

Factors Influencing Fast-Food Consumption Among Adolescents in Tehran: A Qualitative Study

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Abstract

Background: The consumption of different types of fast food is increasingly growing in all parts of the world, both in developed and developing countries. Because of the changes and transitions in the lifestyle and dietary habits of people, an increasing number of people from different age groups, particularly adolescents and young adults, are inclined toward consuming fast food.

Objectives: The objective of this study was to investigate the factors influencing fast-food consumption among adolescents in Tehran, Iran.

Patients and Methods: The present qualitative study was conducted in 2012 - 2013 in Tehran, the capital of Iran. To achieve the objective of this study, 42 adolescents were enrolled in this study through a purposive sampling method, and the required data was collected via individual semi-structured in-depth interviews. Data collection and analysis were carried out simultaneously, and the collected data was analyzed via a thematic content analysis and using MAXQDA 10 software.

Results: In this study after coding the transcribed interviews, the findings were categorized into three main themes as follows: personal views, social factors, and family factors. Each theme included several categories and subcategories, and the coded sentences and phrases were placed under each category and subcategory.

Conclusions: The results of this study showed that the number of factors promoting fast-food consumption appeared to be more than the inhibiting factors and that the diverse factors at the individual and social level influenced fast-food consumption among adolescents.

Keywords: Fast Foods, Adolescent, Health Food, Iran

1. Background

Over the past decades, the consumption of fast foods has increased worldwide (1, 2). Recent studies have shown that the trend of fast-food consumption among Iranians as well as the number of fast-food restaurants in Iran are considerably increasing (1, 2), which is an important health concern among the Iranian population, particularly in the urban areas (3).

Fast foods are quick to prepare, easy to access, moderately inexpensive, and favored by people of most age groups (1). Further, they are typically served in large portions and contain high levels of energy, sugar, and salt, along with low levels of micronutrients and fiber (4). Numerous studies have reported several negative effects attributed to fast-food consumption, ranging from weight gain among the youth (2) to increased risk of diabetes

(5). Similarly, fast-food consumption in Iran was associated with obesity and central adiposity (2). A review of the literature on fast-food consumption across the world, from the perspective of users and food specialists, shows that debates on the health value of fast food still exist. However, some organizations such as the World Cancer Research Fund and the American Institute for Cancer Research suggested minimal fast-food consumption because of the possible association between fast-food intake and weight gain (6).

Among all age groups, adolescents and young adults are found to be relatively more interested in fast-food consumption (2, 7-9). The frequent consumption of fast foods among people in their teens and in their twenties might be attributed to the specific qualities of such types

of foods that are fast to prepare, convenient, and relatively inexpensive (10). In addition, during the transition from primary school to secondary school, high-school adolescents become relatively more independent and have easy access to unhealthy dietary choices (11). The dietary habits of children, adolescents, and the youth are of significant importance because the dietary behaviors are likely to remain stable for their entire life span (12). Therefore, the subject of fast-food consumption may become particularly more important for this group (11). Thus, to control fast-food consumption, special attention must be paid to the interventions designed for adolescents (12). Understanding the determinants of healthy eating can help policy makers, experts, and families to make better decisions on the dietary habits of the younger generations and prevent the likely health threats associated with fast foods by designing appropriate interventions (4, 13, 14). Therefore, it seems necessary to collect and study both the positive and the negative views of different stakeholders and consumers on fast-food consumption to determine its impact on people's life and health and consequently to establish effective policies and plans. To the best of our knowledge, there is limited data about the adolescents' views about factors encouraging or discouraging the consumption of fast food in Iran. This study was carried out to investigate the views of adolescents toward factors that positively or negatively affect the consumption of fast food.

2. Objectives

The objective of this qualitative study was to determine the factors influencing the consumption of fast foods among adolescents.

3. Patients and Methods

This qualitative study was conducted in 2012 - 2013 in Tehran, the capital of Iran. Qualitative research is used to assess complex issues such as people's attitudes, behaviors, value systems, culture, and lifestyles. Therefore, such research can contribute to the development of comprehensive survey instruments and generate hypotheses about associations that can be tested in future quantitative studies (15).

