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## Fast-Food Consumption Habits of University Students: The Sample of Ankara

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**Abstract:** The aim of this research was to determine fast-food consumption habits of university students. A total of 401 students, of whom 297 were female (74.0%) and 104 were male (26.0%), from different universities in Ankara constituted the sample of the research. It was determined that 98.0% of the students going to a fast-food restaurants. The percentage of those students who prefer to go fast-food both during the week and at the weekend is 43.8%. In the sample, the most preferred fast-food was pizza (285 points), followed by chicken doner (278 points) and hamburger (273 points); while the most preferred beverage was fizzy drinks (57.6%).

**Key words:** Fast-food, University students, consumption habits, Ankara

### INTRODUCTION

In parallel with the rapidly developing technology, eating habits also undergo changes. Although nutrition is important for all segments of the society, it is of a different importance for university students (Erten, 2006). Individuals, who gain independence in this period, start to decide on their eating preferences, to eat out more frequently and to get influenced by their circle of friends more. Therefore, they tend to consume those foods that are deemed unhealthy such as fizzy drinks and fast-food more (Demirezen and Cosansu, 2005). Fast-food has become a significant symbol for the modern culture as it satisfies people in a relatively short time (Ritzer, 1992). In terms of nutrition, fast-food includes high amounts of sodium, sugar, cholesterol and fat (especially saturated fat) but low in vitamins A and C and dietary fiber content (French *et al.*, 2000; Ebbeling *et al.*, 2002; Erman and Ozcelik, 2007; Kuyumcu, 2007). Consuming food outdoors increases calorie intake (Pekcan, 2011) and the majority of foods consumed are hamburger types, french fries, fried chicken, doner, pizza, cold sandwiches and so forth (Rakicioglu *et al.*, 2000). A typical fast-food menu satisfies a significant portion of daily energy need. This research was planned and carried out with the aim of determining fast-food consumption habits of university students.

### MATERIALS AND METHODS

The research sample consisted of 401 (297 female and 104 male) students attending various universities in Ankara. In the research a questionnaire was used as data gathering tool. For more obvious comparisons of students' fast-food preferences, the formula  $T = 3T1 + 2T2 + T3$  was used. In this formula, T shows total score,

T1 shows first preference, T2 shows second preference, and T3 shows third preference (Ozgen and Gonen, 1989). Data obtained in the study were analyzed by using SPSS 16.0 for Windows (Statistical Package for the Social Sciences) package program. Data were tabulated with absolute values and percentages (%). When necessary, arithmetic means and standard deviation values  $\bar{X} \pm SD$  were taken. Percentage values of questions where more than one choice was made were calculated by considering the "n" value for each choice. Data were evaluated by using Chi-Square Significance Test.

### RESULTS AND DISCUSSION

**General information about students:** The mean age of the participants is  $21.39 \pm 1.73$  years (female;  $21.19 \pm 1.50$  years, male;  $21.97 \pm 2.18$  years). Of the students, 16.7% are in their first years, whereas 10.0% second, 38.2% third, 34.4% fourth and 0.7% fifth. 98.8% of them are single and 1.2% are married. Of the female students, 64.0% live in dormitory, 23.6% live in a house with friends, 8.4% live in a house with family, 2.4% live in a house alone, 1.7% live with their relatives. Of the male students, on the other hand, 54.8% live with their friends, 23.1% live in dormitory, 14.4% live with their families, 5.8% live alone in house and 1.9% live with their relatives. Cirpici (2006), similarly, found that female students live mostly in dormitories (49.3%), while male students mostly live in houses with friends (53.6%).

**Students' fast-food consumption habits:** As is seen in Table 1, 40.1% of the participant students consume fast-food rarely, 31.4% 1-2 times a week, 14.7% 3-4 times a week, 5.7% 5-6 times a week and 8.0% everyday.

