ORIGINAL ARTICLE

Fast Food Consumption among University Students, Saudi Arabia A Cross Sectional Study

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Abstract

Introduction: Fast food consumption (FFC) is one of the most common eating habits nowadays with escalated prevalence in the recent decades. The study aimed to find the prevalence of FFC among the University students, to identify the factors that contributes to the FFC among them, and to test student's level of awareness regarding the health issues occur due to the consumption of fast food. **Methodology:** A total of 505 students (325) males and (180) females aged between 18-26 years were randomly chosen from Colleges of Majmaah University. **Results.** 41.6%) of the participants choose fast food as their usual meal. Male students consumed fast food as a usual meal more and female students were attracted more by taste and advertisements. Consuming fast food and staying away from the family was significantly more in male students as compared to female students. **Conclusions:** The prevalence of fast food consumption among Majmaah University students is very high.

Key Words: Fast food consumption, University students, World health organization, electronic media.

الملخص

مقدمة: تناول الوجبات السريعة هي واحدة من العادات الغذائية الأكثر شيوعا في الوقت الحاضر مع تصاعد معدل انتشارها في العقود الأخيرة. تعد الوجبات السريعة أحد عوامل الخطر العديد من الأمراض، وقد لوحظ ان الخطر يزداد مع الزيادة في استهلاك الوجبات السريعة. أهداف: تهدف هذه الدراسة لمعرفة نسبة انتشار تناول الوجبات السريعة بين طلاب جامعة ماجمعة كذلك تحديد العوامل التي تساهم في استهلاكها بين هم، واتجاهاتهم نحو الطلب بسبب أن الاضرار الصحية التي تحدثها نتيجة لاستهلاك الوجبات السريعة. **الطريقة:** هذه دراسة قطعية من يناير 2013 مايو 2014 تشمل عينة الدراسة الطلاب الذين يدرسون في جامعة ماجمعة من الجنسين. شملت الدراسة ما مجموعه 505 طالبا (325) من الذكور و (180) من الإناث الذين تتراوح أعمارهم بين 18-26 عاما تم اختيارهم عشوائيا من كليات جامعة ماجمعة. **النتائج:** كان ما مجموعه 41.6٪ (159) من المشاركين ذكور، 51 إناث يعتبر الوجبات السريعة هي الوجبة اليومية المعتادة. وقد لوحظ ارتفاع هذه النسبة من قبل الطلاب مقارنة مع الطالبات (P <0.001). كذلك بينت الدراسة ان العائلات تجذب الطالبات الوجبات السريعة أكثر من الطلاب (P <0.001). **الاستنتاج:** ارتفاع معدل تناول الوجبات السريعة بين طلاب جامعة ماجمعة. حيث كان أكثر من ربع المشاركين يستهلكون بشكل يومي الوجبات السريعة تعد هذه النسبة مرتفعة ويشكل قلق كبير يستدعي معالجة ذلك وزيادة الوعي لدى طلاب الجامعة حول آثار الصحية الناجمة عن استهلاك الوجبات السريعة.

Introduction: The term "fast food" was recognized in a dictionary by Merriam–Webster in 1951.[1] Fast food is a term given to food that can be prepared and served quickly. Usually it is a term given to junk food or food preheated or precooked. It is one of the largest influences on the community as a whole especially on children, teens, and even adults.[2] It is believed that people who consume fast food on daily basis lacks good nutrition and physical condition. Fast food is definitely a problem that concerns us as a society.[3] The fast food market

