FAST FOOD CONSUMPTION OF STUDENTS AND FACTORS AFFECTING CONSUMPTION: A CASE STUDY FROM ISPARTA UNIVERSITY OF APPLIED SCIENCES, TURKEY

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Abstract

In this study, it was aimed to determine fast food consumption and the factors affecting this consumption for Isparta University of Applied Sciences students. The main material of the study consisted of the data obtained from surveys, which were conducted by face-to-face interviews with 384 students. Result showed that 89.06% of the students consumed fast food and 10.94% did not. The average monthly income of students was 1412.26 TL and the share of expenditure on fast food products in the monthly income was 21.25%. It was determined that students consumed steak tartar ala turca (85.96%) among the fast food products, followed by French fries (83.63%) and hamburger (82.75%). It was found that 42.69% of the students consumed fast food products in dinner. It was determined that the most important reasons for fast food consumption were being economical (38.60%) and fast (30.70%). The relationship between the age of the students ($p < 0.10$), the number of individuals in the family ($p < 0.10$) and their opinion about healthy-eating ($p < 0.01$) and fast food consumption were found to be statistically significant.

Key words: Fast food, consumption, preferences, students

Fast food is a food system which serves maximum number of consumers in the minimum amount of time for which foods that are prepared with standard methods are produced and sold. The concept of fast food that is used for foods that are prepared in very short amounts of time first emerged in the USA as worker cafeterias, food and beverage wagons on the street and food stands (Anıl M., et al. 2011). The food and drink habits of people changed rapidly especially with the production of hamburger and hot-dog products and this market that encompasses these products has transformed into a billion-dollar industry in our day (Zhong C.B and DeVoe S.E., 2010).

Catering sector is classified into four main groups as; hotels, restaurants, fast food restaurants and table d'hote (corporate food services). Another name used for this sector is out-of-home food sector. The annual turnover for the catering sector in Turkey is 24.7 billion dollars based on 2015 data. The percentages have been divided as follows: restaurants with 35 %, table d'hote with 30 %, hotels with 20 % and fast food restaurants with 15 %. The share of the fast food sector is increasing rapidly parallel to the economic growth and socio-cultural changes (TAVAK, 2018).

The sector that actually has quite a long history in Turkey with foods that can be prepared in a very short amount of time such as börek, Turkish pide, pizza with spicy filling, döner kebab, etc. got introduced to the concept of fast food when McDonald's entered the market in 1986 after which it gained its current activity growing rapidly. Even though majority of the local and foreign companies active in the sector are located in large cities such as İstanbul, Ankara and İzmir; today they can be found all over Turkey. The factors that are effective in the improvement of the fast-food sector can be listed as; increase in urbanization rate, participation of women in work life, increase in family income levels, establishment of the habit of eating out, limited amount of time spared for eating due to the increasing tempo of work life, increase in young population and the impact of advertisements (Kılıçaslan R., 2019).

Changing economic, social and cultural ways of living result in changes in the eating habits of individuals as well. Busy work life and the increasing participation of women in professional life decreases the amount of time spared for eating thereby directing family members more and more to consuming fast food. The fast food consumption habits of young people who make up a significant portion of the market are increasingly becoming a topic of interest for marketing researchers and implementers (Uğur U., 2018). The purpose of the

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present study was to analyze the fast food consumption of students at the Isparta Applied Sciences University as well as the related factors. It is hoped that the results obtained in the study will be beneficial for the consumers, fast food sector and researchers who will work on this subject.

MATERIAL AND METHOD

The main material of the study was comprised of face-to-face interviews conducted with Isparta Applied Sciences University Undergraduate students. In addition, results of previous studies on this topic were also used. Interviews with the students were conducted during the October-November 2018 period.