Table 1: Fast-food consumption conditions

|   | Female (n=297) |       | Male (n=104) |       | Total (n=401) |       |
|---|----------------|-------|--------------|-------|---------------|-------|
|   | n              | %     | n            | %     | n             | %     |
| <b>Fast-food consumption frequency</b>                                    |                |       |              |       |               |       |
| Everyday  | 25             | 8.4   | 7            | 6.6   | 32            | 8.0   |
| 1-2 times a week  | 90             | 30.3  | 36           | 34.5  | 126           | 31.4  |
| 3-4 times a week  | 44             | 14.8  | 15           | 14.8  | 59            | 14.8  |
| 5-6 times a week  | 19             | 6.4   | 4            | 3.7   | 23            | 5.7   |
| Rarely  | 119            | 40.1  | 42           | 40.4  | 161           | 40.1  |
| Chi <sup>2</sup> = 1.615 sd = 4 p>0.05                                    |                |       |              |       |               |       |
| <b>Factors influencing the acquisition of fast-food consumption habit</b> |                |       |              |       |               |       |
| Acquaintances   | 37             | 12.5  | 12           | 11.5  | 49            | 12.2  |
| University life   | 83             | 27.9  | 22           | 21.2  | 105           | 26.2  |
| Inability to cook   | 24             | 8.0   | 17           | 16.3  | 40            | 10.2  |
| Easy access   | 82             | 27.7  | 32           | 30.8  | 114           | 28.5  |
| Taste   | 71             | 23.9  | 21           | 20.2  | 92            | 22.9  |
| Chi <sup>2</sup> = 8.208 sd = 5 p>0.05                                    |                |       |              |       |               |       |
| <b>Going to fast-food restaurants</b>                                     |                |       |              |       |               |       |
| Yes   | 293            | 98.7  | 100          | 96.2  | 393           | 98.0  |
| No  | 4              | 1.3   | 4            | 3.8   | 8             | 2.0   |
| Chi <sup>2</sup> = 2.465 sd = 1 p>0.05                                    |                |       |              |       |               |       |
| <b>Time of going to fast-food restaurant</b>                              |                |       |              |       |               |       |
| Weekdays  | 60             | 20.5  | 22           | 22.0  | 82            | 20.8  |
| Weekend   | 107            | 36.5  | 32           | 32.0  | 139           | 35.4  |
| Both  | 126            | 43.0  | 46           | 46.0  | 172           | 43.8  |
| Total   | 293            | 100.0 | 100          | 100.0 | 393           | 100.0 |
| Chi <sup>2</sup> = 0.666 sd = 2 p>0.05                                    |                |       |              |       |               |       |
| <b>Going to fast-food restaurants</b>                                     |                |       |              |       |               |       |
| With friends  | 286            | 96.3  | 96           | 92.3  | 382           | 95.3  |
| With family   | 5              | 1.7   | 2            | 1.9   | 7             | 1.7   |
| Alone   | 6              | 2.0   | 6            | 5.8   | 12            | 3.0   |
| Chi <sup>2</sup> = 3.772 sd = 3 p>0.05                                    |                |       |              |       |               |       |

It was found that fast-food consumption frequency does not differ with respect to gender (p>0.05). Yoksvad and Jiranyakul (2011) found in their study conducted in Thailand that 25.8% of the participants eat at fast-food restaurants a couple of times a week, while 44.3% of them go to these restaurants a couple of times a month.

Ranked highest among the factors influencing students' acquisition of fast-food consumption habit are easy access (28.5%), university life (26.2%) and taste (22.9%).

In the general sample, the rate of going to fast-food restaurant is high for both genders (female: 98.7%, male: 96.2%). Of the students, 43.8% go to a fast-food restaurant both on weekdays and weekend days, 35.4% on weekend, 20.8% during the week. 96.3% of the females and 92.3% of the males reported that they go to a fast-food restaurant mostly with their friends. It was determined that gender is not a statistically significant determinant on the factors influencing the acquisition of fast-food consumption habit such as going to fast-food restaurants or not, time of going to a fast-food restaurant and companions while eating at a fast-food restaurant (p>0.05).

