

## Original Article

### **A peer-based study on adolescence nutritional health: A lesson learned from Iran**

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#### **Abstract**

**Objective:** To study the adolescence opinions' among nutritional habits and beliefs.

**Methods:** To conduct a multi disciplinary approach through involving adolescence /youth for finding their mental needs and their suggestion for solving them, we designed a qualitative approach based on grounded theory. For data collection a semi-structured guide questioner designed and 16 focus group discussions were conducted by trained peers with youth aged 10-19 years.

**Results:** According to FGDs results, although majority of participants agreed on the important role of nutrition in health and the effect of nutritional habits on different aspect of health, they used modern and publicized fast foods. On the other hand, most of female and male participants said that different factors influenced the girls and boys diet selection i. e. girls' paid more attention to diet selection and taste and health of foods, whereas boys were careless and gluttony caused more food to be consumed.

**Conclusion:** Adolescents' information (both genders) regarding nutritional problems resulting from improper food habits were not satisfactory. Peer-based health programmes through target groups for capacity building and participation of stakeholders will fulfill the objectives.

**Keywords:** Peer, Adolescence, Nutritional, Health (JPMA 61:549; 2011).

## Introduction

In Iran more than 27% of the population belongs to the age group between 10-19 years. This has an important role in the future development of the country.<sup>1</sup> Previous studies on factors identified by adolescence for health priority have shown nutrition as one the most important ones.<sup>2,3</sup>

Psychological and physical changes induced in this stage of life are considered as the main factors affecting adolescents nutritional health. Ignoring this fact could bring about negative outcomes as anorexia, bulimia, obesity, loss of weight and other nutritional problems. On the other hand most adult diseases take root in this period and also most nutritional habits are formed in this age which continue throughout life.<sup>4</sup>

Result of studies have shown that adolescents' knowledge on different dimensions of nutrition is insufficient.<sup>1</sup> Although related studies in Iran are very limited and fragmented, these findings emphasize on two serious aspects of the problem; the first is poor nutritional status due to lack of absorption of energy, protein and micronutrients and the second is the increasing prevalence of nutritional related diseases.<sup>5,6</sup>

Studies have also shown that rapid and significant changes in lifestyle and patterns of nutrition, especially in industrial societies, are the most important risk factors for nutrition-related diseases.<sup>7,8</sup>

According to the available results,, there is a progressive need for adolescence /youth health providing, based on their own real specific needs and preference.<sup>9</sup> Most of the successful and efficient health promotional programmes have been designed considering the views of target groups.<sup>10</sup>

In this regard related studies emphasized on well trained peers who could provide an example of healthy behaviour<sup>11</sup> Peer-based health interventions are one of the most cost effective potential approaches in health- related programmes.<sup>12</sup>

Considering all the above, the present study, as a part of comprehensive community mobilization for adolescence/youth better health, was undertaken to study the adolescence opinions among nutritional habits and beliefs. In order to achieve maximum level of participants' confidence and maximum transparency of results we used a Peer-based qualitative design.

## Methods

This study was an operational research, based on community mobilization and participation of adolescence and peer groups. As it was a vast multidimensional study,

the qualitative peer needs assessment results were extracted from the nutritional habits and beliefs for this article. Also proposed interventional adolescence health promotion programmes based on them were included. Implementing a multidisciplinary approach, evaluating the programme's efficacy, and expanding the effective programme will be discussed in separate articles. Adolescence nutritional needs were assessed through qualitative methods by trained peer groups and then appropriate interventions were designed. Stages of the study were as follows:

1- Selection of an appropriate locality to perform of the study: the place considered to be ideal for our study was Ekbatan complex which is located in the western part of Tehran. This is a densely populated community of about 60,000 population having a target group size of 10,000. Ekbatan has an integrated structure, easy access to the community, homogenously upper socio cultural status, higher structural groups activities, and having multidimensional NGOs (Non Governmental Organization). Based on its mentioned characteristics, this place was selected as the area for our study.

2- To attract the stakeholders and key persons of the locality to participate, several participatory meetings were held and different related aspects of the project were discussed with residents of that area, adolescence/youths, related GO's and local NGO's representatives and the view points of the audience were considered to modify essential points of the project.

