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HEMŞİRELİK ÖĞRENCİLERİNİN OLUMSUZ BESLENME ALIŞKANLIKLARINI ETKİLEYEN FAKTÖRLER

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Öz

Günlük besinler yaşam boyu büyüme ve gelişmeyi destekler ancak ergen üniversite öğrencilerinde görülen dengesiz beslenme önemli bir sosyal sorundur. Buna bağlı olarak hemşirelik öğrencilerinin beslenme alışkanlıklarının değerlendirilmesi ve bu alışkanlıklara etki eden faktörlerin incelenmesi gerekmektedir. Bu çalışmanın amacı hemşirelik öğrencilerinin beslenme alışkanlıklarını ve etkileyen faktörleri incelemektir. Bu araştırma, Türkiye'de bir üniversitenin hemşirelik bölümü öğrencileri (n=217) ile kesitsel, tanımlayıcı ve ilişki arayıcı olarak yapılmıştır. Araştırmanın verileri Katılımcı Bilgi Formu ve Günlük Beslenme Kayıt Formu ile toplanmıştır. Öğrencilerin %48,4 (n=105)'ünün sık sık yağlı besinler tükettiği, %36,4 (n=79)'ünün ara öğünleri ve %31,8 (n=69)'inin öğlen yemeklerini atladıkları saptandı. Yağdan elde edilen enerji, gelir düzeyi yüksek olan öğrencilerde diğer gelir düzeyine sahip öğrencilere göre istatistiksel olarak anlamlı şekilde daha yüksek bulundu ($p<0.05$). Hemşirelik öğrencilerinin beslenme alışkanlıklarını olumsuz etkileyen faktörler detaylı bir şekilde araştırılabilir ve bunları giderecek kurumsal düzenlemeler yapılabilir.

Anahtar Kelimeler: Beslenme, Beslenme Alışkanlıkları, Sağlık Bilgi Sistemi, Hemşirelik Öğrencileri.

FACTORS AFFECTING NURSING STUDENTS' NEGATIVE NUTRITIONAL HABITS

Abstract

Daily nutrients supports lifelong growth and development; however, imbalanced nutrition observed among university students, especially adolescents, is a significant social issue. Consequently, it is necessary to assess the dietary habits of nursing students and examine the factors influencing these habits. The aim of this study is to investigate the dietary habits of nursing students and the factors affecting them. This research was conducted as a cross-sectional, descriptive, and exploratory study with nursing students (n=217) from a university in Turkey. Data for the study were collected using a Participant Information Form and a Daily Nutrition Record Form. It was found that 48.4% (n=105) of the students frequently consumed fatty foods, 36.4% (n=79) skipped snacks, and 31.8% (n=69) skipped lunch. The energy obtained from fat was statistically significantly higher in students with a higher income level compared to those with lower income levels ($p<0.05$). Factors negatively affecting the dietary habits of nursing students can be thoroughly investigated, and institutional regulations can be implemented to address these issues.

Keywords: Nutrition, Diet Habits, Health Information System, Nursing Students.

1. INTRODUCTION

Nutrition is the most essential requirement for the health and development of people throughout their lives. From the early stages of fetal development to birth, infancy, childhood, adolescence, adulthood and aging, food and good nutrition are crucial to survival, physical-mental development, performance, productivity and health. The World Health Organization (WHO) sees the main purpose of Health for All as having the opportunity to reach the highest level of health and care for people throughout their lives and emphasizes that it is not possible in the presence of hunger and malnutrition (1). Nutritional requirements during the growth of children and adolescents are considered as critical factors that affect their physical development and affect their health status in the future (2). International studies indicate that both nutritional habits and food intake are important indicators of preventing some chronic diseases such as obesity, atherosclerosis, hypertension or osteoporosis (3-5).