In parallel with the findings, Sormaz (2006) found that 91.7% of male students and 96.1% of female students going to a fast-food restaurants, 84.2% of males and

88.5% of females go there with friends, 52.1% of male restaurant-goers and 52.6% of female restaurant-goers go on weekends. Ozcelik *et al.* (2007), on the other hand, found that 63.5% of the participants going to a fast-food restaurant with their friends and 48.3% of them go there both on weekdays and weekend days.

The first three factors classified by the participant students as "absolutely important" in their restaurant preferences are taste (general: 72.1%, female: 74.4%, male: 65.4%), cleanliness and hygiene (general: 70.8%, female: 74.1%, male: 61.5%) and product quality (general: 63.3%, female: 63.6%, male: 62.5%). Factors such as brand effect and cleanliness and hygiene were found to be significant in terms of gender (p<0.05).

In the general sample, the most preferred fast-food is pizza (285 points), followed by chicken doner (278 points) and hamburger (273 points). In terms of gender; pizza ranked highest in females (233 points), followed by hamburger (204 points) and chicken doner (187 points); while chicken doner ranked highest in males (91 points), followed by hamburger (69 points) and kebab (65 points). It could be concluded based on these findings that the female participants tend to prefer Western-style foods, whereas males tend to eat traditional fast-foods more.

In a study, most preferred foods were found to be *ettli pide* (Turkish pizza with ground meat), French fries and

