

Fact Sheet

Traditional Food Culture & Food Security in Bangladesh



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Introduction

Bangladesh is a land of rich culture. The culture of Bangladesh is rich in a huge and amazing variety of foods. Bangladesh is a country of festivals. There is a well-known proverb which is “Baro mase tero parban i.e. Thirteen festivals in twelve month”. Food is an integral part of the festivals. The cuisines of Bangladesh consist of an amazing blend of spices, rice, fish and sweets. “Mase-Bhate Bengali” i.e. “Bengalese with fish & rice” is another well-known proverb. Traditionally, the peoples of the country are very much fond of filling up the stomach with huge amount of different delicious foods but never conscious about nutrition. Once upon a time the nutrition requirement was fulfilled perhaps automatically due to intake of huge amount of diversity of fresh foods including fish, meat, vegetables, fruits etc. with full of nutrition. But, at present the situation has drastically been changed.

Traditionally, cereals, largely rice, are the main food in Bangladesh. At present, nearly two-thirds of the daily diet consists of rice. The people of the country take rice along with some vegetables, a little amount of pulses and small quantities of fish if and when available. Milk, milk products and meat are consumed only occasionally and in very small amounts. Fruit consumption is seasonal and includes mainly papaya and banana which are cultivated round the year. The dietary intake of cooking oil and fat is meager. The typical rural diet in Bangladesh is, reportedly, not well balanced.¹⁰

The dietary habits often do not meet good nutritional requirements, with a preference for polished rice and leafy vegetables of poor nutritional quality. In addition, cultural norms dictate a better diet for males over females with the male head of the household getting the best meal portions. Persistent poverty, inadequate nutrition information and gender inequity cause pervasive malnutrition among women, especially pregnant women and lactating mothers.

While food habits vary at regional and even individual household levels, in general, food preparation methods result in significant nutrient loss. Minerals and vitamins, especially B-complex vitamins are lost (40 percent of thiamine and niacin) even during the washing of rice before cooking. Boiling rice and then discarding the water results in even more nutrient losses. The manner of washing and cooking vegetables leads to considerable loss of vitamin-C and B-complex vitamins.¹¹

Therefore, food insecurity is still a great concern for Bangladesh though over the last few decades, Bangladesh has made considerable progress in increasing national level food availability and individual level energy intake. The rice-based diet in Bangladesh in the context of food and nutrition security Bangladesh is experiencing a situation with both food and nutrition insecurity. Nevertheless, the intake of energy and other essential nutrients is still far below the nutrient requirements and recommended dietary allowances.¹¹ Diets are largely imbalanced with the staple food cereals contributing around 73% of total energy intake and a substantial proportion of dietary protein. In addition to imbalances in macronutrient intakes, diets are largely deficient in micronutrients, essential fatty acids and individual amino acids. Partly as a consequence of the paucity of diets, there is a high prevalence of malnutrition notably among young children and mothers along with emerging problems of diet related chronic diseases in the population.¹¹ The present study therefore, tried to look into the traditional food culture of the country in the context of food and nutrition security of the people of the country.

2. Methodology

The study was conducted based on the data collected from 10 villages of Shailkupa upazila under Jhenaidah district of Bangladesh. The main methodology of the study was focus group discussion with both male and female people of the study area. Representation of the members of rich, medium & poor families as well as male & female in the FGDs was ensured. It was also ensured representation of both Muslims & Hindus so that religious diversity of food culture is reflected in the study. Discussion was also held with relevant government officials, development workers and civil society people. Data was also collected from 120 randomly selected households in order to measure the intake of different food items per person per day. The data was then computed by using MS Excel program of computer. Relevant secondary documents were also reviewed in preparing the study report.

3. Findings & Discussion

3.1 Traditional Bengali Foods

Although young in age, Bangladesh is a country rooted in a millennium old culture and tradition. Bangladesh's culture, like all other cultures, is a result of a blend of geography and religion. The effect of geography and religion can be seen in everything from cuisine to entertainment to marital rituals. Bangladesh is a primarily Muslim country which affects it in all aspects of its culture. For instance, Bengali cuisine will never feature any pork dishes, nor will one ever see wine as an ingredient to any dish. One ingredient prevalent in Bengali cuisine is spice. Almost all main dishes with Bengali influence contain some sort of spice for flavor. The emphasis of spice on Bengali cuisine is indicative of the region, which is notorious for its spices. Although spices are a staple in Bengali cuisine, they are not the most significant part of the Bengali diet.

