

Schools' Cafeteria Status: Does it Affect Snack Patterns? A Qualitative Study

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ABSTRACT

Background: The aim of this study was to evaluate patterns of students' snacks habits regarding to their schools' cafeteria status in Tehran by focus group discussion (FGD) technique.

Methods: Participants were 240 students (12-15 years old), selected from 12 middle-schools in Tehran. The field study consisted of 24 FGDs sessions; involving 8-10 participants. Collected data were coded, categorized and analyzed using constant comparative method.

Results: Over half of the students believed that snack consumption is necessary. Although, majority of students believed that their schools' cafeterias are not acceptable, they noted them as one of the necessary parts of school. Nearly half of the children were complaining of unvaried and expensive food items. The most purchased items were: Cookies, sandwiches with mayonnaise and ketchup, soft drinks and chocolate milk. Most of the students were interested in having roles in their cafeterias.

Conclusions: Schools' cafeteria are significant sources of supplying adolescents' snacks, so developing hygienic stores containing healthy and nutritious food items is a key element to affect their snack selection positively. Reaching this goal requires a multi disciplinary approach through participation of students, school staff, parents, and the support of community and media.

Keywords: Cafeteria, focus group discussion, habit, prevent, school, snack

INTRODUCTION

Adolescence is a transitional period of life in which lifestyle including food habits are formed. Adolescents tend to gain more money and to have more freedom to choose and buy their own foods and snacks. They also spend more time with their friends and imitate their behaviors, either healthy or unhealthy and newly formed ones establish gradually.^[1-3] Recognizing food choices, behaviors and their related factors in adolescents are crucial as they affect adulthood health.^[3-5] As they make considerable portion of Iranian population,^[6-7] investment on their health issues is a priority.^[2,8]

However, studies on dietary patterns of Iranian adolescent indicated that they have inappropriate dietary patterns and food habits, include skipping meals, mainly breakfast, choosing unsuitable and non-nutritious snacks like sweet beverages, high fat and salty food item and low consumption of milk, fruits and vegetables that may cause growth retardation, metabolic changes resulting in reduced IQ (Intelligence quotient), decreased concentration power, learning abilities and physical activities that totally affect reaching educational goals^[4,9-11].

Adolescents spend lots of their day time at school^[1] and regarding their problem of skipping breakfast that effect their snack selection, school's cafeteria are one of the major sources of providing their daily nutritional needs. Many of these food centers supply unhealthy and low quality foods that cannot meet nutritional needs of the students.^[12] This makes undesirable perspective of nutritional health.^[1] So providing favorable, nutritious and healthy snacks, available via cafeterias, is an approach that may affect their food habits.^[1] Furthermore, most of these food centers do not meet the minimum required standard of food services.^[13] In recent decade, there are trends toward qualitative methods in addition to quantitative researches. Qualitative research is an easy, rapid and cost effective way of investigating ideas and understanding attitudes of studied population that in which, complexes statistical analysis is not used to state the results; so it is an accepted technique for gathering information to plan appropriate intervention and policy making.^[14-16] So this qualitative study was done as a part of "Intervention program for training nutrition and health in order to improve schools' cafeteria and food behavior of students" to evaluate students snack habits regarding to their schools' cafeteria status in Tehran.

METHODS

This qualitative study was conducted on 240 students (12-15 years old) using focus group discussion (FGD) technique. Focus group discussion is the most important and efficient method of data collection in qualitative studies. This method is based on conversation and discussion.^[16-18] Subjects were selected randomly among the students, from 12 middle-schools in Tehran ($n = 6$ girls school and $n = 6$ boys schools).

The students were informed about the importance of study and invited for participation as volunteers making them sure that all their opinions will be kept secret. Field study consisted of 24 FGDs was carried out. In each school, 2 FGDs were holding separately, team including a moderator, a co-moderator, an observer and two note takers. All moderators trained in FGD implementation by the authors using Krueger method.^[19,20] Each session had 8-10 participants and was lasted 60 min.

Focus group questions, including 10 questions, was designed according to two specific objects of the study (breakfast and snacks consumption evaluation, cafeterias necessity and their evaluation) by research team, then reviewed by an expert committee and modified based on their comments.

After each session, records of two note takers were compared; possible defects were completed and controlled by a recorder.

Before starting the field study, a pilot FGD was done with some students from a middle school which was not included into the main subjects of study, to match all team members' performance and to check the questions' intelligibility, study's procedure and efficacy.

Finally, collected data were coded, categorized and analyzed using constant comparative method.^[21] Data collection and analysis methods were performed and reviewed to make them valid. At the end of each meeting some gifts were given to appreciate students' participation.

This study was approved by "The Research Ethics Committee (No: 4230)" of National Nutrition and Food Technology research Institute and all participants completed informed consent forms.

Focus group questions

- What do you think about eating breakfast? Do you skip it? Why?
- Which foods are better for breakfast? Why?
- Do you think that is necessary to eat snacks? Why?
- What do you usually eat as school snack? Why?
- Do you think cafeterias are necessary at school? Why?
- What do you buy from school's cafeterias?
- What is your opinion about school's cafeteria? Why?

- How does your ideal cafeteria look like? Why?
- Would you like to participate in managing your school cafeteria? Why?
- Where do you get your nutritional information from?.

