
Fast food consumption Drift in Pakistani population

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Abstract: Objective: To appraise the use of various fast foods in different age groups among males and females and study its drift in Pakistani population. Method: The study was conducted from February to June 2013 in Karachi, Pakistan on a structured questionnaire. A total of n=489 individuals participated in this study among which n= 222 were males and n= 267 were females whose ages were grouped as <18 years, 18-40 years and >40 years. Fast food was categorized as fries, burgers, rolls, chicken broast and pizza whereas fibrous and vegetable diet included all vegetables in this study. Different types of diseases i.e. diabetes, asthma, hypertension, allergy, GI disorders and skin infections were also enquired about from the respondents consuming fast food. Result: The diet comprising fast food is high in energy and energy density. Fast food consumption has been reported to go along with large amounts of soft drinks which not only augments the weight of the individuals but also put them at danger to different kinds of ailments. In our study, both the genders were reported to take fast food on weekly basis, highest consumed in the age group of 18-40 years. Most popular fast food consumed among the females (n=63) was fries + burger and that in males (n=69) was more than one type of fast food. The consumption of cold drinks with fast food was seen more in males (n=105) than in females (n=90) and mostly in the age group of 18-40 years (males n=72 and females n=45). The consumption of fast food more than one time was observed more in the males. Both the genders belonged to age group of 18-40 years who exercised regularly. The frequency of use of fibrous/vegetable diet was higher in females (n=90) as compared to the male gender (n=117) in the age group of 18-40 years ($p=0.033$, $\chi^2=8.706$). It was observed that the increase in weight was more in females under 18 years of age and more in males of age 18-40 years. It was also found that overall (n=72) males and (n=81) females were suffering from various diseases and yet were consuming fast food. Conclusion: Frequent fast food consumption may contribute to weight gain and with a sedentary life style can put the individuals at stake of different kinds of diseases and high health burden. Knowledge regarding healthy diet and healthy life style can contribute towards a society of people with better productivity and economy.

Keywords: Fast Food, Beverages, Obesity, Energy

1. Introduction

The Americans work for added hours and do even more than one job nowadays than years ago. The married couples are working even longer as seen over the past three decades. Women are working more today than in the past, especially single mothers [1]. Due to these circumstances, people have very less time for preparing their food at their homes and they prefer to have it away from home. It was reported in 1993 that about 38 percent of total food expenditure dollars were used up on food away from home which augmented to 42 percent as in reports of 2001 [2].

It was observed that due to increased frequency of food intake in fast food restaurants, women had higher energy and fats intake and hence this resulted in greater body weight [3]. Eating out frequently is associated with increased intake of energy [4]. The energy intake of the Americans has amplified over the past 2 decades and this has been observed athwart age groups [5]. Food and beverages that are provided in fast food places regularly come in large share volume which also contributes to increase in weight of the people [6].

Nowadays, it is seen that the stratum of physical activity has reduced increasing the prevalence of obesity and vital changes in the diet of individuals have come about. Some

of these changes are due to the consumption of food from restaurant and fast-food places. Today, a common American devour much of the energy at restaurants and fast-food places especially the young adults (aged 19 to 39) who take close to 30% of their energy from such places whereas older individuals and the elderly devour much less. More reports on greater food utilization in restaurants and fast-food establishments are also seen [7].

Fast food restaurants frequently aim younger generation with television and Internet advertising. Childhood corpulence and other disorders like diabetes may be linked to the haughty fat and sodium content of such fast foods. The majority of nutritionists and numerous authors sensed that the youth was eating more fast-foods outside the home than their elders [8]. The fast food industry at first progressed in the 1940s in California which altered the consumption practice of numerous countries globally including Asian countries [9]. Fast food consumption has increased drastically in Pakistan due to different aspects such as attraction for eating out, socialization, urbanization, etc. People like eating out in modern ways due to globalization that has affected the preparation and presentation of fast food. Urbanization also amends standard of living and it had been affirmed that food requisite is related to it. It was found that the Western style food consumption augmented in the developing countries as the income position of the people improved [10].

Wood studied in Houston that merely 3% of children's meals accessible at a series of fast food restaurants met dietary values as described by the National School Lunch Program [11]. Research also indicated that those who ate fast food at home and also those students who attended school close to fast food restaurants were more probable to be overweight [12]. Some other researchers also tried to find such links and the rates of heavy students in California [13]. In Turkey, about one-third of the research participants chose fast food as snack for once or more times daily while only 15% consumed the recommended daily amount of fruits and vegetables [14]. Goyal and Singh (2007) revealed in their research that Indian young consumers had ardor to visit fast food places for enjoyment but home food was their first preference [15]. People feel contentment in having fast food daily, although it is detrimental to their health. Cancer is also a cause of fast food consumption and it can be 25% due to high fat and fried food [16].

Policy makers in many cities have countered by restraining the ease of access or content of fast food, or by requiring posting of the caloric content of the meals [17]. Jekanowski, Binkley, and Eales (2001) also did studies to evaluate the upshot of cost, earnings, and demographic distinctiveness on fast food [18]. Ekelund and Watson (1991), too, found that fast food utilization was empirically related to opportunity expenditure of the household [19].