The shift from health-oriented care to health promotion and preventive health care practices brings more responsibility to the role of nursing (6). In addition to education, nurses are expected to become models for individuals with health-promoting lifestyles (7). For this reason, nursing students should themselves gain their healthy and balanced eating habits first. The current health behaviours of student nurses have long-term effects. Some lifestyle practices during university years continue to affect health throughout life (6). While the eating habits of the students before the university continue with the effect of family and socio-cultural environment, the lifestyle that differentiates with the university can also change the nutrition behaviours of the students (8). Researchers have shown that many university students engage in risky health behaviours such as physical inactivity and unhealthy eating practices, and that this leads to obesity or malnutrition (3,4,5,6). The deterioration of the economic conditions and malnutrition cause young people to head towards the way of eating their fill rather than an adequate and balanced nutrition. It is seen in our country, especially in the researches about the nutritional habits of the youth period, that the young individuals experience considerably serious problems related to nutrition in this period (8,9). For this reason, food groups collected under five main headings should be taken in sufficient amounts during the day. As inadequate intake of any nutrients in the body causes unfulfilled tasks related to those nutrients, body work disrupts, resistance to microbes decreases and the diseases occur more quickly and more severe (10,11). Daily intake of energy and nutrients is crucially important as well as in balanced amounts. Attempting to meet all nutritional requirements in a single meal or consuming food in large quantities and increasing the number of meals adversely affects the biological balance.

In a sistematic review conducted by Stefano et al. (2023) it was reported that nursing students showed poor knowledge of basic and specific nutrition demonstrating a lack of knowledge also about nutritional self-care (12). Although there have been national and international researches examining the nutritional habits of nursing students (13-17), there is no one in which the nutrition levels of nursing students are analysed in detail with the Nutrition Information System (NIS) (8.0) package software (18), or no one proposing ideas according to the Nutrition Guide for Turkey (NGT)(19). In this context, the results of the study will be organized to improve students nutritional levels that it is thought that it will provide basic data for the programs. and also, this research will contribute to the literature by determining the reasons for nursing students' negative diet habits and the factors affecting a healthy balanced diet.

Accordingly, the following questions were sought in this research:

Research Questions:

- What are the nutritional habits of nursing students?
- What are the daily amounts of energy that nursing students receive?

- What are the factors that affect the daily nutrition habits and energy levels of nursing students?

2. MATERIALS AND METHODS

2.1. Research type and aim

The aim of this descriptive and correlational research is examining the nutritional habits of nursing students and factors affecting it.

2.2. Research population and sample selection

The population of the research consisted of first, second, third and fourth grade students (N = 242) in the nursing department in 2018-2019 academic year. The research was completed with 217 (90% of the population) students willing to participate in the study. It may be suggested that the sample size is sufficient in terms of generalizability with regard to the sample calculation. According to the population and sample number, the results of the present study reflected a 3.04% error rate and 0.95 confidence interval (20). Willingness to participate in the research and being at school on the days of the research were the criteria for inclusion in the research. Being a foreign student, having celiac disease or having a health problem that would prevent participation in the study constituted the exclusion criteria of this study. Nursing students take nutrition-related courses only in their first year in accordance with the curriculum.

2.3. Data collection tools

Data were collected with "Participant Information Form" and "Daily Nutrition Registration Form.

Participant information form

Developed by the researchers based on the relevant literature (3,6,18,19), this form consists of a total of 19 questions to assess socio-demographic characteristics such as age, gender, social security status, smoking status, nutritional habits, and daily meal skipping instances.

Daily nutrition registration form

This form was created based on the relevant literature (2,3,6,19) and NIS (18). It is a form in which all food and beverages consumed by students in a day are recorded as six main meals, three of which are main meals and three are snacks in standard sizes such as number, quantity, gram, cup, teacup, teaspoon, tablespoon. This form relates to the number of meals per day, the number of meals taken, the number of meals skipped and the frequency of consumption of certain foods and beverages. Data obtained from daily nutrition registration forms were transferred to NIS software (18). Since the form includes daily nutritional monitoring, students were asked to fill it out only according to the 1-day routine nutrition period.