3.1. Participants

Based on the inclusion criteria, boys and girls aged between 15 and 18 years, living in Tehran, speaking Persian well, and willing to participate in the study were enrolled in the study. Lack of tendency to continue participating in the study, presenting dishonest answers, and not signing the informed consent form were considered as the exclusion criteria. Overall, 46 adolescents were enrolled in the study, among whom four were excluded as they did not properly took part in the interviews. However, data saturation was achieved by 42 people.

3.2. Sampling Method

This study utilized purposive sampling method, which is used to select the most informed and knowledgeable samples (16). The participants were recruited with maximum variation (in terms of their age, gender, and socioeconomic status), from different regions and places of Tehran where adolescents are commonly found such as parks, schools, and municipal cultural centers (Farhangsara). Samples were selected one-by-one for the interview until saturation was achieved.

3.3. Data Collection

The data required for the study was collected via semi-structured in-depth interviews. In order to observe the ethical issues of the research, this study was ethically approved by the Research Council and Ethics Committee of the Iran University of Medical Sciences (ID 17896). Participants signed a written informed consent form before the beginning of the interview, and explicit permission was sought for audio taping (17). Parental written informed consent was obtained from all the subjects, as well. Each interview lasted from 20 minutes to 60 minutes. The responses of the participants were recorded only upon their agreement. Wherever it was not possible to record the interview, notes were taken. Moreover, the interviewees were assured that the collected data would remain strictly confidential. Further, the participants had complete freedom to leave the study at any stage they desired. In addition, in order to protect their identity, each participant received a coded number, which was used instead of their actual names during data analysis.

The interviews were conducted by the first author who had good communication and interviewing skills with an interest in adolescents' attitudes and behaviors toward healthy eating. The interviewer who was qualified on conducting qualitative method researches started the interviews by presenting the objective of the study. The researcher used a question guide that included the main questions. To prepare the question guide, first, a series of six semi-structured questions were developed, the questions were then evaluated for their content by two experts and then pretested with four students from the same age group, and, finally, minor changes were implemented on the basis of their feedback. A semi-structured guide that consisted of open questions enabled the respondents to fully explain their personal opinions, perceptions, and experiences (16). The main questions were followed by some probe questions to fully acquire the required data. The researcher stopped the interview once data saturation occurred, that is, when no further code was identified through the last interview (18). It should be noted that data saturation occurred in the 40th interview, following which two more interviews were conducted to ensure data saturation.

3.4. Data Analysis

In this study, data collection and analysis were carried out simultaneously, and the collected data was analyzed

via a content analysis method (15). For qualitative data analysis, MAXQDA software was used to transcribe, classify, and analyze the codes. All the processes were carried out in Persian language. According to the method of Graneheim and Lundman, all the recorded interviews were transcribed into a Microsoft word file, which were then read several times to obtain full understanding of the acquired data. The sentences and paragraphs of the interviews as units of analysis were condensed on the basis of their content and context. The condensed meaning units were summarized and labeled with codes. Then, the codes were classified into categories and subcategories by comparing their similarities and differences. Finally, a theme that expressed the latent content of the text was obtained (16).

3.5. Data Trustworthiness

To secure the trustworthiness of the analyzed data, the four indices of credibility, dependency, confirmability, and transferability were checked (16, 18). In order to enhance credibility, for example, the participants were selected among those who had experience of using fast food. Moreover, dependency was improved by taking the concepts of the research team members into account with regard to reviewing, theme extracting, and analyzing the transcripts. In other words, during the study, the research reports were presented to various researchers and experts who provided feedback. On the other hand, confirmability of the research increased when the members of the research team discussed the contradictory findings and arrived at a consensus. Further, attempts were made to improve the transferability of the findings in two ways. First, a rich description was provided for the data. Second, individuals with different backgrounds and experiences were enrolled in the study (16, 18).