The "unclustered sampling method" specified by equation 1 was used for determining the number of students to be interviewed (Collins M., 1986).

$$N = t^2(p*q) /e^2 \qquad (1)$$

Here; t: t-table value corresponding to the 95 % significance level (1.96), p: probability for that event to take place (0.50) (the ratio of fast food consuming students in this study), q: probability for the case that the event will not take place (0.50) and e: margin of error accepted for sampling (5 %). It was determined as a result of the calculation made via Equation 1 that the sample number is 384. The acquired data were analyzed via MS Excel and SPSS software after which related tables were generated and these tables were interpreted by way of absolute and relative distributions and simple and weighted averages methods.

The relations between the demographic characteristics of the students and fast food consumption were analyzed via Chi-square (χ2) test. The Chi-square test is one of the most frequently used tests among the non-parametric tests. Chi-square (χ2) independence test aims to test the similarities between the frequencies observed in crosstabs of a x b type (Gij) with the calculated theoretical frequencies (Tij) (Bircan H., et al. 2003). Chi-square (χ2) test statistics was solved using the following notation (Çömlekçi N., 2001);

$$\chi2 = \sum (G_{ij}-T_{ij})2 / T_{ij}$$

RESULTS AND DISCUSSIONS

The demographic characteristics of the students are presented in *Table 1*. It was determined that 66.93 % of the interviewed

students were male and that 33.07 % were female. Majority of the students (53.90 %) were determined to be in the 21-23 age group. It was calculated that 40.10 % of the students are continuing their educations at the Faculty of Agricultural Sciences and Technologies, 26.04 % at the Faculty of Technology, 21.09 % at the Faculty of Forestry and 12.77 % at the Fisheries Faculty. Currently, education is ongoing at the aforementioned four faculties of the Isparta Applied Sciences University. It was determined that the monthly income levels of the students vary between 501-1000 TL (42.45 %) and 1001-2000 TL (37.76 %) and that the ratios of students with income levels of less than 501 TL (11.72 %) and more than 2000 TL are lower. It was determined upon examining the accommodation status of the students that; students mostly stay at student houses (39.06 %) followed by apartments for rent (29.69 %).

Table 1

Demographic characteristics of students

Demographic characteristics		n	%
Gender	Male	257	66.93
	Female	127	33.07
Age (year)	18-20	79	20.58
	21-23	207	53.90
	>23	98	25.52
Education	Agricultural Sciences and Technologies Faculty	154	40.10
	Technology Faculty	100	26.04
	Forestry Faculty	81	21.09
	Eğirdir Fisheries Faculty	49	12.77
Income (TL/month)	<501	45	11.72
	501-1000	163	42.45
	1001-2000	145	37.76
	>2000	31	8.07
Accommodation	Student house	150	39.06
	Apartment for rent	114	29.69
	Government dormitory	56	14.58
	With family	52	13.54
	Private dormitory	10	2.60
	With relatives	2	0.52
Place where the student grows	Provincial center	228	59.38
	County center	111	28.91
	Village-town	45	11.72
Do you work?	Yes	66	17.19
	No	318	82.81
Average number of people in the family (person)		3.64	

The ratio of students residing at government dormitories was determined as 14.58 % while the ratio of students living with relatives was determined as 13.54 %. It was determined when the residence locations of the students were

examined that majority has grown up in provincial centers (59.38 %). The ratios of students that grew up in county centers and villages-towns were calculated as 28.91 % and 11.72 % respectively. It was determined that 82.81 % do not work at any job and that 17.19 % are employed. The average number of people in the families of students was determined as 3.64.

Table 2 presents the education levels of the parents. It can be observed when the education levels of the parents are examined that in general the education levels are quite low. Indeed, it was determined that the ratio of primary school graduate mothers is 42.19 % and that the ratio of primary school graduate fathers is 30.47 %. The ratio of university graduate mothers was determined to be very low (10.42 %). The ratio of university graduate fathers was determined to be higher than that of mothers (25.00 %).