3.1.1 The Main Foods

Rice is the staple food of Bangladeshi people. Traditionally Bangladeshis eat rice as Bhat (boiled rice) as their staple food and major intake. About 70 percent of what they eat is based on rice, which is their

main source of carbohydrate.⁸ Rice is also taken as polao (sunned rice cooked with spices), biriani (sunned rice cooked with chicken or mutton with spices & condiments), chira (flattened rice), muri (puffed rice), hotchpotch as well as in some other preparations. For last few decades wheat has become part of the Bengali menu but still not common specially in



the rural area. Few decades ago when there was scarcity of rice, wheat was considered as poor peoples' food. People ate wheat only when they were fallen into scarcity of rice. But, now the situation is being changed. Health conscious people take rooti or chapati (wheat-based food items) at least once in a day on a regular basis specially in the urban area. But, in the rural area wheat is not popular yet. Few

decades ago there were also other sources of carbohydrate such as cown (one kind of food grain), barley etc. which are now almost disappeared due mainly to monoculture of rice.

Unlike other foods, bhat is eaten after mixing with different kind of curry, bhaji (fry), bharta (mash) etc. Generally Bhaji and Bharta are made of countless varieties of vegetables and fishes. The curry is cooked with different kind of vegetables separately or mixed or added with fish or meat. Different kind of dal (soup made of different pulses like lentil, mung bean, khesari, gram, pea etc.) are also taken mixing with bhat. There are also different kinds of ghonto (mixture of vegetables, pulses and even head of big fishes) which are commonly eaten with bhat. There are also different kind of achar & chutni (pickles) which are eaten to enhance the taste.

Shorshe Ilish, a dish of smoked ilish with mustard-seed paste, has been an important part Bengali cuisine. There are numerous ways of cooking fish depending on the texture, size, fat content and the bones. It could be fried, cooked in roasted, a simple spicy tomato or ginger based gravy (jhol), or mustard based with green chillies (shorshe batar jhaal), with posto, with seasonal vegetables, steamed, steamed inside of plantain or butternut squash leaves, cooked with doi (curd/yogurt), with sour sauce, with sweet sauce or even the fish made to taste sweet on one side, and savory on the other.

Bangladesh has more than forty types of mostly freshwater fish are common, including carp varieties like rui (rohu), koi (climbing perch), the wriggling catfish family - tangra, magur, shingi, pabda (the pink-bellied Indian butter fish), katla, ilish (ilish), as well as shutki (small dried sea fish). Chingri (prawn)

is a particular favourite and comes in many varieties - kucho (tiny shrimp), bagda (tiger prawns) or galda (Scampi). All of these are fresh water fishes. Only few decades ago these fishes could be found in small rural ponds and all types of inland water bodies and even in the submerged fields of paddy or jute all over the country. At that time the rural people could catch plenty of these fishes without paying any cost which is next to impossible now-a-days. Salt-water fishes were also found in abundance. Bangladesh can boast of a wide range of Shutki (sun-dried fish) of fresh-water and salt-water fishes. Dishes made of Shutki are popular and delicious and feature in typical traditional meals. Rice and fish is very common dish in Bengali food culture for thousands of years. So, the Bengalis are well-known as “Mase (Fish) bhate (rice) Bangali” all over the world. But, now-a-days the proverb has lost its merit because the availability of fishes has drastically been reduced due mainly to chemical intensive crop cultivation and scarcity of water.