RESULTS

Based on the objectives, findings are presented in two parts:

Part one

Beliefs and opinions of students about breakfast consumption

Majority of students thought that eating breakfast is required and most of them consumed it. Reason for skipping breakfast was mainly being late for school and poor appetite. In their opinion, honey, butter, jam, milk, bread and cheese, were nutritious for breakfast and about half of them, had bread with cheese, butter and walnut, as breakfast. Their main reasons in this regard were: Being energetic, useful to better understanding the lessons, prevent osteoporosis, increasing intelligence, having protein and vitamin contents, increasing height and making good mood.

Beliefs and opinions of students about the snack consumption

Over half of the students believed that snack consumption is necessary. Their most important reasons were: Preventing fatigue and hunger, providing energy, helping for better understanding the lessons, increasing intelligence, compensating for breakfast escape, having it as an entertainment and promoting health. The most consumed snacks among the students were cookies, fruits, bread and cheese, sandwiches, chocolate milk, fruit juices and potato chips. They thought that these snacks are nutritious (having vitamins, protein, calcium and energy), useful for bone strength, prevent osteoporosis, and supply water for their body.

Part two

Cafeterias' status in student' opinion

Majority of students stated that their schools' cafeterias are not good. In their point of view, most of cafeteria are "small", "messy", and "dirty"; needed repairing, painting and containing unrelated stuffs. Nearly half of them were complaining about unvaried and expensive snack items. They were especially unsatisfied with sandwiches' quality including their contents and hygiene conditions.

Majority of the students mentioned about long queues for buying snacks and the cafeterias' staff being unhygienic, with no uniforms and gloves.

All of the students expect their schools' cafeterias to be "clean", "larger" and more "organized", with suitable environment and equipments. Majority of them believed that the staff must be hygienic, non smokers, wearing uniforms and gloves. Only one student reminded the necessity of health cards for the staff.

Majority of the students liked to have cafeterias as a necessary part of school, in the case of forgetting to bring snacks they can be beneficial to release their hunger. The most purchased items were: Cookies, sandwiches with mayonnaise or ketchup, chocolate milks, soft drinks, potato chips, pop corn, chocolate, ice cream, puffed rice, fruit bars, nuts, dried fruits, jelly, cooked lentils and beans, roasted chickpeas, raisins, salted crackers, gum, tea, candy, fruits.

Most of the students were interested in having roles in management of their cafeterias. Their main reasons were making students satisfied by implementing their ideas and helping staffs for an efficient cafeteria.

Sources of nutritional knowledge for majority of the students were television, magazines, newspapers, parents, physicians, and teachers. Their own experience, radio, media, relatives, classmates, friends, internet were other useful sources.

DISCUSSION AND CONCLUSIONS

In this study, FGD results showed that most of the students are aware of the necessity of breakfast and snack consumption and most of them eat breakfast which is consistent with other studies; [7,22-25] It seems that the students follow their own traditional patterns for their breakfast which is different from other countries' patterns.[26,27] Reasons of skipping breakfast is nearly similar to findings of other studies in Iran[28] and other countries.[29]

Morning snack consumption was a common fact among nearly all the students. Despite their awareness of eating suitable snacks, consumption of non nutritious snacks was high at school. The most common consumed foods were biscuits, cookies, fruits and sandwiches which are consistent with other studies in Iran. [7,10,23,28] In Italy, Northern

Ireland and United States, variable cake, milk and soft drinks and sweet snacks were the most popular choices of students.^[27,30,31] It seems that being hungry is the most common reason of choosing cake and biscuits with milk or soft drinks as snacks by students. Food availability, time, flavor and price could be also mentioned as determinant factors; as it is shown that all these items are sweet and inexpensive to buy. Croll and *et al.*, (2001) and Sztainer and *et al.*, (1999) also mentioned hunger, food craving and cost in addition to "parental influence on eating behaviors (including the culture or religion of the family), benefits of foods (including health), situation-specific factors, mood, body image, habit, media, time considerations of adolescents and parents and food availability" were effective factors on food choices and eating behaviors.^[15,32]

Although, standardized cafeterias are important and necessary in schools, it seems that more than half of all cafeterias over the country are not acceptable neither environmental and equipments status nor food items.^[13]

In study of Cullen and *et al.*, (2007), students declared that they prefer fresh and healthy foods, while they didn't have permanent access to these items. Instead of plenty of unhealthy food are provided by vending machines at schools. In another study, authors suggest that cafeterias in schools may cause eating less fruits, vegetables and milk and eating more soft drinks and chips.^[33,34] Kubik and *et al.* (2003) in America reported similar results.^[35] It seems that availability of healthy foods in cafeterias affect students' snack habits.

In conclusion, our findings showed that schools' cafeterias are significant sources of supplying adolescents' snacks which have undeniable impact on their snack habits. In the other words, although our students were enough aware of suitable foods to provide their nutritional needs, which resulted in their unsatisfaction with their cafeteria status, they continued to purchase their daily snacks, mainly because of hunger or peers impact and having no alternative option, which is consistent to other studies.^[17,36-38] Schools' cafeteria determine students' food availability, as a result developing hygienic cafeterias containing healthy and nutritious food items is a key element to affect adolescents' snack habits.

Reaching this goal requires administration of

a multi disciplinary approach: It needs students' cooperation in cafeterias, related activities as a part of nutrition education programs in which cafeterias would make informational and supportive environment, in addition to "school principals and staff and parents help; community and media support".^[39-41] These findings could be considered as an agenda for policy and decision makers of school nutrition programs, especially in respect of preventing non-communicable disease and promoting health of next generation.

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