2.4. Data collecting process

The data of the study were collected in the classroom environment on the day and course hours planned with the permission of the school administration between January-March 2019 of the 2018-2019 academic year. The students were informed about the research before the data collection forms were given; it was explained to the students that all the information in the forms will remain confidential and will not be shared with anyone before the research. Forms were distributed to the students who were reached on the specified days and who volunteered to participate in the research. The students read and responded to the data collection forms individually, and the students who completed the forms submitted them to the researchers. During the response of the questionnaires (about 10-15 minutes), the researchers were present with the students; however, the students were not intervened.

2.5. Ethical consideration

During the research, the Human Rights Helsinki Declaration guidelines were followed. Written permission was obtained by applying to the dean of the faculty where the research data was collected and the rector of the university with an information form containing the purpose and scope of the research. In addition, written permission was obtained from the local ethics committee of the university (08/01/2019-E.665). The purpose and benefits of the research and their roles in the research were explained to the students who were included in the sample, and their names were not written on the data collection forms.

2.6. Analysis and evaluation of the data

The data were analysed by using SPSS (Version 21; IBM Inc, Armonk, NY) statistics package program and Turkish Version NIS 8.0 package software. NIS package software is a software that analyses the contents of food consumed in Turkish society. All consumed foods are entered into this information system and daily consumed energy, protein carbohydrate, fat, fibre, polyunsaturated fatty acid, cholesterol, thiamine, riboflavin, niacin, pyridoxine, folic acid, vitamin A, carotene, vitamin C, vitamin E, calcium, phosphorus, magnesium, sodium, potassium, iron and zinc can be determined through this software (18). All foods consumed by the students for a day were entered into the software and the contents and amounts of the meals were separated using standard recipes. Then the students' average daily consumed energy, protein, carbohydrates, fat, and so on. values were calculated. In data analysis, ordinal variables were evaluated as arithmetic mean and standard deviation, minimum, maximum. In evaluating variables which did not show normal distribution between two groups, the Mann-Whitney test was used; in evaluating between more than two groups, the Kruskal-Wallis test was used. The relationships between the variables were examined using the Contingency Coefficient. Significance level was accepted as $p<0.05$.

3. RESULTS

In the study, 77.9% (n=169) of the students were female, 31.8% (n=69) were in the first grade and 67.3% (n=146) were living in the dormitory; 71.9% (n=156) had moderate income, 80.6% (n=175) had good health and 70.5% (n=153) never smoked in this research.

3.1. Nutritional habits and energy amounts taken by nursing students

It was found that 47.9% (n=104) of the students sometimes consumed cereal bread, fruit and vegetables, 48.4% (n=105) frequently consumed fatty foods, 42.9% (n=93) rarely consumed ready foods and 47% (n=102) sometimes consumed fast food.

An evaluation of the students' skipping habits revealed that 36.4% (n=79) of them skipped snacks and 31.8% (n=69) of them skipped lunches. 36.9% (n=80) of the students skipped meals because they could not find time; 40.1% (n=87) were affected by their families' food choices and 33.2% (n=72) were influenced by their friends' choices. The average amount of total energy received by the students per day is 1493±482.83 (Min.=500.48-Max.=3583.21) kcal. Looking at the average of the students' daily energy intake; The average amount of energy they receive from carbohydrates is 44.6%, from fats is 38.6% and from proteins is 16.7%.

3.2. Factors affecting the nutritional habits and energy levels of nursing students

Comparing the socio-demographic characteristics of the students and the total amount of energy they receive daily from proteins, carbohydrates and fats; it was found that the students in the 19-20 age group received 1538.81 kcal, the students in the fourth grade received 1498.98 kcal, the students living in the student houses received 1535.08 kcal, and the students with very good income received 1628.20 kcal. The daily energy means of female students was 1465.82, while the ones of male students was 1589.73 kcal. Additionally, it was found that the energy amount the students with

very good income level obtained from fats was statistically significantly higher than the other income level students (p<0,05) (Table 1).