2. Methodology

The study was conducted from February to June 2013 in

Karachi, Pakistan on a structured questionnaire developed by the researchers from different published sources. A total of $n=489$ individuals participated in this study among which $n=222(45\%)$ were males and $n=267(55\%)$ were females. Ages of <18 years, 18-40 years and >40 years were grouped in both the genders so as to have appropriate calculations regarding various questions. Fries, burgers, rolls, chicken broast and pizza were categorized as fast food in this study. Fibrous and vegetable diet included all vegetables especially spinach, lady finger and all types of fruits in this study. Different types of diseases were also enquired in the questionnaire which included diabetes, asthma, hypertension, allergy, GI disorders and skin infections despite of having which people consumed fast food on regular basis. The data was analyzed statistically using SPSS version 19.0

3. Results and Discussions

Fast food establishments are well-liked places for food consumption than homes. Fast food is swift, handy, and somewhat economical for the quantity of food attained, and is striking to all age groups [2, 3, 6, 20]. Fast food establishments have increased much and public is also consuming food at such places more than many years ago [2, 3, 6, 21, 22]. As shown in Table 1, majority of the males consumed fast food on monthly ($n=24, 11\%$) and weekly ($n=138, 62\%$) basis, highest consumed in the age group of 18-40 years on weekly basis. In females, highest fast food consumption was recorded on weekly ($n=135, 50.5\%$) and then on monthly ($n=96, 36\%$) basis, again highest consumed in the age group of 18-40 years.

Table 1. Frequency of fast food intake in various age groups

Gender	Age	Frequency of fast food intake		
		Daily	Weekly	Monthly
Male	Under 18	18	42	06
	18-40 Years	39	84	03
	40 Above	03	12	15
Total		60	138	24
Female	Under 18	24	54	36
	18-40 Years	12	78	39
	40 Above	00	03	21
Total		36	135	96

The male respondents of all ages consumed particularly more than one type of fast food (Table 2). The types of food intake emulate the move in utilization from at home to away from home [23, 24]. Such food includes enlarged intakes of salty refreshments, soft drinks, and pizza [25, 26]. The female respondents of various age groups showed difference in their food choice in which fries were consumed at a trendy level (Table 2). It was seen in 1996 that all of the consumed burgers and 50% or more of the fries eaten by all age groups were consumed in restaurant or fast-food places. Therefore, it revealed that easily obtainable items are prepared at home only by a very few

individuals [27, 28]. Table 2 reveals that the frequency of consuming various fast foods declined with age in both the genders esp. at the age >40 years. Various other researchers have stated that some age groups, (19 to 39 years),

consume approximately 30% of their vigor from restaurant and fast-food places but older age groups consume much less [7].

Table 2. Types of fast food consumed by various age groups

Gender	Age	Types of fast food								Total
		Fries (A)	Burger (B)	Roll (C)	Broast (D)	More Than One (A-D)	Pizza	Fries + Burger (combination)	Fries + Burger + Pizza (combination)	
Male	Under 18	18	6	00	03	21	0	15	03	66
	18-40 Years	03	36	00	06	33	6	21	21	126
	40 Above	00	03	03	06	15	0	00	03	30
Total		21	45	03	15	69	6	36	27	222
Female	Under 18	24	6	03	03	15	0	39	24	114
	18-40 Years	21	30	03	03	36	3	21	12	129
	40 Above	00	06	00	03	06	3	03	03	24
Total		45	42	06	09	57	6	63	39	267

Table 3. Frequency of taking fast food by different age groups

Gender	Age	Time of Taking Fast Food				Total
		Lunch	Evening	Dinner	More Than One Time	
Male	Under 18	21	33	09	03	66
	18-40 Years	27	27	36	36	126
	40 Above	03	06	15	06	30
Total		51	66	60	45	222
Female	Under 18	09	81	09	15	114
	18-40 Years	30	78	06	12	126
	40 Above	00	12	12	00	24
Total		39	171	27	27	264

Table 4. Use of cold drink with fast food by various age groups

Gender	Age	Use of Cold Drink With Fast Food		
		Yes	No	Total
Male	Under 18	27	36	03
	18-40 Years	72	48	06
	40 Above	06	21	00
Total		105	105	09
Female	Under 18	42	63	09
	18-40 Years	45	66	18
	40 Above	03	09	09
Total		90	138	36

As seen from the Table 3, males of age 18-40 years mainly took fast food as dinner (n=3, 28.6 %) whereas females under 18 years and 18-40 years of age had fast food in the evening (n=81, 71% and n=78, 60% respectively). The consumption of fast food more than one time was observed more in the males than in the females (p=0.012, $\chi^2=18.031$). Consumption of cold drinks with fast food (Table 4) was seen more in males (n=105, 47%) than in females (n=90, 34%) (p= <0.001, $\chi^2=17.797$) and in both the genders, the highest consumption was observed in the age group of 18-40 years (males n=72, 57% and females n=45, 35%). More males (n=96, 43.2%) did regular

exercise than the females (n=72, 27.3 %) on regular basis (p<0.001, $\chi^2=14.476$) as shown in Table 5. Both the genders belonged to age group of 18-40 years. The frequency of use of fibrous diet was higher in females overall as compared to the male gender (p=0.033, $\chi^2= 8.706$) i.e. n=237(89%) and n=174(78%) respectively (Table 6). In both the genders, age group of 18-40 years used fibrous diet the most (n=90, 71% males and n=117, 91% females).

