Original article

Food, Nutrition and Health Care: diverse conceptions amongst adolescent population in a semi urban Bangladeshi Muslim community

Khan AKMD[1], Islam AKMM[2]

Abstract:

Objective: This study explores how the adolescents identify diet and why do they select these types of foods as diet and how they conceptualize health. ***Methodology:*** This is an empirical study conducted applying qualitative methods in a semi-urban Muslim community at Sylhet district in the northeastern region of Bangladesh. Data were collected through in-depth interviews. ***Results:*** Adolescents had diverse conceptions on foods related to nutrition and health care. Adolescents relate food categorization mainly with the price of food, function of foods and a number of sensory characteristics, such as taste, smell and color. They categorized foods according to the price of foods- poor and rich; and to the function of foods- hot and cold. They had different preferences in different genders according to the sensory characteristics of foods- black color, sour taste etc. They had also some gender specific taboo on some foods. ***Conclusion:*** This study reveals that adolescents have diversified thinking on foods related to nutrition and health care practices, which demands to provide special attention for improving their understanding on food, nutrition and health care.

Keywords: conceptions on food; nutrition; health care; adolescent; qualitative study; Bangladesh

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Introduction

Adolescence is a period of transition between childhood and adulthood. During this period of life child is carefree in the road to adulthood. The World Health Organization defines adolescence as the period of human life between ages 10 and 19 years and this period of life is a stage of development transition i.e. a bridge between childhood and adulthood[1]. The period adolescence accompanied by its profound change in growth rate, body composition and marked physiologic and endocrine changes[2] that demands extra nutrients and energy-rich foods for rapid growth and maturation[3-4]. Approximately 50% of adult body weight and 15% of final adult height is attained during adolescence, along with changes in body shape and composition[5-6]. Inadequate diet and unfavorable environmental condition in developing nations like Bangladesh may adversely affect the growth and nutrition of adolescents. Malnutrition, both under nutrition and over nutrition, refers to an impairment of health resulting from a deficiency or from an excess or imbalance of nutrients[7]. The coexistence of overweight/obesity and underweight is rather common in developing countries and is found to be increased over time[8-9].

Adolescents in Bangladesh, both male and female, constitute about quarter of the total population[10]. Several studies conducted in Bangladesh have emphasized on measurement of nutritional status of

1. A.K.M. Dawlat Khan, Department of Anthropology, Shahjalal University of Science and Technology (SUST), Sylhet, Bangladesh. International Centre for Diarrhoeal Diseases Research, Bangladesh (icddr,b), 68 Shaheed Tajuddin Ahmed Sarani, Mohakhali, Dhaka 1212, Bangladesh.

2. A.K.M. Mazharul Islam, Department of Anthropology, Shahjalal University of Science and Technology (SUST), Sylhet, Bangladesh.

Corresponds to: A.K.M. Dawlat Khan, Senior Research Officer, Outbreak Response and Surveillance Research Group, Centre for Communicable Diseases, International Centre for Diarrhoeal Diseases Research, Bangladesh (icddr,b), 68 Shaheed Tajuddin Ahmed Sarani, Mohakhali, Dhaka 1212, Bangladesh.
Email: dawlat@icddrb.org or akmdawlatkhan@gmail.com

adolescents. This study explored how the adolescents identify diet and why they select these types of foods as diet and how they conceptualize their health. Food selection, perception on ill health and the health care of a community peoples depend on cultural beliefs and societal attributes of the society in which they live[11]. Different groups of people are markedly diverse from one another in many of their beliefs and in all human societies; there are a range of symbolic meanings in their diets and health caring practices[11]. There are wide variations throughout the world in what substance is regarded as a food in one society or group, are rigorously forbidden in another. However, Foster and Anderson[12] have pointed out that under conditions of extreme starvation utilities of all available nutritious substances are treated as food. There is no overwhelming cause for ill health or health or, and health care; personality, education and socio-economic factors all may influence on ill health, health and health care[13-15].