4. Results

Table 1 summarizes the participants' gender, family socioeconomic status, and the pattern of fast-food consumption among the participants and their parents. The results showed that boys were more interested in eating fast food than girls; both these groups mentioned different reasons for their varying level of interest in fast food, which are presented in the subsequent paragraphs. With regard to the demographic and socioeconomic factors, it was found that a majority of adolescents who ate fast food more frequently were from middle-income families.

The participants expressed the following factors that influenced their major reasons for consuming fast food: 1) fast food is delicious; 2) fast-food eateries and restaurants are easily accessible; 3) a greater variety of fast-food options than home-cooked food options is available, providing people with numerous choices; 4) the affordability of fast foods and the fact that they are readily available provide adolescents with a sense of independence; 5) finally, going out to eat fast foods with friends is a way of entertainment, particularly for adolescents. On the other

hand, the participants expressed the following reasons that primarily inhibit them from consuming fast food: (1) numerous concerns regarding the health threats associated with the consumption of fast food exist; (2) negative attitudes towards the ingredients used in fast foods, as well as reports on such ingredients, are prevalent; (3) most parents consider fast food as a health threat; (4) adolescents are concerned about their figure and believe that fast foods will eventually lead to obesity.

In this study, after coding the transcribed interviews, the findings were categorized into the following three main themes: personal views, social factors, and family factors. Each theme included several categories and subcategories, and the coded sentences and phrases were placed under each category and subcategory. To achieve the objective of this study, the factors that were found to influence the consumption of fast foods were classified into the following two main groups: 1) factors promoting the consumption of fast food and 2) factors inhibiting the consumption of fast food. Boxes 1 and 2 summarize the results found for each group.

The major findings of this study in terms of the factors promoting the consumption of fast food among adolescents are described as follows. Several participants who were in favor of fast-food consumption believed that fast foods provide them with a favorable feeling, because they are delicious, quick to prepare, convenient to access, and easy to digest: "fast foods are convenient foods that quickly eliminate hunger" (male, 17 years old); one of the participants said that "fast foods can be readily eaten and digested" (male, 16 years old). The participants considered fast foods to be relatively affordable and easy to access: "fast foods are prepared very quickly, and they are cheaper than other types of foods" (male, 17 years old). Furthermore, the variety of tastes, smells, and colors of fast foods were mentioned as factors motivating the consumption of fast foods: "I prefer fast foods simply because of their appearance, color, and form" (female, 16 years old), and a participant said that "their smell and taste win me over" (female, 15 years old).

Social norms and friendship were expressed as motivating factors for fast food-consumption in that some participants stated that they ate fast food unwillingly simply to conform to their friends: "when I am with my friends, if they invite me to go out to eat fast food, I won't decline the offer" (male, 15 years old). Most participants said that they eat fast food because it is a type of food that is globally popular: "how can we say that fast food is bad when we see that McDonalds has covered all parts of the world" (male, 15 years old). The participants considered eating out at fast-food restaurants as a way of socializing and spending time with friends and family members: "traditional foods which we eat at home are too routine and we need a variety" (male, 18 years old); another participant said that "sometimes fast-food restaurants choose unique and attractive names for the dishes on their menu, which we simply love to try out" (female, 16 years old). As stated by a few participants, the consumption of

fast food gives adolescents a feeling of modernism and a sense of belonging to a higher social class.

The consumption of fast food was like a habit for some of the participants: "After a while it becomes a habit, and the person repeatedly feels like eating fast food. I have to eat out eat a sandwich for instance at least once a day" (male, 18 years old). Eating fast food at restaurants seems like a ritual and a way of entertainment for some adolescents: "Eating fast food alone is not interesting; it is fun when we are together with my friends" (male, 15 years old).

The quick approach to accessing and preparing fast food was also mentioned as a factor motivating the consumption of fast food. According to the participants, fast-food consumption is common among some of the families because the parents of such families belong to the service class and they do not have enough time to spend on preparing and cooking traditional foods: "nowadays, both the father and the mother are employed and they do not have much time to cook, so they just buy fast food" (female, 18 years old).