Table 5. Regular exercise in males and females

Gender	Age	Regular Exercise		Total
		Yes	No	
Male	Under 18	27	39	66
	18-40 Years	60	66	126
	40 Above	09	18	27
Total		96	123	219
Female	Under 18	21	93	114
	18-40 Years	45	81	126
	40 Above	06	18	24
Total		72	192	264

Table 6. Use of fruits/vegetables in diet by various age groups

Gender	Age	Use Of Fruits/Vegetables				Total
		Spinach	Lady Finger	Fruits	All Vegetables	
Male	Under 18	03	12	0	42	57
	18-40 Years	12	00	6	72	90
	40 Above	00	06	0	21	27
Total		15	18	6	135	174
Female	Under 18	06	06	0	87	99
	18-40 Years	09	03	6	99	117
	40 Above	00	00	0	21	21
Total		15	09	6	207	237

Increase in weight due to fast food consumption (Table 7) was observed more in females <18 years of age and more in males of age group 18-40 years. Slight difference in the increase in weight was observed in both the genders in age

group >40 years. It had been reported that intake of food outside the home mounted, adding to enlarged energy intake and also increasing obesity among individuals [29]. Enlarged energy intake could be ascribed to the consumption of large fraction volume of foods and beverages [30, 31].

Table 7. Weight increase in various age groups

Gender	Age	Weight Increase		Total
		Yes	No	
Male	Under 18	21	45	66
	18-40 Years	78	48	126
	40 Above	18	12	30
Total		117	105	222
Female	Under 18	51	60	111
	18-40 Years	54	75	129
	40 Above	12	12	24
Total		117	147	264

The overall diet of all individuals must be focused due to the prevalence of obesity coupled with co-morbidities [32, 33, 34]. From Table 8, it can be seen that out of 222 males, n=72 (32.4 %) were suffering from various diseases and out of 264 females, n=81 (30.7 %) had different diseases; in both the genders, GIT diseases were the most common i.e. n=24, 10.1 % in males and n=27, 10.2 % in females. Various researches revealed that fast food was high in energy density and provided 158 to 163 kilocalories per 100 grams of food consumed. The diet of fast food eaters was poorer in vitamin A, carotenes, and vitamin C density which are good sources for the promotion of good health and for the prevention of cancer also [35-39]. Fast food was also linked to consumption of a diet squat in calcium and magnesium density which are related with bone health of individuals [40-44]. In the U.S., 30.5 percent adults are obese and obesity endangers individuals to various ailments like stroke, hypertension, diabetes, etc [45-47].

Table 8. Diseases existing in various age groups consuming fast food

Gender	Age	Kind Of Diseases								Total
		CVD	DM	HTN	Allergy	Skin Infection	GIT	Respiratory	Other	
Male	Under 18	0	0	00	03	03	06	0	00	12
	18-40 Years	0	3	03	06	09	18	0	00	39
	40 Above	3	0	09	00	00	00	6	03	21
Total		3	3	12	09	12	24	6	03	72
Female	Under 18	0	0	00	09	06	03	0	12	30
	18-40 Years	0	3	03	06	00	21	3	03	39
	40 Above	0	3	06	00	00	03	0	00	12
Total		0	6	09	15	06	27	3	15	81

It is important for public that they should be aware of the nutritional aspects of the food they consume at restaurants and fast food places. One significant approach of shifting the diet of people is to persuade them to eat at home more and make better selection at restaurants and fast food establishments. The consumers should be encouraged to eat more fruits and vegetables and smaller amounts of high-fat mixed-grain-based food. Through these interventions, the mount in obesity will be restricted along with the co-morbidities in the people, hence producing healthy communities worldwide [48].

4. Conclusion

Fast food is convenient and tasty though prepared with low nourishing or unhealthy ingredients. Fast food companies are targeting youngsters through great promotion strategies, delicious recipes and attractive advertisement. There are much greater side effects of fast food and people are unaware of its ill consequences which can tend to many detrimental diseases; extended use of fast food is also a cause of health problems and obesity. Working class prefers fast food at their workplace due to

their busy schedules and they also compromise with the food quality due to shortage of time and ease of access. Moreover, fast food is also an addiction for most of the people. It is recommended that parents should keep an eye on the diet of their children as youngsters spend more money on junk food and must have balanced diet for proper growth. Moreover, policy makers should limit or ban the unhealthy fast food restaurants that are using cheap quality ingredients for food preparation; media should also spread awareness among people about the side effects of taking fast food frequently.

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