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Research Article

Animal product consumption habits of university students: Suluova Vocational School

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Abstract

The aim of this study is to determine the animal product consumption habits of associate degree students at Amasya University Suluova Vocational School. For this purpose, a face-to-face survey was conducted with a total of 285 students, which 159 students from the Veterinary Department and 126 students from the Property Protection and Security Department, between January and March 2020. When the opinions of the students about the food groups were evaluated, it was observed that 71.2% of them thought that the animal-based foods were healthier and 94.7% thought that the products of animal origin had a better protein quality. Furthermore, it was determined that the majority of the students (42.5%) were consuming foods of animal origin because they were healthy. When the animal-based food consumption frequency of the participants was examined, it was seen that those who consumed cheese (37.9%) and eggs (31.2%) every day were in the majority. While most of the participants consumed yoghurt (25.8%), ayran (26.4%), chicken meat (26.3%) and sausage (28.4%) 1-2 times a week, it was found that consumption of beef-veal (30.2%), lamb-mutton (39.6%), fish (48.8%), salami (21.4%) and sausage (29.5%) was rare. Moreover, 25.8% of the participants did not consume butter, 72.3% did not consume turkey meat and 51.9% did not consume pastrami at all. It was found that the majority of university students did not consider any of the criteria of taste, price, brand, quality, hygiene, ease of preparation, smell-color and personal health when buying red and white meat. Finally, when the participants were examined in terms of their milk consumption preferences, it was seen that the majority (47.4%) preferred street milk.

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1. Introduction

The intake of various nutrients into the body in order to maintain life, growth, development and protection of health is defined as nutrition (Baysal, 2015; Tayar et al., 2015). For an adequate and balanced diet, the nutritional elements needed by individuals must be taken at an adequate level and used appropriately in the organism (Tayar et al., 2015). Malnutrition not only affects physical and mental development but also reduces resistance to infections (Ndlovu, 2010). People get the nutrients they need from plant and animal sources. Among these, foods of animal origin are an indispensable element of the human diet with their macro (protein, carbohydrate, fat) and micro (vitamins and minerals) nutrients (Ndlovu, 2010). Moreover, the bioavailability of these foods is high (Flachowsky et al., 2017). It is recommended to meet 1/3 of the daily protein needs of people with animal origin products (Flachowsky et al., 2017).

There are many factors that affect the consumption level of animal products, such as nutritional habits and income level. Considering the 2011 data of FAO, it has been reported that there will be an increase in meat, egg (73%) and milk consumption (58%) until the middle of the 21st century (Makkar, 2016). This study was carried out to determine the animal product consumption level and habits of Amasya University Suluova Vocational School students.

2. Materials and Methods

2.1. Type, Place and Time of the Research

The research is a descriptive study conducted to determine the animal origin food consumption levels of students from Amasya University Suluova Vocational School between January 2020 and March 2020.

2.2. Ethical Aspect of the Research

To conduct the research, written permission from the Rectorate of Amasya University and approval with the letter of Amasya University Non-Interventional Clinical Research Ethics Committee, numbered 15386878-044 and dated 06.01.2020, were taken. The students participating in the research were included after they were informed about the study and their consent was obtained.

2.3. Population and Sample of the Research

The research population consisted of Amasya University Suluova Vocational School Property Protection and Security Department students and Veterinary Department students. In this research, the sampling method was not used, and 285 students studying in the departments of Veterinary Medicine (n=159) and Property Protection and Security (n=126) who agreed/voluntarily participated in the study were included.

2.4. Data Collection Tools

A questionnaire form was used to collect research data. While preparing the questionnaire, the Dietary Guidelines (Baysal et al., 2014) was used. The questionnaire includes questions about students' demographic information (age, gender, department, housing status), students' views on food groups (which food groups are healthy, evaluation of food groups according to protein quality, reasons for consumption of animal origin food), the frequency of animal-based food consumption (cheese, yoghurt, ayran, butter, eggs, beef-veal, lamb-mutton, chicken, fish, turkey, soudjouk, salami, sausage, pastrami), the points that students pay attention to when buying red and white meat (taste, brand, price, quality, hygiene, ease of preparation, smell-color, personal health criteria), and their milk consumption preferences (UHT milk, packaged milk, street milk).