Table 1. Comparison of Socio-Demographic Characteristics of Students with Their Daily Total Energy, Protein, Carbohydrate and Fat Intake

Socio-demographic characteristics		Total Energy	Energy taken from proteins	Energy taken from fats	Energy taken from carbohydrates
Age Groups	18 Years and Below	1500.07	255.56	597.56	646.17
	19-20 Years	1538.81	253.05	579.44	705.32
	21 Years and Above	1460.59	240.88	555.43	662.47
	Chi-Square	3.316	.934	1.255	2.469
	Sd	2	2	2	2
	p	.191	.627	.534	.291
Gender	Female	1465.82	240.32	571.16	652.75
	Male	1589.73	267.78	552.22	768.86
	Mann-Whitney U	3590.000	3413.000	3856.000	3496.000
	Z	-1.214	-1.675	-.521	-1.459
	p	.225	.094	.602	.145
Grade level	First Grade	1521.39	249.34	566.71	701.62
	Second Grade	1449.91	252.02	574.79	623.01
	Third Grade	1486.07	231.33	547.12	707.32
	Fourth Grade	1498.98	253.18	581.08	664.05
	Chi-Square	1.556	5.790	1.305	1.762
	Sd	3	3	3	3
	p	.669	.122	.728	.623
Marital Status	Single/Divorced	1488.24	245.91	564.85	676.11
	Married	1849.10	280.59	717.96	843.79
	Mann-Whitney U	163.000	308.000	222.000	204.000
	Z	-1.463	-.120	-.917	-1.083
	p	.143	.904	.359	.279
Residential Status	With Family	1424.15	247.54	521.91	655.21
	Dormitory	1503.27	248.47	578.78	673.66
	Student House	1535.08	235.14	569.52	730.89
	Chi-Square	1.663	.411	2.552	2.421
	Sd	2	2	2	2
	p	.435	.814	.279	.298
Income	Very Bad	1109.36	229.29	367.21	515.76
	Bad	1433.04	196.70	484.97	737.92
	Average	1499.33	248.59	575.06	674.61
	Good	1512.77	248.31	576.02	688.17
	Very Good	1628.20	309.89	583.76	736.21
	Chi-Square	4.790	5.247	9.910	3.646
	Sd	4	4	4	4
	p	.309	.263	**.042***	.456
Health	Very Good	1543.02	249.26	579.11	714.81
	Good	1484.81	246.77	570.39	665.80

	Average	1481.13	230.71	468.36	783.07
	Bad	.	.	.	.
	Very Bad	2.207	.117	2.275	3.870
	Sd	2	2	2	2
	p	.332	.943	.321	.144
Smoking Status	Never Smoked	1499.26	246.47	579.69	671.57
	Smoked but Quit	1539.42	257.71	585.77	692.42
	Still Smoking	1428.61	236.68	495.79	696.82
	Chi-Square	1.562	.344	5.177	.931
	Sd	2	2	2	2
	p	.458	.842	.075	.628

*$p<.05$

Comparing the nutritional habits of the students with the total amount of protein, carbohydrate and fat they received daily; it was found that the total amount of energy consumed by the students who skipped lunch and sometimes skipped their meals was statistically significantly higher (1549.94 and 1556.06), respectively ($p<0.05$) (Table 2).

Table 2. Comparison of the students' eating habits and total amount of energy, protein, carbohydrate and fat they receive daily