3.1.2 The Spices & Condiments

Different spices and condiments are used in preparing Bengali dishes. Among them dried red chilli and bay leaves, cumin powder, cumin, red chilli powder, turmeric powder, ‘panch phoran’, coriander powder are common. The ‘pach poron’ is a general purpose spice mixture composed of radhuni (*Carum roxburghianum* seeds), jira (cumin), kalo jira (black cumin, also known as nigella), methi



(fenugreek) and mouri (anis). This mixture is more convenient for vegetarian dishes and fish preparations. Shorsher tel (mustard oil) is the primary cooking medium in Bengali cuisine. Of late, the use of sunflower oil, soybean oil and refined vegetable oil, which is a mixture of soybean, kardi, and other edible vegetable oils, is gaining prominence. However, depending on type of food, ghee (clarified butter) is often used, e.g. for making the dough or for frying bread. Mustard paste, holud (turmeric), poshto (poppy seed), ada (ginger), dhania (coriander, seeds and leaves) and narikel (ripe coconut usually desiccated) are other common ingredients.

3.1.3 Sweet Desserts

Different kinds of sweets are integral part of food culture of Bangladeshi people. The people are fond of different kind of sweets like Sandesh (a milk based dessert), Zarda (sweetened rice with sugar, ghee and colour), Firni (rice flour cooked in milk with sugar and flavouring), Payesh (rice cooked with sugar, milk and some condiments), Khir (similar to payesh), Semai, Rasgolla and Kalojam-two popular milk-based desserts (made with sugar, flour and ghee), Rosh Malai (round sweets floating in thick milk), Misti



Dhohi (sweetened yogurt), Halua (egg halua, carrot halua etc.), suji etc. In Bangladesh, different regions are renowned for different kinds of sweets. For example, Porabari in Tangail district is famous for chamcham, Mugtagachha in Mymensingh district for manda, Comilla district for pyara and rasmalai, Faridpur district for malaikari, Natore district for kanchagolla and Dhaka district for amrati, jilipi and pranhara.

3.1.4 Pithas (Home-made cake)

Pithas are part and parcel of traditional food culture of Bangladesh. Pitha is also called pithe or peetha which is a Bangla word that refers to rice cake or pie. But it's not like the traditional cake or pie what is common in the western world and in their food culture. However, it is not part of our daily menu. Most of the pithas are seasonal, specially prepared in the winter season because of some ingredients which are available only in this season. And the pithas of the winter season are the most delicious – a special combination with the climate of winter cold. Besides, some pithas are strongly associated with harvest festivals such as Nabanna and Poush Parban. Some pithas are also made throughout the year. Most pithas are sweet and a few are hot.



Traditionally in Bangladesh pithas are prepared and served on special occasion, such as receiving bridegrooms or brides, entertaining guests and arranging special get together of family

members, relatives or friends. Pithas are often eaten as small meals, such as breakfast or as a snack with tea, although there are many sweet varieties that are reserved for desserts.

The most common ingredients of pitha are sunned rice or wheat flour, molasses/gur or sugar, coconut and oil. Meat and vegetables are also used in preparing some pithas such as Pooli pitha, Shabji (vegetables) pitha, Bhapa (steamed) pitha, Jhal (hot) patishapta pitha and Mangsha (meat) patishapta pitha etc. Sometimes fruits – mostly jackfruit, palm, coconut and banana are also used in preparing some kind of pithas. Date juice and molasses/gur prepared from date juice, palm syra, sugarcane molasses/gur are also some of desirable ingredients. These pithas are named after the name of the fruit they are made from. A special type of pitha is prepared by using tree leaves as covers and are named as pata (leaf) pitha. Some pithas are named according to their size. A big size pitha is called “Hati pitha”, while one of the small types of pitha is named “Khejur (date) pitha. Sometimes the same pitha has different names in different areas. Some pithas are nationally known and familiar to all.

Pithas are prepared by different ways and that give different test. Depending on the type of pitha being prepared, pithas can be fried in oil, slow-roasted over a fire, steamed or baked and rolled over a hot plate. The most common and popular pithas that are well known throughout Bangladesh are Chittoi pitha, Patishapta, Pakan pitha, Bhapa pitha, Andosha, Kulshi pitha, Pata pitha, Jhuri pitha, Muthi pitha, Teler pitha, Puli pitha, Beni pitha, Dudher pitha, Gokul pitha, Chui Pitha, Roser pitha etc.

