
- [3] Johnson, R.K. (2000). Changing Eating and Physical Activity Patterns of US Children, *Proceedings of the Nutrition Society*, 59(2): 295-301.
- [4] St-Onge, M.P., Keller, K.L. and Heymsfield, S.B. (2003). Changes in Childhood Food Consumption Patterns: A Cause For Concern in Light of Increasing Body Weights, *The American Journal of Clinical Nutrition*, 78(6): 1068-1073.
- [5] Reeves, S., Halsey, L.G., McMeel, Y. and Huber, J.W. (2013). Breakfast Habits, Beliefs and Measures of Health and Wellbeing in a Nationally Representative UK Sample, *Appetite*, 60: 51-57.
- [6] Heşemina, T., Çalışkan, D. ve Işık, A. (2002). Ankara'da Yüksek Öğretim Öğrenci Yurtlarında Kalan Öğrencilerin Beslenme Sorunları, *İbni Sina Tıp Dergisi*, 7: 155-167.
- [7] Mazıcıoğlu, M.M. ve Öztürk, A. (2003). Üniversite 3 ve 4. Sınıf Öğrencilerinde Beslenme Alışkanlıkları ve Bunu Etkileyen Faktörler, *Erciyes Tıp Dergisi*, 25(4): 172-178.
- [8] Özkurt, Ö., Nural, N. ve Hindistan, S. (2006). KTÜ Trabzon Sağlık Yüksekokulu Hemşirelik Öğrencilerinin Beslenme Alışkanlıklarının ve Malnütrisyon Prevelansının Saptanması, 5. *Ulusal Hemşirelik Öğrencileri Kongresi*, Şanlıurfa, Türkiye.
- [9] Güleç, M., Yabancı, N., Göçgeldi, E. ve Bakır, B. (2008). Ankara'da İki Kız Öğrenci Yurdunda Kalan Öğrencilerin Beslenme Alışkanlıkları, *Gülhane Tıp Dergisi*, 50(2): 102-109.
- [10] Faydaoğlu, E., Energin, E. ve Sürücüoğlu, M.S. (2013). Ankara Üniversitesi Sağlık Bilimleri Fakültesinde Okuyan Öğrencilerin Kahvaltı Yapma Alışkanlıklarının Saptanması, *Gümüşhane Üniversitesi Sağlık Bilimleri Dergisi*, 2(3): 299-311.
- [11] WHO Expert Committee (1995). Physical Status: The Use and Interpretation of Anthropometry, *WHO Technical Report Series*, no. 854. Geneva: WHO.
- [12] Arslan, P., Karağaoğlu, N., Duyar, İ. ve Güleç, E. (1993). Yüksek Öğrenim Gençlerinin Beslenme Alışkanlıklarının Puanlandırma Yöntemi ile Değerlendirilmesi, *Beslenme ve Diyet Dergisi*, 22(2): 195-208.
- [13] Çetik Yıldız, S. (2020). Üniversite Öğrencilerinde Kahvaltı Yapma Alışkanlığının Saptanması ve Çözüm Önerileri, *Iğdır Üniversitesi Fen Bilimleri Enstitüsü Dergisi*, 10(2): 819-827.
- [14] Çinibulak, S. (2018). *Düzenli Sabah Kahvaltısı Yapmanın Öğrenci Motivasyonuna Etkisinin Belirlenmesi*, Kırklareli Üniversitesi Sağlık Bilimleri Enstitüsü, Yüksek Lisans Tezi, Kırkkale.