Table 2

Education level of mother and father

Education level	Mother		Father	
	n	%	n	%
Primary school	162	42.19	117	30.47
Middle school	98	25.52	69	17.97
High school	84	21.87	102	26.56
University	40	10.42	96	25.00
Total	384	100.00	384	100.00

The occupations of the parents of the students are given in *Table 3*. Accordingly, it was determined that majority of the mothers are housewives (69.79 %). Whereas it was determined that fathers are mostly employed and the ratio of unemployed fathers was quite low (1.30 %). It was observed when the occupations of the fathers are examined that retired fathers are ranked number one (27.60 %) followed by employees (19.79 %), officers (19.53 %), shopkeepers (18.76 %) and self-employment (13.02 %).

Table 3

Occupation of mother and father

Occupation	Mother		Father	
	n	%	n	%
Officer	36	9.38	75	19.53
Employee	30	7.81	76	19.79
Shopkeeper	11	2.86	72	18.76
Retired	24	6.25	106	27.60
Self-employment	15	3.91	50	13.02
Housewife	268	69.79	-	-
Unemployed	-	-	5	1.30
Total	384	100.00	384	100.00

Tables 4 and 5 present the fast food consumption status of the students and the types of fast foods they consume. It was determined that 89.06 % of the students consume fast food and that 10.94 % do not. The highest ranked fast foods consumed were determined in order as steak tartar ala turca (85.96 %), French fries (83.63 %), hamburger (82.75%), toast (81.87%), a pizza with spicy filling (80.99%), Turkish pide (80.70%), pizza (78.95%), döner kebab (77.78%) and chicken tenders (70.76%). Sayılı and Gözener (2013) carried out a study in which it was determined that 71.38 % of the students consume fast food whereas it was determined as a result of the study by Özçiçek *et al.,* (2002) that 88.43 % of the students consume fast food. Kıngır *et al.,* (2015) determined in a study that 25.7 % of the students prefer eating hamburger, 5 % prefer kumpir, 26.7 % prefer steak tartar ala turca, 40.3 % prefer döner kebab, 44.6 % prefer pizza with spicy filling and 15.3 % prefer pizza. Yardımcı *et al.,* (2012) carried out a study as a result of which it was put forth that pizza, döner kebab and hamburger are among the most frequently consumed fast foods.

Table 4

Fast food consumption status of students

Do you consume fast food?	n	%
Yes	342	89.06
No	42	10.94
Total	384	100.00

Table 5

Types of fast food consumed

Types of fast food	n	%*
Steak tartar ala turca	294	85.96
French fries	286	83.63
Hamburger	283	82.75
Pizza	270	78.95
Chicken tenders	242	70.76
A pizza with spicy meat filling	277	80.99
Turkish pide	276	80.70
Baked potato	184	53.80
Tantuni	205	59.94
Sandwich	223	65.20
Toast	280	81.87
Döner kebab	266	77.78
Grilled sheep's intestines	212	61.99
Meatball sandwich	251	73.39

Table 6 shows the frequency of fast food consumption among students. It was observed that

students eat hamburger at most once a month (27.56 %), once every two months (25.09 %) and 1-2 times per week (21.55 %), that they eat pizza once a month (31.48 %), once every three months (23.33 %) and once every two weeks (18.52 %), chicken tenders once a month (25.21 %), once every two weeks (20.25 %) and 1-2 times per week (17.36 %), steak tartar ala turca once a month (27.21 %), once every two weeks (23.81 %) and 1-

2 times per week (21.77 %), pizza with spicy filling once a month (35.02 %) once every two weeks (21.30 %), Turkish pide once a month (34.06 %) and once every two weeks (22.10 %), toast 1-2 times per week (36.79 %), 3-4 times per week (19.64 %) and once every two weeks (18.21 %), döner kebab 1-2 times per week (36.47 %), once every two weeks (19.55 %) and 3-4 times per week (18.05 %).