Now a days life is not so easy and simple like before. People especially those who live in urban areas don't have much time to engage themselves for making pitha. It demands time and labour for preparation of pitha making. That is why, now a days cakes, pastry and other food items that are sold commercially are gradually replacing traditional homemade pithas, especially in urban areas. But pithas still continue to attract many, even in urban areas. Many specialized shops sell costly pithas and small vendors in street corners also make their living by selling cheap pithas.

3.1.5 Drinks

Sarbat, prepared with water, sugar and lemon, is very common drinks all over Bangladesh. Green coconut water is also served as fresh ready-made drinks in the rural area. Borhani is also served as drinks but not common other than some big ceremonies like marriage. Lassi is a refreshing yogurt drink which is also served by mainly rich people. Besides, milky sweet tea or raw tea are available almost everywhere in the country. Now a days corporate drinks such as Pepsi, Coca-Cola, Fanta, 7-up, Mirinda, Sun Crest, Sprite are readily available and has become symbol of aristocracy replacing the traditional drinks. Hard drinks are available only in big hotels and selected restaurants. Drinking wines, whisky, bear etc. in public is restricted in the country.

3.1.6 Fruits

Traditionally, fruit is not considered as food in the country. So, no fruit is served associated with daily meals specially in the rural area of the country. Food is taken as seasonal food. Once upon a time Bangladesh was very much rich in diversity of seasonal fruits which were available throughout the country all the year round. In every household there were different kinds of seasonal fruit trees for mainly family consumption. But, those fruits are now rarely available due mainly to aggression of few kinds of expensive exotic fruits like apple, orange, grape etc. These fruits are considered as very much

nutritious by most of the people both in rural and urban area which is not true at all as described later on. As a result, fruits are almost disappeared from the menu of the people of Bangladesh specially from the menu of poor peoples.

3.2 Common Bengali Recipe Styles

The following are a list of characteristics of Bengali recipe styles. Each entry here is actually a class of recipes, producing different dishes depending on the choice of ingredients. There are six different tastes to which the Bengali palate cater to, sweet, sour, salty, bitter, hot and "koshay".

- **Shak:** Any kind of green leafy vegetable, like spinach, red amaranth, green amaranth, Indian spinach, bottle guard leaf, sweet gourd leaf etc. are often cooked with oil and onion, garlic, green chilli, salt etc., is called shak.
- **Bhaji :** Some vegetables like potato, bitter gourd, okra, green papaya, green banana etc. are fried on a frying pan mixed with oil and onion, garlic, green chilli, salt etc., is called Bhaji.
- **Bharta :** Any vegetable, such as potatoes, brinjal, okra, beans, green papaya, pumpkins or even dal, first boiled whole and then mashed with fresh chilli, mustard oil/ghee and spices, is called Bharta. For making bharta the vegetables are often boiled keeping inside the pot of boiling rice.
- **Bawra:** Anything that has been mashed and then formed into rough roundish shape and fried generally in mustard or soybean oil is called bawra. It is generally served with rice as a starter, or served with puffed rice crisps as a snack.
- **Charchari:** It is usually a vegetable dish which is cooked with one or more varieties of vegetables, sometimes with the stalks of leafy greens vegetables, cut into longish strips. The chachhari is often mixed with small shrimp or other small fishes. Turmeric powder, onion, garlic, green chilli, salt etc. are used in cooking charchari. The chachhari would be generally fried in a korai (a slightly rounded wok) with little water so that the preparation remains almost dry. Therefore, it can be called dry curry.
- **Dalna:** Mixed vegetables or eggs, cooked in a medium thick gravy seasoned with ground spices, especially garam mashla and a touch of ghee.
- **Dolma:** A vegetable, 'patal', stuffed with fish boiled, de-boned, then prepared with Bengali five spice powder, ginger and onions (alternately coconut-vegetable stuffing is used).
- **Ghonto:** Different complementary vegetables (e.g. cabbage, green peas, potatoes or banana blossom, coconut, chickpeas) are chopped or finely grated and cooked with both a pourn and ground spices. Dried pellets of dal are often added to the ghonto. Non-vegetarian ghontos are also made, with fish or fish heads added to vegetables. The famous murighonto is made with fish heads cooked in a fine variety of rice. Some ghontos are very dry while others a thick and juicy.