2.5. Evaluation of Data

Research data were analyzed using SPSS 22.0 (Statistical Package for Social Sciences) for Windows 22.0 program (IBM Corp., 2011). While evaluating the data, numbers, percentages and mean values were used.

3. Results and Discussion

In this study, which was conducted to determine the animal origin food consumption levels of Amasya University Suluova Vocational School students, when the demographic characteristics of the students were examined, it was seen that the average age was 20.09. When other demographic characteristics were analyzed, it was observed that 89 (31.2%) of the participants were female, 196 (68.8%) were male, 159 (55.8%) were student Veterinary

Department, 126 (44.2%) of them were a student at Property Protection and Security Department. Moreover, 135 (47.4%) of them were living at home-apartment, 98 (34.4%) were living in dormitories, and 15 (5.3%) of the participants were living with their relatives (Table 1).

Table 1. Demographic characteristics of the participants

Yaş		
Minimum age	18	
Maksimum age	28	
Average age	20.09	
Gender	**N**	**%**
Female	89	31.2
Male	196	68.8
Department	**N**	**%**
Veterrinary	159	55.8
Property protection	126	44.2
Housing Status	**N**	**%**
With family	37	13
With a relative	15	5.3
At home-apartment	135	47.4
In the dormitory	98	34.4

When the opinions of university students about food groups were examined, it was determined that 203 (71.2%) of them thought that animal-based products were healthier, while 270 (94.7%) of them thought that animal-based products contained good quality protein. While 121 (42.5%) of the participants were consuming foods of animal origin because they thought it was healthy, 109 (38.2%) of them were consuming because they were delicious, and 23 (8.1%) of them were consuming foods of animal origin due to familial habits (Table 2).

Table 2. Students' opinions on food groups

Which food group do you think is healthy?		
Food groups	**N**	**%**
Animal origin products	203	71.2
Herbal origin products	82	28.8
Evaluation of food groups according to protein quality?		
Food groups	**N**	**%**
Animal origin products	270	94.7
Herbal origin products	15	5.3
Reason for consumption of animal origin food		
Reason for consumption	**N**	**%**
Because it's healthy	121	42.5
Because it's delicious	109	38.2
Because it's satisfying	32	11.2
Familial habits	23	8.1

The frequency of food consumption of animal origin by the students is given in Table 3.

Table 3. Animal source food consumption frequency of students

	Every day		5-6 times a week		3-4 times a week		1-2 times a week		Once in 15 days		Rarely		Never	
Food groups	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Cheese	108	37.9	50	17.5	38	13.3	41	14.4	8	2.8	25	8.8	13	4.6
Yoghurt	63	22.3	34	12	49	17.3	73	25.8	12	4.2	45	15.9	7	2.5
Ayran	36	12.7	41	14.4	58	20.4	75	26.4	21	7.4	49	17.3	4	1.4
Butter	46	16.2	24	8.5	33	11.6	39	13.7	29	10.2	68	23.9	45	25.8
Egg	89	31.2	48	16.8	64	22.5	35	12.3	14	4.9	19	6.7	16	5.6
Beef-Veal	15	5.3	17	6	22	7.7	71	24.9	40	14	86	30.2	34	11.9
Lamb-Mutton	5	1.8	7	2.5	11	3.9	26	9.1	35	12.3	113	39.6	88	30.9
Chicken	20	7	49	17.2	63	22.1	75	26.3	33	11.6	39	13.7	6	2.1
Fish	2	0.7	4	1.4	9	3.2	39	13.7	42	14.7	139	48.8	50	17.5
Turkey	2	0.7	5	1.8	2	0.7	3	1.1	3	1.1	64	22.5	206	72.3
Soudjouk	23	8.1	37	13	53	18.6	81	28.4	30	10.5	48	16.8	13	4.6
Salami	23	8.1	22	7.7	41	14.4	55	19.3	38	13.3	61	21.4	45	15.8
Sausage	9	3.2	15	5.3	32	11.2	39	13.7	29	10.2	84	29.5	77	27
Pastrami	7	2.5	5	1.8	3	1.1	9	3.2	9	3.2	104	36.5	148	51.9

When the dairy products consumption frequency of the students was examined, it was determined that 108 (37.9%) of them were consuming cheese every day, 8 (2.8%) of them were consuming cheese once in 15 days, and 13 (4.6%) of them were not consuming cheese at all.