		Total Energy/ Kcal	**Energy taken from proteins/kcal**	**Energy taken from fats/kcal**	**Energy taken from carbohydrates/ kcal**
Consuming Cereal Bread Fruit Vegetables	Never	.	.	.	.
	Rarely	1573.61	230.28	558.46	785.13
	Sometimes	1508.22	256.55	590.76	658.22
	Often	1477.72	240.50	547.24	689.40
	Usually	1238.24	204.46	474.78	562.05
	Chi-Square	2.603	6.625	4.478	2.555
	Sd	3	3	3	3
	p	.457	.085	.214	.465
Consuming Fatty Food	Never	.	.	.	.
	Rarely	1404.64	232.16	574.33	590.45
	Sometimes	1457.41	239.29	572.65	645.93
	Often	1543.05	253.87	561.74	725.67
	Usually	1367.64	285.51	533.79	538.82
	Chi-Square	2.308	2.235	.363	4.609
	Sd	3	3	3	3
	p	.511	.525	.948	.203
Consuming Convenience Food	Never	1386.63	233.33	558.35	597.51
	Rarely	1450.71	235.62	555.44	655.86
	Sometimes	1570.84	262.13	593.01	716.00
	Often	1445.16	243.28	476.51	722.63
	Usually	1453.51	219.31	610.22	623.99
	Chi-Square	2.919	5.790	5.545	1.513
	Sd	4	4	4	4
	p	.571	.215	.236	.824
Consuming Fast Food	Never	.	.	.	.
	Rarely	1381.08	222.02	538.65	618.40
	Sometimes	1544.47	256.07	583.45	703.01
	Often	1559.47	264.45	573.34	722.20
	Usually	1202.71	175.59	545.93	481.19
	Chi-Square	6.859	7.304	1.456	5.527

	Sd	3	3	3	3
	p	.077	.063	.693	.137
Meal Skipped	Breakfast	1420.48	253.85	532.11	635.44
	Lunch	1549.94	254.02	575.87	717.38
	Dinner	1332.66	231.83	507.62	588.99
	Snacks	1546.88	244.29	598.56	703.58
	1+4	1356.16	219.88	548.05	591.25
	Chi-Square	10.925	7.060	8.528	4.781
	Sd	4	4	4	4
	p	**.027***	.133	.074	.311
Meal Skipping Status	Never	1197.25	193.69	487.70	517.54
	Rarely	1510.33	240.42	550.98	717.57
	Sometimes	1556.06	273.61	598.68	683.61
	Often	1489.42	238.18	582.18	665.28
	Usually	942.44	151.24	340.68	449.26
	Chi-Square	12.355	13.055	9.448	9.154
	Sd	4	4	4	4
	p	**.015***	**.011***	.051	.057
Meal Skipping Cause	Losing Weight	1411.90	234.45	544.85	629.94
	Not Having Time	1469.71	249.93	566.22	652.95
	Stress	1655.93	285.05	662.16	709.24
	Economical Causes	1415.38	251.47	525.40	633.01
	Not Feeling Hungry	1555.68	240.48	572.88	741.09
	Losing Weight - Not Having Time	644.44	83.78	283.55	283.55
	1+3	.	.	.	.
	Chi-Square	6.197	5.664	7.261	5.547
	Sd	5	5	5	5
	p	.288	.340	.202	.353
Being Affected by Food Choices	Family	1482.44	243.58	564.91	673.50
	Friends	1473.03	247.78	549.45	674.12
	Social Media	1622.87	244.61	533.44	845.82
	Tv	1782.14	228.82	613.64	933.21
	Book	1395.99	195.44	474.64	725.91
	Family – Friends	1455.21	246.07	621.01	588.66
	Friends-Social Media	1385.31	180.09	664.95	540.27
	All	1562.66	308.84	702.08	549.85
	Economical	1142.38	183.94	348.01	540.24
	Chi-Square	2.067	3.454	10.450	6.178
	Sd	8	8	8	8
	p	.979	.903	.235	.627

* $p < .05$

Comparing the socio-demographic characteristics of the students and their feeding habits; there were statistically significant relationships between the age of the students and skipped meals; their ages and meal skipping frequency; gender and consumption of fatty foods; genders and

convenience food consumption; grade levels and consumption of cereal bread, fruit and vegetables; grade levels and skipped meals and meal skipping status; marital status and consumption of cereal bread, fruit and vegetables; residential status and convenience food consumption, skipped meals and meal skipping status; the situation of living and ready-to-eat food, skipped meals and skipping situations; income levels and skipped meals, the reason for skipping meals and being affected by food choices; and health status and skipped meal (p<0.05) (Table 3).