in Saudi Arabia is expected to reach $4.5 billion in gross sales by 2015, driven by growing demand from its population,[4] while obesity considered as a risk factor for many disease, consumption of fast food are reasons for increasing prevalence of obesity.[5] One study in United States reported that during 2007–2010, adults consumed, on average, 11.3% of their total daily calories from fast food; the highest percentage of calories from fast food was consumed among adults who were aged 20–39.[6] While in Saudi Arabia there are not clear statistics about consumption of fast food, but one news indicate that the rate of consumption of fast food among Saudi families reached 85% daily.[7] Available studies in Eastern Mediterranean countries indicate that fast food related disease like obesity has reached at an alarming level among both children and adults.[8] Another study conducted in Karachi, Pakistan, revealed that 58.3% students were of normal weight and 41.7% were overweight. 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.[9] 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. Fast-food has become a significant symbol for the modern culture as it satisfies people in a relatively short time.[10] College students are highly exposed to unhealthy eating habits leading to body weight gain.[11] According to WHO, obesity is generally more common among women than men.[12] Therefore, we planned this study to determine the prevalence of fast food consumption among Colleges' students; to associate gender with factors that leads to fast food consumption and to measure the level of awareness in association with gender about fast food consumption effects in students studying at Almajmaah University.

Methodology

It was an observational cross-sectional study conducted in Majmaah University, the main campus is loacted in Majmmah City and has branches in other cities like, Alzulfi, Alghat, Hotatsudair, Ushirat Sudair, Rumah, and others. The study was conducted from December 2013 - May 2014. The target population was students of either gender studying in Majmaah University. A total of 505 students (325) males and (180) females aged between 18-26 years were randomly chosen from Colleges of Almajmaah University. The data was collected by Simple random sampling, using computer generated list Using direct investigation method. The questionnaire was adapted from study of "Consumption of Fast Food among the students of Faculty Technology at University Malaysia Pahang" and was validated by pilot study. Prior to filling out the questionnaire, the students were informed about the study and were given

instructions about how to fill out the questionnaire completely and truthfully. Ethical approval was also soughted from Department of Essential and Health Sciences Research Center at Majmaah University. The data entered and analyzed by using SPSS 22.0. Mean±S.D is reported for quantitative variables like age etc. Frequencies and percentages are reported for qualitative variables. Pearson Chi-square and Fisher Exact test were applied to observe associations between qualitative variables. A p-value of <0.05 was considered as statistically significant.

Results

The prevalence of fast food consumption among Majmmah University students was calculated on basis of two parameters; as a usual meal and weekly consumption. Two hundred ten participants (41.6%) choose fast food as their usual meal.

Fast food as a usual meal was consumed more by male students as compared to female student (p<0.001). Majority of the students 430 (85.15%) were consuming fast food at least once a week. Two hundred and one (39.8%) of the participants (137 males, 64 females) were consuming fast food 2-3 times a week. Sixty (11.9%) of the participants (54 males, 6 females) were consuming fast food 4-5 times a week. While 65 (12.9%) of the participants (55 male, 10 female) were consuming fast food more than 5 times per week.

Table1: Fast food consumption among affected population.

Type of disease	Yes	No
Obesity	395 (78.2%)	192(38%)
Hypercholesterolemia	183 (36.2%)	322 (63.8%)
Heart Disease	137 (27.1%)	368 (72.9%)
Diabetes	131 (25.9%)	374 (74.1%)
Hypertension	88 (17.4%)	417 (82.6%)
Gallstones	35 (6.9%)	470 (93.1%)
Arthritis	30 (5.9%)	475 (94.1%)
Sleep Apnea	24 (4.8%)	481 (95.2%)
Others	19 (3.8%)	486 (96.2%)

Weekly consumption of fast food was more by male students as compared to female students (p<0.001). About factors that leads to fast food consumption, we asked questions about: Distances of restaurants, taste, advertisements, lack of cooking skills, time limitation, prices, friends, and staying away of family. Significant association was observed between gender of participants and taste (p<0.001), showing that female students were attracted by taste more than male students.

Female students were attracted to advertisements more than male students (p<0.001). Consuming fast food and staying away from the family was significantly more in male students as compared to female students (p<0.001). We also tried to measure the level of awareness among our participants regarding fast food consumption. About knowing of diseases

that fast food may cause 273 (54.1%) of participants knew about it.

Table 2: Major factors affecting fast food consumption.