Table 6

Frequency of fast food consumption

Types of fast food		Frequency of consumption						
		Everyday	1-2 a week	3-4 a week	Once two weeks	Once in a month	Bimonthly	Quarterly
Hamburger	person	3	61	20	71	78	23	27
	%	1.06	21.55	7.07	25.09	27.56	8.13	9.54
Pizza	person	1	24	7	50	85	40	63
	%	0.37	8.89	2.59	18.52	31.48	14.81	23.33
Chicken tenders	person	5	42	19	49	61	26	40
	%	2.07	17.36	7.85	20.25	25.21	10.74	16.53
Steak tartar ala turca	person	6	64	28	70	80	19	27
	%	2.04	21.77	9.52	23.81	27.21	6.46	9.18
A pizza with spicy meat filling	person	2	28	14	59	97	40	37
	%	0.72	10.11	5.05	21.30	35.02	14.44	13.36
Turkish pide	person	2	44	21	61	94	27	27
	%	0.72	15.94	7.61	22.10	34.06	9.78	9.78
Kumpir	person	1	7	5	15	37	36	83
	%	0.54	3.80	2.72	8.15	20.11	19.57	45.11
Tantuni	person	2	17	9	29	46	33	69
	%	0.98	8.29	4.39	14.15	22.44	16.10	33.66
Sandwich	person	15	41	32	35	43	14	43
	%	6.73	18.39	14.35	15.70	19.28	6.28	19.28
Toast	person	27	103	55	51	21	9	14
	%	9.64	36.79	19.64	18.21	7.50	3.21	5.00
Döner kebab	person	17	97	48	52	27	12	13
	%	6.39	36.47	18.05	19.55	10.15	4.51	4.89
Grilled sheep's intestines	person	6	20	17	44	45	19	61
	%	2.83	9.43	8.02	20.75	21.23	8.96	28.77
Meatball sandwich	person	4	53	28	59	66	21	20
	%	1.59	21.12	11.16	23.51	26.29	8.37	7.97
French fries	person	26	114	56	44	26	10	10
	%	9.09	39.86	19.58	15.38	9.09	3.50	3.50

Acar (2016) carried out a study in which it was reported that the number of individuals who consume French fries more than once every day is quite high, that the number of people who consume döner kebab, dürüm, burger products daily has increased intensively and that foods such as chicken tenders, steak tartar ala turca, kumpir,

sandwich, grilled sheep's intestines are not consumed by some of the participants.

Table 7 shows the fast food consumption meals. As can be seen from the table, it has been determined that students consume fast food mostly during dinner (42.69 %) followed respectively by breakfast (26.32 %) and lunch meals. Acar (2016) carried out a study in which it was determined that

students mostly consume fast food products during lunch (34.00 %) and afternoon (46.8 %) meals.

Table 7

Fast food consumption meals

Meals	n	%
Breakfast	90	26.32
Lunch	76	22.22
Dinner	146	42.69
Late night	30	8.77
Total	342	100.00

Table 8 indicates the reasons for fast food consumption of students. As can be seen from the table, students have mostly indicated that they prefer consuming fast food because it is economic (38.60 %) and fast (30.70 %). Sayılı and Gözener (2013) carried out a study in which it was the reasons put forth by students for consuming fast food were determined as; more practical (61.32 %), palate (36.79 %), not liking the menu (15.09 %), not knowing how to cook (13.21 %) and cheaper (12.74 %). Korkmaz (2005) carried out a study as a result of which it was put forth that hygiene, healthy products, quality, filling and price were indicated as the most important factors respectively which influence the decisions of students to purchase fast food products.

Table 8

Reasons for fast food consumption

Consumption reasons	n	%
Economic	132	38.60
Fast	105	30.70
Taste	49	14.33
I like	45	13.16
Satisfying	7	2.05
Hygiene	2	0.58
Healthy	1	0.29
Popular	1	0.29
Total	342	100.00

Table 9 presents the reasons not to consume fast food. Accordingly, majority of the students indicated that it is not healthy (50.00 %) and that they do not like it (38.10 %). The ratio of those who do not consume fast food because it is expensive was determined to be lower (11.90 %). Sayılı and Gözener (2013) carried out a study in which it was put forth that students do not consume fast food because they do not have such a habit (54.12 %) and because it is not healthy and hygienic (42.35 %).