Table 3. Comparison of the Students' Socio-Demographic Characteristics and Their Nutritional Habits

	Cereal bread fruit vegetables		**Consumption of fatty food**		**Consumption of convenience food**		**Fast-food consumption**		**Skipped meal**		**Meal skipping frequency**		**Meal skipping cause**		**Being affected by the environment in food choice**	
	C	*p*	C	*p*	C	*p*	C	*p*	C	*p*	C	*p*	C	*p*	C	*p*
Age	.149	.554	.198	.183	.206	.294	.127	.738	.307	**.004***	.286	**.013***	.244	.187	.302	.149
Sex	.166	.103	.196	**.034***	.255	**.004***	.126	.322	.115	.570	.184	.107	.165	.300	.178	.523
Grade Level	.292	**.017***	.203	.407	.272	.139	.202	.415	.515	**.000***	.453	**.000***	.243	.555	.344	.215
Marital Status	.248	**.003***	.108	.469	.070	.897	.065	.822	.089	.784	.037	.990	.150	.415	.110	.953
Living Place	.200	.170	.216	.102	.300	**.006***	.133	.685	.288	**.012***	.268	**.033***	.235	.239	.288	.241
Income	.294	.057	.245	.312	.237	.677	.280	.102	.332	**.042***	.261	.466	.467	**.000***	.460	**.003***
Health Status	.140	.634	.170	.375	.232	.137	.176	.326	.304	**.005***	.215	.233	.222	.342	.282	.281
Smoke	.131	.702	.149	.550	.241	.098	.118	.802	.226	.165	.256	.055	.254	.134	.221	.798

C: Contingency Coefficient
* p <.05

4. DISCUSSION

Nutrition is considered as the main component of a healthy lifestyle and the lack of essential nutrients found in fruits and vegetables and diets containing high levels of salt and fat both cause malnutrition and are increasingly burdening health services and health systems in the last 50 years (21). For this reason, it is worth investigating all kinds of subjects examining nutritional habits in university students and the factors affecting these habits.

The findings of the research were discussed under two headings:

1. Discussing the nutrition habits of nursing students and the amount of energy they take

In our research, it was found that 48.4% of the students frequently consumed fatty foods, 47.9% sometimes consumed cereal bread, fruits and vegetables, and 47% sometimes consumed fast food. Similar to our research, Güleç et al. (2008) reported that 40.3% of the students sometimes consumed fast food (22); Sayılı and Gözener (2013) reported that 71.38% of the students consumed fast food (23); In the research of Korkmaz (2005), reported that 19.0% of university students consumed fast food once a week, 9.9% once every 15 days, and 6.6% consumed once a month (24). Güleç et al. (2008), reported that fruit and vegetables (25.3%) were the main foods they consumed the most during the main meals (22); Özyazıcıoğlu et al. (2008) reported that 61.3% of the students did not eat any fruit (15); In a research conducted by Al-Qauhiz (2010) it was reported that only 17.2% from 799 female university students at Saudi consumed fruit and vegetable daily (24). In a similar research conducted by Dilber and Dilber (2013) with university students, it is reported that

ready-to-eat foods are more important in university students' diet because sheltering conditions and time factor lead students to ready-to-eat foods (25). By encouraging regular nutrition routine of individuals, by gaining healthy eating habits and vegetable-fruit consumption habits, the quality of nutrition routine can be improved (26). Low consumption of fruit and vegetables in children and adolescents can lead to a lack of nutrition in one of the most important periods of life (27). Differences in nutritional requirements may be affected by factors such as age, gender, physical activity, disease status and genetic structure (28,29). Therefore, age, family structure, lifestyle, eating habits, personality traits, socio-cultural environment and economic factors are thought to be effective in nursing students' nutritional habits.