Table 2: Factors influencing fast-food restaurant preferences

| Factors                 |   | Absol. unimportant |      | Unimportant |      | Important |      | Absol. important |      | Statistic                            |
|-------------------------|---|--------------------|------|-------------|------|-----------|------|------------------|------|--------------------------------------|
|                         |   | n                  | %    | n           | %    | n         | %    | n                | %    |                                      |
| Taste                   | F | 3                  | 1.0  | 3           | 1.0  | 70        | 23.6 | 221              | 74.4 | Chi <sup>2</sup> =4.908 sd=3 p>0.05  |
|                         | M | 2                  | 1.9  | 0           | 0.0  | 34        | 32.7 | 68               | 65.4 |                                      |
|                         | T | 5                  | 1.2  | 3           | 0.7  | 104       | 25.9 | 289              | 72.1 |                                      |
| Price                   | F | 4                  | 1.3  | 16          | 5.4  | 162       | 54.5 | 115              | 38.7 | Chi <sup>2</sup> =2.785 sd=3 p>0.05  |
|                         | M | 4                  | 3.8  | 6           | 5.8  | 52        | 50.0 | 42               | 40.4 |                                      |
|                         | T | 8                  | 2.0  | 22          | 5.5  | 214       | 53.4 | 157              | 39.2 |                                      |
| Cleanliness and hygiene | F | 5                  | 1.7  | 4           | 1.3  | 68        | 22.9 | 220              | 74.1 | Chi <sup>2</sup> =13.423 sd=3 p<0.05 |
|                         | M | 3                  | 2.9  | 8           | 7.7  | 29        | 27.9 | 64               | 61.5 |                                      |
|                         | T | 8                  | 2.0  | 12          | 3.0  | 97        | 24.2 | 284              | 70.8 |                                      |
| Standard product        | F | 5                  | 1.7  | 57          | 19.2 | 150       | 50.5 | 85               | 28.6 | Chi <sup>2</sup> =2.355 sd=3 p>0.05  |
|                         | M | 3                  | 2.9  | 26          | 25.0 | 49        | 47.1 | 26               | 25.0 |                                      |
|                         | T | 8                  | 2.0  | 83          | 20.7 | 199       | 49.6 | 111              | 27.7 |                                      |
| Product quality         | F | 2                  | 0.7  | 9           | 3.0  | 97        | 32.7 | 189              | 63.6 | Chi <sup>2</sup> =1.227 sd=3 p>0.05  |
|                         | M | 2                  | 1.9  | 3           | 2.9  | 34        | 32.7 | 65               | 62.5 |                                      |
|                         | T | 4                  | 1.0  | 12          | 3.0  | 131       | 32.7 | 254              | 63.3 |                                      |
| Product diversity       | F | 6                  | 2.0  | 36          | 12.1 | 154       | 51.9 | 101              | 34.0 | Chi <sup>2</sup> =1.056 sd=4 p>0.05  |
|                         | M | 1                  | 1.0  | 11          | 10.6 | 53        | 51.0 | 39               | 37.5 |                                      |
|                         | T | 7                  | 1.7  | 47          | 11.7 | 207       | 51.6 | 140              | 34.9 |                                      |
| Fast service            | F | 5                  | 1.6  | 23          | 7.7  | 154       | 51.9 | 115              | 38.7 | Chi <sup>2</sup> =1.120 sd=4 p>0.05  |
|                         | M | 1                  | 1.0  | 10          | 9.6  | 50        | 48.1 | 43               | 41.3 |                                      |
|                         | T | 6                  | 1.4  | 33          | 8.2  | 204       | 50.9 | 158              | 39.4 |                                      |
| Brand effect            | F | 9                  | 3.0  | 39          | 13.1 | 154       | 51.9 | 95               | 32.0 | Chi <sup>2</sup> =22.574 sd=4 p<0.05 |
|                         | M | 11                 | 10.6 | 27          | 26.0 | 38        | 36.5 | 28               | 26.9 |                                      |
|                         | T | 20                 | 4.9  | 66          | 16.5 | 192       | 47.9 | 123              | 30.7 |                                      |
| Atmosphere              | F | 7                  | 2.3  | 30          | 10.1 | 168       | 56.6 | 92               | 31.0 | Chi <sup>2</sup> =11.312 sd=4 p>0.05 |
|                         | M | 8                  | 7.7  | 14          | 13.5 | 45        | 43.3 | 37               | 35.6 |                                      |
|                         | T | 15                 | 3.7  | 44          | 11.0 | 213       | 53.1 | 129              | 32.2 |                                      |
| Habit                   | F | 14                 | 4.7  | 53          | 17.8 | 156       | 52.5 | 74               | 24.9 | Chi <sup>2</sup> =6.829 sd=4 p>0.05  |
|                         | M | 8                  | 7.7  | 27          | 26.0 | 41        | 39.4 | 28               | 26.9 |                                      |
|                         | T | 22                 | 5.5  | 80          | 20.0 | 197       | 49.1 | 102              | 25.4 |                                      |
| Healthy products        | F | 9                  | 3.0  | 16          | 5.4  | 87        | 29.3 | 185              | 62.3 | Chi <sup>2</sup> =3.960 sd=4 p>0.05  |
|                         | M | 5                  | 4.8  | 7           | 6.7  | 38        | 36.5 | 54               | 51.9 |                                      |
|                         | T | 14                 | 3.5  | 23          | 5.7  | 125       | 31.2 | 239              | 59.6 |                                      |

F: Female, M: Male, T: Total, Absol.: Absolutely

Table 3: Students' fast-food preferences (n=401). Table 3 shows the data related to the most-preferred six fast-foods

| Food   | Gender | 1. Preference | 2. Preference | 3. Preference | Total | Score |
|--|--------|---------------|---------------|---------------|-------|-------|
| Pizza  | Female | 32            | 50            | 37            | 119   | 233   |
|  | Male   | 5             | 15            | 7             | 27    | 52    |
|  | Total  | 37            | 65            | 44            | 146   | 285   |
| Hamburger  | Female | 44            | 25            | 22            | 91    | 204   |
|  | Male   | 19            | 3             | 6             | 28    | 69    |
|  | Total  | 63            | 28            | 28            | 119   | 273   |
| Kumpir (stuffed and baked potato)                | Female | 7             | 18            | 26            | 51    | 83    |
|  | Male   | -             | -             | 4             | 4     | 4     |
|  | Total  | 7             | 18            | 30            | 55    | 87    |
| Chicken doner                                    | Female | 39            | 24            | 22            | 85    | 187   |
|  | Male   | 22            | 9             | 7             | 38    | 91    |
|  | Total  | 61            | 33            | 29            | 123   | 278   |
| Pide, lahmacun (pancake with spicy meat filling) | Female | 27            | 29            | 22            | 78    | 161   |
|  | Male   | 5             | 10            | 14            | 29    | 49    |
|  | Total  | 32            | 39            | 36            | 107   | 210   |
| Kebab  | Female | 18            | 15            | 24            | 57    | 108   |
|  | Male   | 10            | 14            | 7             | 31    | 65    |
|  | Total  | 28            | 29            | 31            | 88    | 173   |

hamburger among females and *etli pide*, meat doner and hamburger among males (Surucuoglu and Cakiroglu, 2000).