The major findings of this study in terms of the factors inhibiting the consumption of fast food among adolescents are described as follows. Several participants expressed that they avoid eating fast foods as it negatively affects their figure: "I think girls eat less fast food than boys, because the figure of the body is very important to girls than to boys" (female, 15 years old). Negative attitudes also originated from the health concerns of adolescents: "fast food has a high amount of fat and increases the cholesterol and weight" (female, 17 years old); it was also said that "fast-food consumption results in a heart attack" (female, 16 years old); "fast foods lead to infertility and cancer" (male, 18 years

old). Some participants or one of their family members or friends had previously experienced an illness or complication due to fast-food consumption: "Because of eating fast food, my brother fell ill, had nausea and vomiting, and was hospitalized for two days; I do not eat fast food anymore, and I just eat home-cooked foods" (female, 17 years old).

A majority of participants believed that the health concerns were among the major factors inhibiting fast-food consumption. Some reported that their main concerns originated from rumors on the quality of ingredients used in fast foods as well as the manner in which they are manufactured and prepared: "once my father was reading the newspaper, which reported that a truck full of cats had been arrested, and after interrogation, it was revealed that the cats were going to be used for making sausages" (male, 15 years old). The participants were not even sure about the hygiene of fast-food eateries and restaurants: "once, I saw somebody preparing a sandwich where the pickles fell on the ground, yet he picked up the pickles and put them back in the sandwich; I left that place" (male, 15 years).

Moreover, a few number of participants preferred eating home-cooked foods because of the emotional atmosphere of eating with family members: "Eating traditional foods with families is better because the family members are together; eating fast food creates a distance between the adolescents and their family" (female, 15 years old). It was also stated that eating home-cooked foods assures people that the ingredients are safe and healthy and that the cooking procedure is clearly safe without any health threats: "home-cooked food is better since you know it is safe, who cooked it, and how clean the cook was" (male, 15 years old).

Table 1. Participants' Demographic Data and the Frequency of Fast-Food Consumption among Adolescents and Their Families

Variables	Values ^a
Gender	
Female	16 (38)
Male	26 (62)
Socioeconomic status of family	
Very good	5 (12)
Good	12 (28.6)
Average	22 (52.3)
Weak	3 (7.1)
Frequency of fast-food consumption among adolescents	
Often	12 (28.6)
Sometimes	16 (38)
Rarely	12 (28.6)
Never	2 (4.8)
Frequency of fast-food consumption among mothers	
Often	1 (2.4)
Sometimes	7 (16.7)
Rarely	25 (59.5)
Very rarely	6 (14.3)
Never	3 (7.1)
Frequency of fast-food consumption among fathers	
Sometimes	3 (7.1)
Rarely	24 (57.2)
Very rarely	7 (16.7)
Never	8 (19)

^aData are presented as No. (%).

Box 1. Factors Promoting the Consumption of Fast Food Among Adolescents

Main Theme/Category	Subcategory
Personal views	
Fast-food attractiveness	Variety in shape, color, and smell Being more delicious than home-cooked foods
Quick access and convenience	Quick to prepare and buy Quick to digest Delivered in schools Available in shops in all parts of the city
Full of calorie and energy	Energetic Suitable for physically active adolescents
Habitual consumption	Being addicted to fast food Eating fast food as a routine activity
Social factors	
Social norms	Eating out to conform with the other friends To spend time with friends and to socialize and entertain As a sign of modernism and being attached to higher social classes Adolescents' feeling of independence Feeling like being in western countries
Public interest in fast food	Extensive advertisements on fast foods Global popularity of fast food Friends and family members' interest in eating fast food Increasing number of fast-food eateries
Family factors	
Parents' time and cost considerations	Being cheap and convenient Parents' lack of time to cook Shorter time to spend with family Quickly prepared
Families' interest in new foods	A chance to taste new type of foods Parents' interest in fast food
Difficulties associated with carrying traditional foods to other places	Adolescents' reluctance to carry home-cooked food to school or other places Difficulties associated with cooking and carrying home-cooked food to other places
Parents' ignorance toward adolescents' tastes	Preparing food at home on a regular basis Parents' ignorance toward children's tastes
Socioeconomic status of the families	High cost of eating traditional food out of home Low cost of fast food