In our research, it was found that 36.4% of the students skipped snacks, 31.8% skipped lunch and 14.7% skipped breakfast. Similar to our research, in the study of Tuğay (2019), it was concluded that 67.6% of university students skipped snacks (30). In researches conducted with different groups in which the nutritional habits of university students are examined, it is reported that students generally skip meals and the most skipped meals are breakfast and lunch (31-37). As a meal recommended to be consumed as the most important indicator of a healthy lifestyle (31), the breakfast, is very important in terms of higher intake of cereals, fruit, vegetables and dairy products, including the high rate of nutrients in the diet (38). Some studies suggest that skipping breakfast is associated with unhealthy behaviors such as a lower level of physical activity (39,40) and some suggest that adolescents, especially girls, generally believe that skipping breakfast can be an effective diet to lose weight and reduce daily energy intake (41). Consuming breakfast as the first meal helps to preserve body weight, yet skipping breakfast to limit the energy consumed during the day can cause more meals to be consumed the next day (42-44). Since the time between dinner and breakfast is the longest time without energy and nutrient absorption, skipping breakfast can cause metabolic changes and have a negative impact on cognitive performance (45). Having breakfast has beneficial effects on the quality of the diet and prevents chronic disease; however, skipping this meal increases the risk of metabolic syndrome and cardiovascular disease (46). In addition, international researches have shown that dividing the amount of food to be consumed daily into four or five meals reduces the risk of overweight and obesity among adolescents (2,47,48). In general, avoiding regular meals, consuming more calories by increasing portions, and eating casual snacks between meals will cause obesity to develop (2). It is very important to make nursing students conscious about regular meal consumption and to bring lifelong behavioral changes to these students since malnutrition affects health and school success negatively.

It was found in our research that 36.9% of the students skipped meals because they couldn't find time and 32.3 skipped because they didn't feel hungry. In similar researches, not having time is the most frequent cause for skipping meals (8,34,49-52) the reports that students skipped meals because they did not feel hunger was the second most frequent cause (51). Incorrect or incomplete knowledge of university students about healthy and balanced nutrition, insufficient or irregular eating habits, making skipping meals a lifestyle, fast-food type of diet, meals rich in salt, sugar and fat, may lead to problems such as obesity or weakness (30). Therefore, it should not be ignored that the healthy eating habits to be gained in the youth period are important in leading a healthy life in later years.

Our research found that the majority of students were affected by family and friends. Contrary to our research results, it is reported that the majority of university students are affected by social media in food selection (25,33) Eating is a behavior that has a physiological dimension and can be improved by learning (53); eating behavior is influenced by emotional, social, physiological and environmental-cultural factors. As in all habits of students throughout their lives, family, school, friends, income level, lifestyle and socio-cultural and so on are also effective in eating habits can be effective. For this reason, healthy and balanced eating habits can be gained through nutrition behaviour trainings to be given during university years.

It was found in this research that the average daily energy intake of nursing students was low. The amount of energy that individuals need per day varies depending on various factors such as age, gender, height, body weight and physical activity levels (19). The amount of energy that individuals should receive daily depends particularly on whether they are less active, medium active or active (19). According to NGT, the daily amount of energy required for active male individuals in the 19-39 age range is 2800 kcal, and the average amount of energy required for medium active female individuals in the 19-39 age range is 2000 kcal, and therefore it may be suggested that the average daily energy intake of students in our research group is lower regarding NGT guidelines (19). On the other hand, the daily average energy requirement of individuals is higher than the recommended average for obesity and chronic diseases, while having less can cause cachexia and additional diseases. In this respect, it is important to develop proper nutrition awareness among university students regarding calorie intake according to the recommended amounts according to age, gender, body mass index and physical activity level.

It was found in this research that students received 44.59% energy from carbohydrate, 38.60% from fat, and 16.65% from protein. As it is recommended that less active male individuals between the ages of 19-24 take 48% kcal from carbohydrate, 35% from fat and 18% from protein when they take 2200 kcal daily on average according to NGT (19); it may be said that the energy intake of the students in our research are close to the recommendations of NGT (19).