Table 4 shows the consumption frequencies of the most-preferred fast-foods.

As Table 4 shows, the fast-food with the highest rate of non-consumption is hamburger among females (33.0%) and *kumpir* among males (48.1%). 14.1% of the participant female students consume hamburger and chicken doner and 30.8% the males consume chicken

Table 4: Students' fast-food consumption frequencies

| Food          |   | Everyday |     | 3-4 times a week |     | 1-2 times a week |      | Once in 15 days |      | Once a month |      | None |      | Statistic                               |
|---------------|---|----------|-----|------------------|-----|------------------|------|-----------------|------|--------------|------|------|------|---|
|               |   | n        | %   | n                | %   | n                | %    | n               | %    | n            | %    | n    | %    |   |
| Hamburger     | F | 2        | 0.7 | 4                | 1.3 | 42               | 14.1 | 62              | 20.9 | 89           | 30.0 | 98   | 33.0 | Chi <sup>2</sup> =12.251 sd=5<br>p>0.05 |
|               | M | 1        | 1.0 | 5                | 4.8 | 19               | 18.3 | 19              | 18.3 | 17           | 16.3 | 43   | 41.3 |   |
|               | T | 3        | 0.7 | 9                | 2.2 | 61               | 15.2 | 81              | 20.2 | 106          | 26.4 | 141  | 35.2 |   |
| Pizza         | F | -        | -   | 3                | 1.0 | 36               | 12.1 | 88              | 29.6 | 130          | 43.8 | 40   | 13.5 | Chi <sup>2</sup> =9.022 sd=5<br>p>0.05  |
|               | M | 1        | 1.0 | 3                | 2.9 | 11               | 10.6 | 30              | 28.8 | 37           | 35.6 | 22   | 21.2 |   |
|               | T | 1        | 0.2 | 6                | 1.5 | 47               | 11.7 | 118             | 29.4 | 167          | 41.6 | 62   | 15.5 |   |
| Kumpir        | F | 3        | 1.0 | 5                | 1.7 | 30               | 10.1 | 55              | 18.5 | 111          | 37.4 | 93   | 31.3 | Chi <sup>2</sup> =15.679 sd=5<br>p<0.05 |
|               | M | -        | -   | 2                | 1.9 | 6                | 5.8  | 7               | 6.7  | 39           | 37.5 | 50   | 48.1 |   |
|               | T | 3        | 0.7 | 7                | 1.7 | 36               | 9.0  | 62              | 15.5 | 150          | 37.4 | 143  | 35.7 |   |
| Chicken doner | F | 5        | 1.7 | 8                | 2.7 | 42               | 14.1 | 71              | 23.9 | 94           | 31.6 | 77   | 25.9 | Chi <sup>2</sup> =31.119 sd=5<br>p<0.05 |
|               | M | 3        | 2.9 | 9                | 8.7 | 32               | 30.8 | 29              | 27.9 | 19           | 18.3 | 12   | 11.5 |   |
|               | T | 8        | 2.0 | 17               | 4.2 | 74               | 18.5 | 100             | 24.9 | 113          | 28.2 | 89   | 22.2 |   |
| Pide lahmacun | F | 5        | 1.7 | 11               | 3.7 | 35               | 11.8 | 66              | 22.2 | 121          | 40.7 | 59   | 19.9 | Chi <sup>2</sup> =15.705 sd=5<br>p<0.05 |
|               | M | -        | -   | 2                | 1.9 | 25               | 24.0 | 30              | 28.8 | 28           | 26.9 | 19   | 18.3 |   |
|               | T | 5        | 1.2 | 13               | 3.2 | 60               | 15.0 | 96              | 23.9 | 149          | 37.2 | 78   | 19.5 |   |
| Kebab         | F | 2        | 0.7 | 2                | 0.7 | 29               | 9.8  | 64              | 21.5 | 126          | 42.4 | 74   | 24.9 | Chi <sup>2</sup> =44.758 sd=5<br>p<0.05 |
|               | M | -        | -   | 6                | 5.8 | 26               | 25.0 | 37              | 35.6 | 23           | 22.1 | 12   | 11.5 |   |
|               | T | 2        | 0.5 | 8                | 2.0 | 55               | 13.7 | 101             | 25.2 | 149          | 37.2 | 86   | 21.4 |   |