- **Jhal:** Literally, hot. A great favorite in Bengali households, this is made with fish or shrimp or meat, first lightly fried and then cooked in a light sauce of ground red chilli or ground mustard and a flavoring of panch-pouron or kalo jira.
- **Jhol:** A light fish or vegetable stew seasoned with ground spices like ginger, cumin, coriander, chilli, and turmeric with pieces of fish and longitudinal slices of vegetables floating in it. The gravy is thin yet extremely flavorful. Whole green chillies are usually added at the end and green coriander leaves are used to season for extra taste. It is the closest to a "Curry", yet it is more of a jus than a sauce.
- **Torkari:** A general term often used in Bengal the way 'curry' is used in English. The word first meant uncooked garden vegetables. From this it was a natural extension to mean cooked vegetables or even fish and vegetables cooked together.
- **Kalia:** A very rich preparation of fish, meat or vegetables using a lot of oil and ghee with a sauce usually based on ground ginger and fresh shallots pasted or fried along with a tempering of garam mashla.
- **Kofta (or Boras):** Ground meat or vegetable croquettes bound together by spices and/or eggs served alone or in savory gravy. Koftas are usually softer than boras which are mainly made of ground lentils, sometimes with added chopped vegetables - Telebhaja is different.
- **Korma:** A term that can also be called "Qurma" of Mughali origin, meaning meat or chicken cooked in a mild yoghurt based sauce with ghee instead of oil, and often poppy seed paste is added to it. People of Southern Bangladesh are known to add coconut milk to many of their dishes and Korma is no exception.
- **Kasha:** Meaning fried for a long time with ground and whole spices over high heat until shallot/garlic/ginger have dissolved into a thick paste. Usually applied to meat and some shellfish.
- **Chutney:** Generally Bengal is one of the pioneers for this particular dish, making it with everything including preserved mango sheets, called amshatta.
- **Ombol or Aum-bol (also known as Tok) :** A sour dish made either with several vegetables or fish, especially fish bones. The souring agent is usually tamarind pulp, unripe mango and sometimes amla or amloki is used. Curd, though a souring agent occasionally used with non-vegetarian dishes, will not be called ombol. It is served at the end of the meal as a kind of digestive, and to cleanse the palate.
- **Achar:** Pickles. Generally flavored with Mustard oil, Mustard Seeds, Aniseed, Caraway Seed and Asafoetida, or hing.

3.3 Cooking Instruments and utensils

Another characteristic of Bengali food is the use of a unique cutting instrument, the boti (also called the dao in some regional dialects). It is a long curved blade on a platform held down by foot; both hands are used to hold whatever is being cut and move it against the blade. The



method gives excellent control over the cutting process, and can be used to cut anything from tiny shrimp to large pumpkins. Knives are rare in a traditional Bengali kitchen.

Different utensils used in a Bengali household. Among them kadai, tawa, haandi, tea pan and a dekchi are common. A korai (wok) is a universal cooking vessel for most Bengali food, for making sauces, frying/stir-frying etc. Dekchi (a flat bottomed pan) is used generally for larger amounts of cooking or for making rice. The dekchi



comes with a thin flat lid which is used also to strain out the starch while finishing up cooking rice. The other prominent cooking utensil is a hari, which is a round bottomed pot like vessel. All the three mentioned vessels come in various sizes and in various metals and alloys. the "Tawa" is used to make roti and porota.

Silverware, as expected, is not part of traditional Bengali cookery. A flat metal spatula, khunti is used often, along with hata (scoop with a long handle), jhanjri (round shaped sieve like spatula to deep fry food), the "sharashi" (pincers to remove vessels from the fire), the ghuntni (wooden hand blender) for puréeing dal and the old wooden belun chaki (round pastry board and rolling pin), and the "shil nora", which is a rough form of a mortar and pestle, or grinding stone is also used. The "Kuruni" is a unitasker, there to grate coconuts.