Moreover, 63 (22.3%) of students were consuming yoghurt every day, 73 (25.8%) were consuming yoghurt 1-2 times a week and 7 (2.5%) of them were not consuming yoghurt at all. While 75 (26.4%) of the students were consuming ayran 1-2 times a week, 4 (1.4%) of them were not consuming ayran at all. While 46 of the students (16.2%) were consuming butter every day, 45 (25.8%) of them were not consuming butter at all.

In a study examining the milk and dairy products consumption habits of Kafkas University students, Çetinkaya (2010) reported that the rate of milk consumption of students was 33%, the rate of those who never consumed milk was 67%, and the rate of choosing dairy products instead of milk was 76%. Çetinkaya (2010) stated that the majority of the students did not have the habit of consuming milk and that more cheese and yoghurt were consumed than dairy products.

Selçuk et al. (2003) investigated the dairy products consumption habits of Yüzüncü Yıl University undergraduate students and determined that the students generally found the prices of dairy products expensive. In another study investigating the milk and dairy products consumption habits of university students, Şahinöz and Özdemir (2017) revealed that 41.7% of the students had a habit of drinking milk, while 30% were not consuming milk at all. In a study by Tarakçı et al. (2003), in a study examining the drinking milk consumption habits of Yüzüncü Yıl University students, it was reported that the students had limited knowledge about the milk they drink.

When the egg and meat consumption frequency of the students was examined, it was seen that the majority of them rarely preferred beef-veal (30.2%) and lamb-mutton (39.6%). While 75 (26.3%) of the participants were consuming chicken 1-2 times a week, 39 (13.7%) of them were consuming it infrequently. While there were 2 students (0.7%) who were consuming turkey and fish every day, 50 (17.5%) of them were not consuming fish at all. The number of participants who were not consuming turkey at all was 206 (72.3%).

The consumption levels of soudjouk, salami, sausage and pastrami of the participants are given in Table 3. Among the participants, 23 (8.1%) of them were consuming soudjouk and salami every day. Thirteen (4.6%) of the participants were not consuming soudjouk and 45 (15.8%) of them were not consuming salami at all. Furthermore, while 84 (29.5%) students were consuming sausage infrequently, 77 (27%) of them were not consuming sausage at all.

When the pastrami consumption levels of the participants are examined, it is seen that 148 (51.9%) of them were not consuming this product at all.

In another study investigating the animal product consumption patterns and habits of Erciyes University Faculty of Veterinary students, Sarıözkan et al (2007) revealed that students were consuming more beef-veal and sausage than red meat and its products. In the same study (Sarıözkan et al., 2007), it was reported that 20% of the students did not have the habit of consuming milk.

In a study investigating the chicken preferences of Çoruh University students, İskender et al. (2015) determined that the weekly average chicken consumption was 1.3 kg and the vast majority (71.8%) were not consuming poultry meat other than chicken. In the same study (İskender et al. (2015), it was revealed that 77.1% of the students preferred village chicken.

In a study on university students by Işkın and Sarıışık (2017), it was reported that students were consuming cheese, chicken and eggs very often, and products such as offal, fish and soudjouk -sausage were being consumed at a minimum level.

On the other hand, Taşkın et al. (2020) determined the meat consumption preferences of students studying at different faculties at Ege University. It was revealed that most of the students participating in the survey (92.4%) were consuming red meat, while 7.6% were not (Taşkın et al., 2020). In the same study, they reported that students preferred more beef (95.2%) in the red meat group.

In a study in which the fish consumption levels of the students of Çine Vocational School were determined, Özuğur et al. (2019) stated that students were consuming fish because it was both delicious and healthy. In the same study, they reported that the students were above the average fish consumption level in Turkey (Özuğur et al., 2019).

In a study, İskender and Kanbay (2014) determined that the majority of students (91.9%) consumed eggs and their weekly egg consumption was 3.4 on average. In the same study, it was also revealed that 81.2% of the students had knowledge about organic eggs.