3- Establishment of scientific committees with experts, medical specialists and community representatives to design the leading questions, research process and so on. Besides this committee, an Executive Committee together with the executive project partners, volunteers and key researchers was organized. The main responsibilities of the executive committee were: advocacy, assessing potential facilities and opportunities of the area, selection of volunteers to perform "need assessment plan" cooperation in need assessment and evidence based interventional programme designing.

4- Selection of volunteers: some adolescents/youths (aged 15-25) who were interested in community health campaign and possessed appropriate qualifications for working with their peers were selected. Criteria for volunteer selection were: interest in working with peers among community, respectful, non-judgmental, having a quality to maintain client confidentiality, able to accept opinions from others, ability to establish good relationship with individuals and groups, ability to act as a role model and to exercise leadership, ability to deal with relevant information and programme content, be able to spend enough time for this

project and be able to draw parents' satisfaction.

5- Defining the frame of target group : According to census results, to access exact families' demographic information, data forms were filled out at the door of every home by cluster Commissioners (a male and a female for each team). The gathered data were analyzed to develop educational and cooperative plans for adolescence /youth of the area. The community size was 10,000 and the target group size 8072 (53% of them were male and the remaining 47% were female).

6- Capacity building of adolescence /youth volunteers: In order to build the capacity of volunteers to actively participate in the project and in assessing the health needs of young people in the area based on the decisions made and the predetermined goals of the project, 60 volunteers aged 20-25 years were selected to act as a channel between the project executors and adolescents of the area. A 4 day consecutive educational training course was conducted. Based on literature review and consultations made with the executive and scientific committees, 4 main subject areas related to adolescence health such as; mental health and life skills, nutrition, high risk behaviour, and leisure activities were selected as educational topics. In order to enhance the quality of education, educational methods such as question and answer, role playing, games, group discussion and film analysis were incorporated. After that different research methods, priorities resetting in health subjects were introduced (two day) and volunteers attended a three days workshop among qualitative study exactly focused on Focus Group Discussion skills. Following the training courses to access the acceptable level, essential skills specially for conducting FGDs were exercised with scientific committee members as participants.

7- Assessing the opinion of the adolescence regarding nutritional needs : The three factors, which were applied to adolescence FGDs designing, were age, sex and educational level. Therefore, 8 groups were identified and 16 FGD sessions (2 sessions for each group) were organized. To access the highest level of confidence and transparency in data collection all of process consisted of initial preparation, participants' invitation, session conducting, data collections, data analyses and adolescence health needs determination were done by trained volunteers. The implemented qualitative method was Grounded Theory Often making processes transparent to social interactions between humans. Method used for data collection was FGD. Time of each session was about 1-1.5 hours, during which the subject was discussed at length to reach saturation and provide necessary information. After each session the notes taken were completed on recorded tapes and comments were observed in initial analyses. Collecting and analyses of data was based on content

analysis through which simultaneously during texts open coding, main concepts were extracted, then in axial coding similar concepts categorized. Comparison and integration of similar codes lead to novel comments, suggestion, and ideas. The reliability was established throughout the study by the amount of similarity between research findings with separate results extracted independently by another expert by coding and analyses.

### **Ethical consideration:**

This study was approved by National Ethical Committee of medical research. Participation in this study was voluntary and informed consent was obtained from all participants. All information was collected anonymously and the outcomes were used for research purposes.

### **Results**

Based on the objectives, and in the pursuit of data analysis, the following findings were summarized based on 254 codes in 5 major axis: the importance of nutrition in adolescent health, the effects of food habits on their health, foods that teenagers prefer most, differences in food preferences [diet] between girls and boys, and the problems resulting from improper food habits.

### **The importance of nutrition in adolescent's health:**

Most adolescents of both sexes shared a common view regarding the importance of nutrition in adolescents' health. They also believed that this effect is mostly dependent on enough food consumption and that poor diet would result in negative consequences such as; anaemia, brain dysfunction and osteoporosis.

Boys in the primary and guidance schools believed that nutrition plays an important role in the youth's health, meanwhile high school students believed that in Iran, nutrition had not been given enough significance especially for the youth's health, they even believed that nutrition must be given more importance than AIDS but in general, they have attributed this neglect to financial reasons. They also believed that dietary habits play a vital influence on an individual's physical growth, personality and intelligence.