F: Female, M: Male, T: Total

Table 5: Drink consumption along with fast-food

| Drink                               | Female |       | Male |       | Total |       |
|-------------------------------------|--------|-------|------|-------|-------|-------|
|                                     | n      | %     | n    | %     | n     | %     |
| Yes                                 | 237    | 79.8  | 79   | 76.0  | 316   | 78.8  |
| No                                  | 60     | 20.2  | 25   | 24.0  | 85    | 21.2  |
| Total                               | 297    | 100.0 | 104  | 100.0 | 401   | 100.0 |
| Chi <sup>2</sup> =0.679 sd=1 p>0.05 |        |       |      |       |       |       |
| <b>Drinks consumed</b>              |        |       |      |       |       |       |
| Fizzy drinks (kola etc.)            | 133    | 56.2  | 49   | 62.1  | 182   | 57.6  |
| Ayran                               | 65     | 27.4  | 14   | 17.7  | 79    | 25.0  |
| Ready-made fruit juice              | 20     | 8.4   | 6    | 7.6   | 26    | 8.2   |
| Fresh fruit juice                   | 6      | 2.5   | 5    | 6.3   | 11    | 3.5   |
| Ice tea                             | 13     | 5.5   | 5    | 6.3   | 18    | 5.7   |
| Total                               | 237    | 100.0 | 79   | 100.0 | 316   | 100.0 |
| Chi <sup>2</sup> =8.647 sd=6 p>0.05 |        |       |      |       |       |       |

doner 1-2 times a week. 29.6% of the females eat pizza and 28.8% of the males eat pizza and/or *pide-lahmacun* once in fifteen days. 42.4% of the females eat kebab and 37.5% of the males eat kumpir once in a month. Gender was found to be a significant factor on the consumption frequencies of *kumpir*, chicken doner, *pide-lahmacun* and kebab (p<0.05).

Elmacioglu (1996), in the study conducted to determine the priorities in the fast-food industry, determined that 10.9% of the participants prefer hamburger and 10.7% prefer doner. In Ekeyilmaz's study (2006), the most preferred foods were found to be kebab, lahmacun, meat doner, pizza and hamburger, respectively. Findings of the current study are in parallel with them.

While 78.8% of the students consume drinks at fast-food restaurants, 21.2% do not. Of those who consume drinks, 57.6% consume fizzy drinks and 25.0% consume ayran. 56.2% of the females and 62.1% of the males prefer fizzy drinks. The least-preferred drink among

females is fresh fruit juice (2.5%) and among males is fresh fruit juice and ice tea (6.3%). Other studies also determined that cola and ayran are the most-preferred drinks (Ozcelik and Surucuoglu, 1998; Surucuoglu and Cakiroglu, 2000). In order to render fast-food menus healthier, drinks rich in calcium and vitamin C such as ayran and fresh fruit juice should be included along with fizzy drinks.

**Conclusion and recommendations:** In this research, it was determined that the rate of fast-food consuming university students is high. Such a diet has become a part of today's way of living. In fast-food menus, some nutrients are inadequate whereas some others are oversupplied. Offering healthy options in these menus will help people keep healthy. It is believed that healthier menus will be more available in fast-food restaurants if inspections on menus are performed and nutrition facts are written on menus more clearly.

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