Box 2. Factors Inhibiting the Consumption of Fast Food Among Adolescents

Main Theme/Category	Subcategory
Personal views	
Likely health threats of fast food	Risk of heart disorders
	Risk of infertility
	Risk of poisoning
	Increased level of cholesterol
	Concerns about obesity
Poor quality of fast foods	Potential of using expired ingredients
	Poor cooking methods
	Potential use of second-hand oils
Illness and poisoning	Experiencing health problems and illnesses
	Experiencing illness and hospitalization by friends and family members
Social factors	
Rumors about the ingredients	Potential of using unhealthy and even risky ingredients
	Negative reports on fast foods
	Negative rumors about problems associated with fast-food consumption
Negative attitudes of friends	Friends' unwillingness to eat fast food
	Friends' negative experiences about fast food
Family factors	
Value of eating with family members	Negative effect of fast food on family relationships
	Feeling of being distant from the family when eating out
	Adolescents' interest in spending time eating with their families
Safety of home-cooked foods	Safety and security of ingredients of home-cooked foods
	Cleanliness of cooker, cooking place, and tools
Parents' strict monitoring of adolescents' diet	Parents' rejection of fast foods because of their potential health hazards
	Parents' tendency to raise healthy children

5. Discussion

The results of our study showed that the factors promoting the consumption of fast food appeared to be stronger than those inhibiting the consumption of fast food. A similar trend is also observed in other studies. Currently, an increasing number of people are interested in eating out and visiting fast-food restaurants (6). According to the results of Thornton et al.'s study, fast food supply and demand have surged in the recent decades (19). Rouhani et al. reported that the rate of fast-food consumption has increased in the past years, particularly among children and adolescents (20); this finding is consistent with the

results of our study.

Kipke et al. suggested that the behavior of individuals is affected not only by personal characteristics (e.g., age, gender, genetic profile) but also by interactions with larger social, cultural, and environmental contexts in which children live, and such various environments can affect dietary habits (21). This observation is consistent with the results of our study, because we found that social factors can both negatively and positively affect fast-food consumption. For instance, the need to conform to friends and the tendency to attend public places such as restau-

rants promote fast-food consumption, whereas negative reports and experiences of friends and family members were reported as the inhibiting factors.

A previous research supported an association between the taste preferences and fast-food consumption among adolescents; moreover, other attitudes such as convenience and health may influence food choices (5). Schmidt et al. reported that time considerations and convenience were among the major factors for adolescents' food choices (9). We observed the same phenomena and found that the time considerations of the adolescents and families played a major role in their tendency toward fast-food consumption. Even some participants in our study prefer fast food because they are quickly and easily digested. Moreover, some studies identified that taste, cost, convenience, and health are key parameters that influence the choice of food (22); the same factors, except health, were identified in our study as promoting factors. According to Steenhuis et al.'s study, pricing is an important determinant in selecting food (23). Kipke et al. also proposed that the increased availability and affordability of energy-dense foods, such as fast food, particularly in low-income neighborhoods, might play a role in the increased level of fast-food consumption (21); however our results did not prove the same concept, and it was observed that the interest toward fast food was more common among middle-income families.

A study in Iran introduced unhealthy eating patterns, high level of soft drink consumption, breakfast skipping, and inappropriate frequency of family meals and home food environment as the likely health risks, posing a threat to people's health (3). Our study also showed that the participants had some concerns about their eating habits, particularly those related to eating with their family members; they also reported that families had concerns about their children's healthy diet.