When the points that students pay attention to in red meat consumption are examined, it is seen that the majority of the participants did not pay attention to taste (72.3%), brand (81.8%), price (65.6%), quality (56.8%), hygiene (64.9%), ease of preparation (93.7%), smell-color (75.4%) and personal health criteria (85.3%). Only a low percentage of the participants took these criteria into account when buying red meat. Besides, 79 (27.7%) students paid attention to the taste, 52 (18.2%) of them to the brand, and 98 (34.4%) of them to the price of meat. While 123 students (43.2%) considered quality in their meat selection, 100 (35.1%) of them considered hygiene. Eighteen students (6.3%) prioritized the ease of preparation in their red meat consumption. While buying red meat, the smell-color criterion was considered as important by 70 students (24.6%), 42 students (14.7%) shaped their meat consumption as a result of personal health criteria (Table 4).

Table 4. Considerations for students while buying red meat

Considerations while buying red meat		
Taste	**N**	**%**
Yes	79	27.7
No	206	72.3
Brand	**N**	**%**
Yes	52	18.2
No	233	81.8
Price	**N**	**%**
Yes	98	34.4
No	187	65.6
Quality	**N**	**%**
Yes	123	43.2
No	162	56.8
Hygiene	**N**	**%**
Yes	100	35.1
No	185	64.9
Ease of preparation	**N**	**%**
Yes	18	6.3
No	267	93.7
Smell-Color	**N**	**%**
Yes	70	24.6
No	215	75.4
Personal health criteria	**N**	**%**
Yes	42	14.7
No	243	85.3

The majority did not pay attention to taste (75.1%), brand (72.3%), price (70.5%), quality (55.8%), hygiene (67%), ease of preparation (93.3%), smell-color (78.2%), and personal health criteria (87.4%) on white meat consumption (Table 5). Moreover, a low percentage of students

paid attention to taste (24.9%), brand (27.7%), price (29.5%), quality (44.2%), hygiene (33%), ease of preparation (6.7%), smell-color (21.8%) and personal health criteria (12.6%) while buying white meat.

Table 5. The points students consider while buying white meat

Considerations when buying white meat		
Taste	**N**	**%**
Yes	71	24.9
No	214	75.1
Brand	**N**	**%**
Yes	79	27.7
No	206	72.3
Price	**N**	**%**
Yes	84	29.5
No	201	70.5
Quality	**N**	**%**
Yes	126	44.2
No	159	55,8
Hygiene	**N**	**%**
Yes	94	33
No	191	67
Ease of preparation	**N**	**%**
Yes	19	6.7
No	266	93.3
Smell-Color	**N**	**%**
Yes	62	21.8
No	223	78.2
Personal health criteria	**N**	**%**
Yes	36	12.6
No	249	87.4

In a survey conducted with Siirt University students, Örük (2021) indicated that the factors that students pay the most attention to when purchasing animal products were hygiene, freshness and product smell, respectively. İskender et al. (2015) reported that as a result of a survey they conducted with Coruh University students, they preferred the expiration date of the product when buying chicken (32.8%), while the brand was in the second place (28.8%). In another study, Taşkın et al. (2020) reported that hygiene (82.6%), freshness (82.3%), hygiene (81.8%) and reliability (72.4%) factors came to the fore in students' red meat purchase.

When the milk consumption preferences of the students are examined, 135 students (47.4%) preferred street milk, 120 students (42.5%) preferred pasteurized milk and 30 students (10.5%) preferred UHT milk (Table 6).

Table 6. Students' milk consumption preferences

Preferences	**N**	**%**
UHT milk	30	10.53
Packaged pasteurized milk	120	42.11
Street milk	135	47.37

4. Conclusion

According to the results obtained from the research, the majority of Suluova Vocational School students found foods of animal origin healthier. Furthermore, there were more students who thought that animal proteins have higher quality. It was observed that most of the students were consuming beef-veal, lamb-mutton, fish, salami and sausage infrequently, while the majority of them were not consuming butter, pastrami and turkey at all. It was revealed that the majority of the students did not consider many criteria (taste, price, brand, quality, hygiene, ease of preparation) when buying white and red meat. Besides, it was observed that most of the students preferred street milk compared to UHT and packaged milk.

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