Factor	Yes	No
Are Restaurants near?	313 (62%)	192(38%)
Restaurants Distance Effect	304 (60.2%)	201 (39.8%)
Taste	218 (43.2%)	287 (56.8%)
Friends	168 (33.3%)	337 (66.7%)
Time Limitations	151 (29.9%)	354 (70.1%)
Staying away of Family	119 (23.6%)	386 (76.4%)
Advertisements	86 (17%)	419 (83%)
Lacking of Cooking Skills	66 (13.1%)	439 (86.9%)
Prices	58 (11.5%)	447 (88.5%)

Majority of the students 395 (78.2%) responded that obesity is a major disease caused by consumption of fast food, followed by one quarter of the students who said hypercholesterolemia and about one fifth of the students said diabetes, hypertension and heart disease. Significant association was observed between gender of participants and knowing about diseases, $p<0.042$, showing that female students knowledge about diseases that fast food may cause was more than male students.

No significant association was observed between Gender and knowledge about natural information and knowledge about ingredients on choosing fast food meals. About trying to lower or stop fast food consumption, 434 (85.9%) students answered "yes", whereas, 68 (13.5%) of the students said they will not stop or try to lower their fast food consumption.

Discussion

Our study revealed that the prevalence of fast food consumption among Almajmaah university male and female students is high. In our study 85.15% of the students aged 18 to 26 years went to fast-food restaurants at least once per week. Our study is the first of its kind in the Kingdom which aims to determine prevalence of fast food consumption among important bridge of the community i.e. university students. A cross-sectional study conducted at Rass, Qassim University, Saudi Arabia[14] revealed that 21.8% of the students were overweight and 15.7% were obese with strong association to the dietary habits including fast food consumption, but it differs than our study as the prevalence in 85.15%. In another similar study[15] on frequent consumption of fast foods, low servings per day of fruits, vegetables, milk and dairy products, frequent consumption of sweets, candy and carbonated drinks was mild to moderate, but in our study prevalence is much higher. That may be because it was conducted on college students who are usually busy with educational activities with limited time, more responsibilities resulting in more exposure to fast food. Another study conducted in Dammam, Saudi Arabia[16] revealed that fast food rich in fat and calories from restaurants was popular among majority (98.2%) of the students. In our study, the prevalence is also high as it involves young

female students with almost same circumstances. Yet another study conducted on association between fast-food consumption and obesity in Michigan adults[17] showed that 80% of adults went to fast-food restaurants at least once per month which is as high prevalence as in our study because of similar age groups, educational activities and family issues. We compared our results related to reasons for eating fast food with a relatively similar study conducted in 2009;[18] the distance from the restaurant (60.2% Vs 71%), the taste (43.2% Vs 69%), sitting with friends (33.3% Vs 31%), limited time (29.9% Vs 46.8%) and being away from family (23.6% Vs 21%) advertisements (17% Vs 47%). In our study when gender differences were compared in relation to fast food consumption and nutrition self-assessments, female students' significantly strongly agreed with the supra stated statements than males, when this compared with a study[18] conducted in 2008 no significant association was observed. Regarding knowledge about the diseases that fast food disease may cause, females significantly knew about it more than the males ($p>0.001$). When the classification of diseases were studied: fast food causes; obesity was reported by (78.2%) of the participants, hypercholesterolemia (36.2%), heart diseases (27.1%), diabetes (25.9%), hypertension (17.4%), gallstones (6.9%), arthritis (5.9%) and sleep apnea (4.8%). When these results were compared to a study conducted in Bangladesh[18] approximately 98% students were concerned about the negative effects associated with fast food consumption, and 60% pointed out obesity and weight gain as the most prominent consequence of excessive fast food consumption. About trying to lower or stop fast food consumption a total of 85.9 % want to reduced, lower, or stop their fast food consumption. No similar study was found to compare our results with.

Recommendation

We recommend to the fast food restaurants; to offer alternative meals with more healthy/natural components; awareness among the community should be developed related to diseases that fast food consumption causes, for this help from print or electronic media may be soughed.

Conclusion

The prevalence of fast food consumption among Almajmaah University students is very high. More than one quarter of the participants were consuming fast food daily which itself is alarming. Some intervention awareness programmed should be conducted to minimize the harmful effects of fast food consumption.

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