In the context of the importance of nutrition to adolescent's health, adolescent girls have a consensus of putting a very high value to this matter. They believed that nutrition plays a vital role in an individual's physical and mental growth.

### **The effects of dietary habits on adolescents' health:**

Regarding the effect of dietary habits on the health

of adolescents, nearly all of the female high school students believed that "appropriate dietary habits are very effective for health" and "bad dietary habits result in illnesses." Most of the girls in guidance school and in high school stressed that food consumption must be in accordance to what the body needs but, in contrast to this belief, some high school female students expressed that some families due to financial reasons, could not give importance to the effects of dietary habits on the future health of their children. High school students expressed that nutrition has more impact on one's appearance, digestion and health. Also, this group said that, appropriate dietary habits help to prevent mental and physical diseases and have positive effects on the appearance, intellect and personality traits. They also opined that if someone wants to lose weight, it should be done in a healthy manner.

It is important to note that, some male participants expressed that dietary habits should be considered as a part of youth's recreation.

### **Foods that interest teenagers:**

Majority of girls stated that the present younger generation have different food preferences such as; fast foods, assorted snacks, pasta and macaronis, lasagna and readymade foods such as, sandwiches, sausages and salamis, pizza and soft drinks and other processed foods and those foods that are seen on TV commercials. This results in a decreased consumption of the traditional foods. According to the students in guidance school and in high school, the most important reason for the decline in use of traditional foods was the belief that these foods were "less fashionable and lacking in class."

Based on the consensus of the male participants, most of the adolescents in this group preferred foods such as pizzas, salamis and sausages, foods served without rice, chips, fast foods, foods that are hot and generally those that are newly advertised. A few stated that they preferred the traditional Iranian foods.

### **Differences in food selection [diet] between girls and boys:**

Almost all female participants believed that there is a great difference in the food preferences between girls and boys. They said that "boys eat two to three times more in comparison to the girls, for the reason that they are more active, and so are less likely to become obese".

With regards to the reason for such differences; majority of this group believed that girls need lesser energy while boys are more physically active. Female students in the Primary and Guidance School have stated that "women in general love beauty and they like to become beautiful".

High school female participants in FGDs had a unanimous opinion that there are some differences between girls and boy's diet preferences on the aspect that boys do not give importance to the quality of the food they ate, while girls think the opposite. Also girls gave more importance to the appearance of the food and also they believed that because women are more prone to osteoporosis, therefore adding dairy products to their daily dietary consumption is very important. Generally, both groups had made a consensus in expressing the reason of dietary differences between these two sexes; the girls' were more interested in outward beauty and having a good figure, the need for adequate iron. The male sex stressed on more calories.

Majority of the adolescent boys believed that, girls and boys differ in their food choices, they expressed that because girls wanted to maintain their figures therefore they try to go on a diet and they choose to eat safe foods. Reasons for these differences of food choices between the two sexes include; early puberty in girls and the girls interest in cooking. Boys had less facilities. One of the participants opposed this suggestion and he believed that there was no significant difference between boys and girl's diet preferences and said that no one had made any specific comment on this aspect.

Majority of the high school boys stated that, "there exists a difference in the choice of foods between boys and girls because girls give more importance to the food's taste and its hygienic values and also girls eat lesser than boys because they are more conscious for their weight." One participant believed that "eating food does not have any relation to gender." Often, the boys have mentioned that: "it is very important for the girls not to get fat but boys do not give any importance to this matter". Some participants did not give any specific point of view.

### **The problems resulting from improper food habits:**

The following problems were pointed out by the female primary and guidance students as a result of improper dietary habits; indigestion, food poisoning, crash diets and use of slimming products without a doctor's supervision. While the high school students emphasized more on osteoporosis, skin diseases, short stature, psychological problems, impaired thinking and foetal problems during pregnancy.

The male participants belonging to primary and guidance level, believed that the following problems could result in improper food habits: food poisoning, problems of digestion, other diseases (mad cow's disease), and impaired physical growth, gastrointestinal and renal disorders. While the high school students thought that

improper food habits would result in malnutrition, MS, vitamin deficiency and obesity.