3.4 Nutritional status of the People of the Country

Despite considerable improvement in the national rural health status, the nutritional well-being of rural people continues to be neglected.¹⁵ Children and women in Bangladesh suffer from high levels of malnutrition and micronutrient deficiencies such as low birth weight (LBW), undernutrition (underweight, stunting and wasting), vitamin A deficiency, iodine-deficiency disorders (IDD) and iron-deficiency anaemia (IDA). At the same time, new health problems related to over-nutrition such as obesity are emerging.¹¹

Maternal undernutrition (body mass index less than 18.5 kg/m²) in non-pregnant women in the country, while declining from 54 percent in 1996–1997 to 38 percent in 2003, is still very high.^{1, 6} Undernutrition, both before and during pregnancy, causes intrauterine growth retardation and is one of the major reasons for the high LBW (36 percent) prevalence in the country.¹¹

Low birth weight is more common among adolescent mothers. Marriage at very young age has serious consequences for pregnancy, future survival, health, growth and development. When combined with positive energy balance (adequate energy intake) in later life, LBW increases the risk of obesity, diabetes, high blood pressure and coronary heart disease. Between 1990 and 2004, underweight levels among children fell from 67 to 48 percent and child stunting fell from 66 to 43 percent,^{4, 2} but the levels are still unacceptably high.¹¹

The consumption of vitamin A-rich foods is still low, suggesting that the underlying causes of vitamin A deficiency require further attention. The diets of pregnant women in low-income groups are deficient not only in micronutrients but also in energy. Anaemia is a severe public health problem affecting pre-school children (49 percent) and pregnant women (47 percent), and a moderate public

health problem among non-pregnant women (33 percent) and adolescents (29 percent).³ Anaemia caused by iron deficiency impairs the growth and learning ability of children, lowers resistance to infectious diseases and increases the risk of maternal death and LBW. Children are malnourished by inadequate dietary intake or infectious diseases.

There is a general perception that poverty is the root cause of the malnutrition of the people of the country which is not fully true. In fact, the lack of awareness about nutrition is the root cause in this regard. However, the other underlying causes include (i) household food insecurity resulting from inability to grow or purchase a nutritionally adequate amount and variety of food; (ii) lack of dietary diversity; (iii) inadequate maternal and child care due to inappropriate hygiene, health and nutrition; (iv) low rates of exclusive breast feeding; (v) inadequate access to quality health services; (vi) poor environmental hygiene and sanitation along with low levels of income and maternal formal education. Malnutrition early in life has long-lasting and negative effects on overall growth, morbidity, cognitive development, educational attainment and adult productivity.¹⁴

Because of this, the nutritional status of children, particularly below five years of age, is seen as one of the most sensitive indicators of a country's vulnerability to food insecurity and overall socio-economic development. Women of child-bearing age are also highly vulnerable to nutritional deficiencies because of increased need for food and nutrients during pregnancy and lactation.

3.5 Rural Peoples' Perception about Food & Nutrition

It was very difficult for the respondents of the study to respond instantly to the questions "What do you mean by food & why do you take food?" because it is such a habitual fact from the very beginning of life that they never think about. Food is synonymous to bhat to the people of Bangladesh because they often use the word 'bhat' instead of food. For example, when someone says "I am going to take food" s/he says "I am going to take bhat". However, after some brainstorming they could express their general understanding about food as follows-

"Whatever we eat to live is food. For example, rice, fish, meat, vegetables etc. are foods for us".

Then in response to the question "Why do you take food?" the respondents answered in different ways as follows-

- we take food to live because we can't live without food;
- we take food when we feel hungry;
- we take food to fill up our stomach;
- we take food to gain energy in our body for work;
- we take food to maintain good health;

The answers reveal that the people have general perception about food from their practical knowledge and feelings. But unfortunately, in practice, they are not much concern about the nutritional requirement of their body and the nutritional value of different foods they take every day. The respondents of the study were found little concerned about balanced diet which is essential for their healthy and active life. In general, the people take food which are delicious for them. In fact, rice is the main food for the people of Bangladesh. The other foods like fish, meat, dal, vegetables are the means

to make the rice delicious. Feeling up the stomach with rice is the main objective of taking food for the people in rural areas perhaps also in the urban area. The poor or hardcore poor people have little choice to afford different delicious food. Therefore, they are satisfied if they can fill up their stomach with a bowl of rice by any means. On the other hand, the rich people arrange many delicious items to take rice.