Materials and Methods

A focused qualitative study was conducted among adolescents in a semi urban Muslim community in Sylhet district the northeast part of Bangladesh, to understand of adolescents' conceptions on food, nutrition and health care practices. Cultural beliefs and practices strongly influence people's health and health care practices and this is the point of medical anthropology views[11-13]. This study was conducted following this notion i.e. from medical anthropological approaches. We purposively selected the adolescents (aged between10 and 19 years) from the study community with different socio-demographic backgrounds (Table I). We conducted in-depth interviews with 16 male adolescents and 16 female adolescents. An open-ended interview guideline was used to explore conceptions of adolescents regarding food, nutrition, nutrition value of food, function of foods on health as well as health care practices. Participants and their guardians, especially father of the adolescent, provided verbal permission, which was tape recorded at the beginning of interview questions. As a South Asian country, Bangladeshi men are conventionally considered the breadwinners and the guardians of the family[16], so we sought permission from father of adolescent to conduct interview with the adolescents. Each adolescent and his/her guardian were informed of the objectives and purpose of the study and the data collection methods, including the use of a tape recorder and intimate nature of interview questions. Interviews were conducted in a place within their households chosen by the participants. The first author was involved in data collection and two trained female research assistants collected data from the female respondents. Tape recorded interviews were transcribed. Data analysis was manually performed to build codes against the theme and sub theme of findings i.e. followed content, contextual and thematic analysis[17-18].

Table I: socio-demographic information of the adolescents

Characteristics	Value
	N=32 (%)
Sex	
Male	16(50)
Female	16(50)
Age	
Mean (years)	14
Median (range)	15(10-19)
Education	
No formal education	3(9)
Drop out before primary education	3(9)
Studding	26(81)
Primary level	9(28)
Secondary Level	15(47)
Higher Secondary Level	2(6)
Occupation	
Rickshaw Puller	2(6)
Day labor stone collection	2(6)
Student	26(81)
Dependent (help to household work)	2(6)
Household income (monthly)	
Mean (BDT)	8156
Median (range)	8000(4000- 15000)

Results

There were different views among adolescents of the study community on food, nutrition and health care. Adolescents conceptualized on foods related to nutrition and health care. In this context, adolescents classified foods in several perspectives. This division was reverse such as poor food and rich food, and hot and cold food. Adolescents reported that meat, fish and milk were rich foods and vegeta-

bles like potato, cabbage, arum, cauliflower, gourd, green leaves, beans, pumpkin, carrot palong shak (*Spinah paratha*), tomato etc were poor foods. They also reported that low income households or poor class people cannot buy or cannot get rich foods. Furthermore, they mentioned that rich foods have high nutrient. On the other hand, they stated that rich people didn't buy or consume poor foods for their high prestige as the rich people belonged in the rich or in the high class status. The adolescents also classified foods as 'hot' and 'cold' food though they didn't refer to actual temperature of the foods. They stated that mustard oil, onion and garlic are hot foods. However, they associated symbolic values with each category of foodstuffs. They used few foods as medicine. They stated that chewing betel nuts reduces dyspepsia. They also reported us that they ate hot *Jilipi* (a kind of sweetmeat made with wheat flour and fried into steam oil and hot liquid sugar) for treating dysentery. Adolescents mentioned that some foodstuffs were used in social ceremony. They stated that these foods were very prestigious foods. They mentioned one name of them, "Akni". It was a mixed food prepared by cooking tiny rice and beef. They actually used this food in religious ceremony like Milad, meeting in religious discussion and Shab-e-barat etc. They also stated that this food had high nutritional value also.

Adolescents had different choices to food selection based on gender. In this field, basically food selection was governed by a number of sensory characteristics, such as taste, smell and color. In the community, female adolescents like sour tested and black color fruits. So, female adolescents preferred black jerry for color, plum for sour tested and grape also for sour tested. They also preferred spicy foods like hot tomato sauce, spicy curry that was cooked with green chili. On the other hand, male adolescents had a preference for sweet and salt in foods. Male adolescents didn't choose 'heart of chicken'. One of male adolescent explained this issue,

"If any male eats a heart of a chicken his heart may be small like this (chicken's heart)."

Female adolescents had also disfavors on some fruits. They avoided custard apple. They stated, *"custard apple is an evil fruit as Eve ate this at first ... and it is the symbol of sin."*

Female adolescents described their menstruation period as a period of impure, uncleanliness and illness. They reported restriction to food intake at this period linked to menstrual blood. They stated that thin blood caused anemia and a bad diet caused for thin blood. They mentioned that eating sour fruit caused for thin blood. One of the female adolescents stated:

"During menstruation female shouldn't take sour fruits, it makes blood thin, and it refresh the blood, so, blood secretion is much..."