Although Seo et al. identified frequent consumption of fast foods by adolescents as a likely threat to the growth and development of children and adolescents (10), the participants in our study only expressed their immediate health concerns and did not express anything about the effects of fast-food consumption on their long-term growth. However, some participants introduced fast food as a source of energy and calorie, which can help them to obtain sufficient energy for daily activities. The same concept is expressed by Martens et al. (24).

Denney-Wilson et al. stated that adolescence is a stage of life in which teenagers experience increased autonomy, both in terms of availability of meals outside the home and discretionary income (25). This theory is in line with our results, which show that some boys and girls like eating fast food outside the home environment because doing so provides them with a sense of confidence.

Most studies have attributed several risks to fast-food consumption, including weight gain (12), relatively poor dietary profiles, relatively low consumption of fruits/vegetables and milk (8, 25), obesity, energy imbalance (26),

increased total energy intake (4), and poor diet quality. In addition to the fact that fast foods contain a glycemic load and are generally served in excessive portions (6), additional risks to fast-food consumption include adverse dietary factors related to obesity; relatively high intake of calories, fat, saturated fat, and sugar-sweetened drinks; relatively high body mass index (BMI); less successful weight-loss maintenance (27); decreased insulin sensitivity (11); and increased risk of diabetes (5) owing to poor concentration of micronutrients. Given that the participants of this study were a group of adolescents aged from 15 to 18 years, like many adults, they were not quite familiar with professional medical terms, and hence, they did not express the same problems. However, they did mention gaining weight, becoming overweight, suffering from infertility, experiencing a high level of cholesterol, and being diagnosed with cancer as the likely outcomes of consuming high dosages of fast food.

Schmidt et al. concluded that dietary intake of fast food is a determinant of diet quality in adolescent girls; hence, efforts to reduce fast-food consumption may be useful in improving the diet and risk for future cardiovascular diseases (9). Our results also show that some of the participants have admitted to fast food as being a cause of heart problems, and hence, reducing the consumption of fast foods could prevent the related problems.

Several studies emphasized on the importance of establishing a healthy eating behavior among children and adolescents (28), and some other studies suggested the call for interventions such as improving the convenience of healthy fast foods in school canteens and neighborhood stores, establishing policies to increase the cost of unhealthy fast food, and developing activities to provide adolescents with skills to increase self-efficacy and to reduce the effect of the external loci of control (29). To improve the health of children and adolescents, it is essential to consider the positive or negative factors in order to formulate suitable policies on the quality of fast food as well as to train adolescents to control their dietary habits.

Our study also had some limitations. We conducted our study only on adolescents aged 15 to 18, whereas, in reality, various age groups are exposed to fast-food consumption; study on such a limited age group is one of the main limitations of our study that prevents our results to be generalized to other age groups. Similar to all qualitative studies, the use of non-probability and limited-size sampling in this study also prevent the generalization of our results. Further studies may use our findings to develop and design a questionnaire and run a survey with a larger sample size and a wider age-group range. Moreover, the socioeconomic status of fast-food consumers was not strictly determined. Despite these limitations, this qualitative study provides deep insights into factors influencing fast-food consumption among adolescents, which cannot be achieved through quantitative studies. Furthermore, sampling with variation in the gender and socioeconomic status is another advantage of our qualitative study.

It appears that to manage fast-food consumption, it is essential to further investigate the factors that can help policy makers and health experts to make suitable interventions. Further studies can also focus on the views of parents, health experts, health policy makers, and other stakeholders.

It is recommended to train families, children, and adolescents about the effects of consuming fast foods. It is also crucial to ensure strict supervision over fast-food companies and restaurants in order to reduce the adverse effects of fast foods on children and adolescents.

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Footnotes

Authors' Contribution: Hesamedin Askari Majabadi conducted the study, collected data, and prepared the manuscript. Mahnaz Solhi and Ali Montazeri supervised the study. Hesamedin Askari Majabadi, Saharnaz Nejat, and Farideh Khalajabadi Farahani participated in data analysis. Davoud Shojaeizadeh and Abolghasem Djazayeri were the advisors of the study. All the authors approved the content of the manuscript.

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