2. Factors affecting the daily nutrition habits and energy amounts of nursing students

A comparison of the average amount of daily energy intakes of students according to the age groups in this research revealed that the energy intake amounts of the students between the ages of 19-20 were higher than the students under the age of 18 and then the ones that are 21 years old and above. The calorie requirement for the development and growth of tissues is highest in childhood (54). Nutrient consumption decreases with age (55). Since the students that are at the age of 18 and under are in adolescence period, this can be considered as the reason of lower daily energy average compared to other age groups. The fact that the daily energy intakes of students that are at the age of 21 and older are lower compared to other age groups can be attributed to their being less active and to their daily protein and fat consumption rates taken from foods being also less.

It was also found in this research that the average total amount of energy received by the students in the fourth grade, living in the student house and having a very good income was significantly higher than the others. Daily energy intake may vary with the effect of age, gender, body mass index, physical activity level and other physical factors, as well as the level of education, place of residence, income level, and other socio-cultural factors (19).

It was found in our research that the total amount of energy consumed daily by the students who skipped lunch and sometimes skipped their meals was significantly higher; age, grade level, place of residence, income level and health status were found to have an impact on students' meal skipping habits. In order to ensure that all energy and nutrients are adequately and evenly balanced, the nutrients consumed must be of good quality and in sufficient quantities. Meals should not be skipped, food should be consumed in three main courses and in 1-2 snacks (56). To maintain the highest level of physical and mental performance throughout the day is possible by consuming snacks and main meals regularly. Inadequate and unbalanced nutrition is an important health problem in our country. The university students, in addition, are among the groups having the most common nutritional problems. During the university period, students try to adapt to a new order, they become more open to external factors due to their interaction with new individuals and they may exhibit different behaviors or acquire different habits in this period (50). This situation is thought to arise from a lack of nutritional education, nutritional culture and nutritional knowledge levels, lifestyle changes, a new environment, communication with different individuals, not participating in a healthy and regular nutrition as well as sporting activities, and a lack of scientific activities on this subject.

Another finding was that the nursing students' habits of convenience food consumption were affected by gender and place of residence; and that the frequency of skipping meals was affected by age, grade level and place of residence. Accordingly, it is stated in another research that the place where university students live has a significant effect on their eating habits (33). Along with the globalization, the intense pace of life affected the societies as well as the changes in the nutritional habits and food preferences of university students. The need to eat faster and to consume convenience food in order to save time have become more and more desirable (33). It may be stated that the female students who generally prefer to eat at home are more successful in cooking than male students; and they may be said to be more successful in cooking juicy dishes, especially soup. When it comes to male students who live at home, they prefer practical dishes that are easier to prepare (sandwitch, pasta, rice, instant ravioli, fried potato, etc.) (33). It is a well-known fact that students generally do not pay attention to their meals, they eat only one meal a day and consume foods such as sandwiches and bagels more, economic difficulties are effective on the problem of inadequate and unbalanced nutrition, and it is also well-known that the students staying in dormitories are not well-fed because of the dormitory conditions, they only eat to feel full (57).

It was found in our research that the nutritional habits of university level nursing students who would have important roles in the care of healthy/sick individuals were not at the desired level. It is important for nursing students to gain true awareness about adequate and balanced nutrition. Additionally, nutritional habits of nursing students and negative factors affecting these habits should be examined in detail and institutional and national studies should be supported to eliminate these factors.

5. CONCLUSION

This research indicates that the average daily amount of energy received by nursing students is below the recommended levels; the majority of students are fed with high-fat foods; and nutritional habits of students are related to factors such as age, gender, grade level, place of residence and income level. Nursing students' awareness about a healthy and balanced nutrition may be aimed to be increased. In addition, different studies should be conducted to eliminate the factors that negatively affect the nutritional habits of these students. Correct nutrition training can be given to change the bad nutritional behavior of nursing students. Healthy lifestyle elective courses can be added. It may be suggested that factors that negatively affect the nutritional habits of students (income status, accommodation conditions, scholarship status, etc.) should be closely examined and these factors should be eliminated.

Limitations

The generalization of the research results only to the sample group; and not investigating the students' body mass index, body fat ratio, and similar bio-physiological characteristics are the main limitations of the research.

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