Female adolescents avoided *puti* fish (a kind of small fish) and hilsa fish during menstrual period. They locally call these "amasa". They meant "amasa" as non fish. They also mentioned that it has an odor. They opened that if any female takes "amasa" it made her menstruation blood pungent. They also made restriction on other foods such as eggplant, duck egg and beef. They thought these causes allergy around vagina if taken during menstrual period. They also avoided taking milk during menstrual period because it was a barrier to return into normal condition. One of the female respondents explained the issue:

"If it (milk) is taken during menstrual period it takes time to the vagina returns to normal condition, as the vagina enlarged (during menstruation)."

Discussion

In the study adolescents conceptualized on food in different point of views related to food value, nutrition value of foods and function of foods according to their beliefs. Cultural norms, beliefs and practices i.e. traditions influence on age, life stage, gender and social class that replicate norms of care and behavior[19]. Furthermore, cultural beliefs and practices strongly influence people's health[20] and this is the point of medical anthropology views[11-13]. Medical anthropology is the study of people in different cultures and social groups that explain the causes of ill health, the types of treatment they believe in, and to whom they turn if they do get ill. It is also the study of how these beliefs and practices relate to biological, psychological and social changes in the human organism, in both health and disease. In Foster and Anderson's[12] definition, medical anthropology is: "A bio-cultural discipline concerned with both the biological and socio-cultural aspects of human behavior, and particularly with the ways in which the two interacted throughout human history to influence health and disease."

Adolescence is a time for strengthening good food habits and established meals patterns as dietary habits and food preferences are developed particularly in adolescence[21]. Our study findings are adolescents classified foods in several ways and related

it to their health care practices. Helman C.G[11] stated that there are five types of food classification. They were: food versus non food, sacred versus profane, parallel food classification (hot versus cold food), food used as medicine and medicine as food, social food (which signal relationships, status, occupation, gender or group identity). Foster and Anderson[12] also pointed out community beliefs *"... a thin blood from a bad diet"*.

Several literatures indicate that nutrition is a process that concerns the relationship of food intake to the functioning of organism. This indicates physiological aspects of nutrition and the process of it including the ingestion, digestion, absorption, and transport of nutrients, the synthesis of tissue components and the liberation of energy. Literatures also show that there is another aspect of nutrition and it is related to social and cultural conditions including economic background, dietary habits, attitude towards and belief about food, habits of physical activity and so on.

Muti-sectoral co-ordination between various sectors e.g. education, labor, law and Justice, youth and social affairs is underway to achieve the goal for improving adolescents' health. NGOs are also working in this sector[10]. As a part of adolescent health Micronutrient Supplementation (MS) and National Nutrition Program (NNP) were major nutrition programs of public health under the Ministry of Health and Family Welfare, government of Bangladesh was operated through Institute of Public Health Nutrition (IPHN) and Directorate General of Health Services (DGHS) in Bangladesh. The programs covered the entire country. One of the target populations of NNP's nutrition programs is adolescent boys and girls. The program services were included food security interventions through vulnerable group feeding as well as through encouraging people for homestead gardening, poultry farming and training by behavior change communication[22]. However, adolescents do not know proper nutritious and hygienic practices and information about puberty. Moreover, there are restrictions on shuffle at the menstruation period. But on this period, adolescents need more energy intake than other times to prevent anaemia and it is suggested to take more fish, red meats, poultry and legumes[3-4,19].

Conclusion

This study reveals that adolescents have diversified conceptions on food, nutrition and related health care that make barrier for adolescents to take necessary foods for their general growth. This finding suggests that health education program or awareness is necessary for adolescents to improve their conceptions on food choice related to nutrition and health care. Family background as well as school is important influential factor for adolescents to acquire knowledge, cultural norms and behavioral practices. Furthermore, there are many programs in Bangladesh to improve adolescent health. So, these findings recommend that we need to modify adolescent health education programs as well as to develop and implement culturally acceptable health education program for the adolescents.

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