### **Discussion**

Considering the results of group discussions it is evident that the adolescent's nutrition is important due to its role in future generation's health.<sup>12</sup> However, based on the results of one of the related studies only 25 percent of boys and 15 percent of girls have an acceptable practice in this regard, while 75 percent of boys and 82 percent of girls had appropriate knowledge in this field. The results of similar experiences in other regions of the world indicate an obvious gap between adolescent's knowledge and practice.<sup>13,14</sup>

Results of this study showed that majority of the adolescents agreed on the importance of nutrition in the health of the adolescents. Others believed that although it is very important, but due to financial and other reasons, its importance has been ignored. Also, based on the results of this study, consuming a proper diet and the tendency towards consumption of traditional foods along with lifestyle modifications during adolescence can play an important role in preventing the risk of chronic cardiac diseases and endocrine disorders.<sup>15,16</sup> Also, in some studies, a significantly correlation was observed with the level of parents knowledge and adolescence practice.<sup>12</sup> The majority of participants in this study believed that food habits have a remarkable effect on different aspects of their health, such as a well functioning gastrointestinal system, personality, intelligence, osteoporosis, illness, appearance and beauty.

Most studies have shown that majority of the adolescents do not adhere to the proper diet, for example; consumption of junk foods which has no dietary value, have dangerously increased, instead of consuming the staple foods which are full of nutrients. It is important to note that 59.7% of these students had expressed that their teachers had not played any role in educating them regarding proper nutrition.<sup>12</sup>

The results of this study revealed that today's teenagers are more inclined to have fast foods and the latest foods advertised on the electronic media. This is regardless of their quality. Other researchers have also noted that knowledge on nutrition is not the only factor affecting food behaviour but some other factors and variables such as physiologic needs, body image, food preferences, parents dietary patterns, friends and classmates' influence, as well as mass media also plays an important role in the adolescents' choice of foods.<sup>12</sup>

Based on the results of several studies, it can be hypothesized, that the main reason of the food differences between boys and girls are its bulk and calories. Boys prefer foods with more calories and more bulk to satisfy their needs

whereas girls choose exactly the opposite, lesser bulk and lesser calories with the main reason being the girls inclination to lose weight and remain slim. This shows that adolescents' knowledge on substantial nutritional needs tailored for their age is very limited and their option to prioritize on maintaining a slim figure overshadows the real value of nutrition.<sup>1</sup>

Results of this study have shown that, adolescents' information (both genders) regarding nutritional problems resulting from improper food habits were not satisfactory. Some pointed out the lack of information as the cause of nutritional problems while others referred to some general aspects as; gastrointestinal disorders, side effects of dieting, osteoporosis, skin diseases, short stature, problems during pregnancy (female high school students) and malnutrition which were expressed by majority of the female participants.

Results of the study have shown the understanding that obesity is one of the complications resulting from inappropriate nutrition in the adolescent period and has significant relationship with increasing mortality risk in adulthood. In addition, consequences such as physically related diseases, mental and emotional problems as isolation, loss of self-esteem were also pointed out as by other researchers.<sup>17,18</sup>

Considering the fact that educational interventions have resulted in increased awareness and improvements in the students' attitudes regarding nutrition, the following strategies are recommended to improve the health of adolescents in the areas being evaluated:

- Drawing the interest of the youth by appointing them as main stakeholders and make use of peer group education as an effective method in conducting the educational training for the adolescents based on their needs and on their interests

- Holding educational trainings and discussions or answer and questions meetings for the youth's parents particularly on the methods of creating relationships with the adolescents for the purpose of identifying and resolving the common problems that occur in this period of life.

- Cooperation and make use of the local NGO's capabilities in teaching and in communicating information regarding nutrition.

- Holding food festivals to promote a healthy food pattern and to communicate information.

- Possibility of utilizing the services of guidance counselor in an indirect method [telephone, mail].

- Implementation of evidenced based interventions on health education based on the principles consistent to reducing the gap between knowledge and practice.

- Holding related regional programmes.
- Implementation of evidence-based interventions based on the effective health education methods in accordance with conditions to reduce the gap between knowledge and practice.

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