Table 9

Reasons not to consume fast food

Reasons not to consume	n	%
I don't like	16	38.10
Expensive	5	11.90
It is not healthy	21	50.00
Total	42	100.00

Table 10 shows the fast food expenditures and their share in monthly income. The monthly income levels of the students vary between 398.89 TL and 1412.26 TL with the group average calculated as 1412.26. The monthly fast food expenditures of students increase with increasing income groups. Monthly fast food expenditures were determined as 182.67, 186.32, 202.69 and 153.87 TL respectively for groups of <501, 501-1000, 1001-2000 and >2000. Average of all groups was determined as 181.39 TL. It was determined that the shares of fast food expenditures in total income decrease with increasing income levels. Indeed, the share of fast food expenditures in monthly income was determined as 45.79 % for the group with the lowest income, whereas it was calculated as 5.47 % for the group with the highest income. The fast food expenditure share according to the average of all groups was determined as 21.25 %.

Table 10

Fast food expenditures

Income groups (TL)	Income (TL/month)	Fast food expenditures (TL/month)	Share of fast food expenditure (%)
<501	398.89	182.67	45.79
501-1000	911.13	186.32	20.45
1001-2000	1527.72	202.69	13.27
>2000	2811.29	153.87	5.47
Average	1412.26	181.39	21.25

When the opinions of students on healthy nutrition were asked, 64.58 % of the students indicated that they are not eating healthy food while 35.42 % were of the opinion that they are eating healthy food (*Table 11*).

Table 11

Students' opinion about healthy nutrition

Do you think you are eating healthy?	n	%
Yes	136	35.42
No	248	64.58
Total	384	100

The relationships between the fast food consumption of students and their demographic characteristics were analyzed via Chi Square and the results are presented in Table 12. Accordingly, the relationships between the students age,

(p<0.10), number of people in the family (p<0.10) and opinions about healthy nutrition (p<0.01) and fast food consumption were determined to be statistically significant. The relationships between the gender, accommodation, monthly income, place where the student grew up and state of employment with fast food consumption were not determined to be statistically significant. Akbay *et al.,* (2007) carried out a study as a result of which it was put forth that factors such as age, income, education, household size, children and consumer attitude towards fast food price, health issues and child preference have significant impacts on fast food consumption.

Table 12

The relationship between fast food consumption and demographic characteristics

Variables	Pearson χ^2	Degree of freedom	P
Gender	0.149	1	0.700
Age	4.725	2	0.094*
Accommodation	0.472	7	1.000
Income (TL/month)	2.249	3	0.522
Place where the student grows	3.819	3	0.282
Number of people in the family	13.822	8	0.087*
Working in a job	0.925	1	0.336
Opinion about healthy nutrition	57.213	1	0.000***

CONCLUSIONS

It was determined that 66.93 % of the students who participated in the questionnaire were male and 33.07 % were female with majority (53.90 %) in the 21-23 age group, residing in student houses (39.06 %), having monthly average incomes of 1412.26 TL and that they have generally been raised in provincial centers (59.38 %). It was observed that 89.06 % of the students consume fast food with monthly fast food expenditures of 181.39 TL and with fast food expenditures share in monthly incomes of 21.25 %. Steak tartar ala turca, French fries, hamburger, toast, pizza with spicy filling, Turkish pide, pizza, döner kebab and chicken tenders were determined to be the most frequently consumed fast foods. It was determined that students prefer fast foods mostly during dinner and because it is economic and fast. Students who do not consume fast food indicated their reasons for not consuming fast food as that it is not healthy (50.00 %) and that they do not like it (38.10 %). A statistically significant relationship was determined between the age of the students (p<0.10), number of people in the family (p<0.10) and opinions on healthy nutrition

(p<0.01) with fast food consumption. A statistically significant relationship could not be determined between gender, accommodation, monthly income, place where the student grew up and status of employment with fast food consumption. Findings obtained in this and similar studies will help the fast food sector understand consumer behaviors related with fast food consumption and thus make improvements accordingly.

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