Traditionally, mother cook food and feed the children. The mother is very much concerned that her child is in full stomach all the times and don't feel hungry. Therefore, mother always insists the child to take more and more rice to fill up the stomach. The mother becomes satisfied if her children take full stomach of rice with anything eg. mash of potato which is also a carbohydrate containing food item. As a result, from the very boyhood the people of the country get the habit of taking huge quantity rice or carbohydrate much more than their requirement. On the other hand, the children are growing up with deficiency of vitamins & minerals and also protein which are very much essential for their proper growth and development. It is not only the scenario of the rural poor and uneducated people but also a habitual fact for urban educated people. As a result, the nation is growing up with malnutrition and poor health.

The people have a general perception that the costly foods are the most nutritious food. So, the respondents of the study identified costly fishes like Hilsa, meat like mutton, chicken or beef, milk, egg and few kinds of exotic fruits like apple, orange, grape etc. as the nutritious food. Therefore, they have general perception that they suffer from malnutrition as they can't afford to purchase these costly foods. Very surprisingly, this is not only the perception of illiterate people but also the rural literate people and may be of urban people as well. Among the respondents of the study nobody was found to know that the fish, meat, milk, egg etc. all are sources of protein. They also don't know that they have plenty of other sources of protein around them like low cost small fishes, different kinds of pulses like lentil, mung bean, khesari, gram, pea, seeds of jackfruit & beans etc. Once upon a time pulses were called "the protein of the poor" which is not true now-a-days because the prices of pulses has gone very high over last few decades because the production has gone down due mainly to increased monoculture of irrigated boro rice.

The same situation prevails in case of vegetables. The peoples have general perception that the costly exotic vegetables like Cabbage, Cauliflower, Knolkhol, Spinach etc. are much more nutritious compared to indigenous vegetables. That is why, their dependency on market for vegetables is being increased day by day. Their expenditure for vegetables is also being increased. It is worthy to mention here that the aforesaid exotic vegetables need huge amount of chemical fertilizers and pesticides to grow which is great threat for health. Therefore, the health threat is also being increased. However, once upon a time specially before independence most of the vegetables were grown in homestead without using any chemical fertilizers and pesticides. Only few vegetables like Brinjal, Radish, Potato, Green Amaranth, Aroids, Tomato etc. were grown in the field also without using any chemical fertilizers & pesticides. The rural people specially the poor people collected different kinds of vegetables either from crop field or from the fallow land which were grown without cultivation. For example, Bathua, Bakful, Kanchushak, Methishak, Noteshak, Pudina, Kalmishak, Getkal, Halencha,

Telakucha, Pipul, Amrul, Punarnaba, Shantishak, Setadrin, Raktadrin, Thankuni, Gonori, Gimashak, Kanaishak, Nuniashak, Shushni shak, Sarisha (Mustard) shak, Pat (Jute) shak and many others.

The nutritional values of different indigenous and exotic vegetables are presented in table-1 and the ranking of the vegetables in terms of nutrition content is presented in table-2. The data presented in the tables shows that the exotic vegetables Cabbage, Cauliflower, Knolkhol, Lettuce and Spinach have much less nutritional values compared to many of the indigenous vegetables. According to mineral contents of the vegetables it is observed that the ranks of Cabbage, Cauliflower, Knolkhol, Lettuce and Spinach are 18, 16, 11, 13 and 6 respectively while the ranks for calcium contents are 13, 12, 15, 11 and 9 and the ranks for iron contents are 14, 11, 16, 10 and 3 respectively. On the other hand, the ranks of Cabbage, Cauliflower, Knolkhol, Lettuce and Spinach for Vitamin-A contents are 14, 15, 16, 10 & 6; for Vitamin-B-1 contents are 10, 14, 16, 7 & 8; for vitamin-B-2 contents are 13, 14, 15, 6 & 8 and for vitamin-C contents are 17, 2, 4, 13 & 11 respectively. Further, according to calorie contents the ranks of Cabbage, Cauliflower, Knolkhol, Lettuce and Spinach are 15, 10, 11, 18 and 13 respectively. Therefore, it is obvious that many of the indigenous vegetables are more nutritious than the costly exotic vegetables that invalidate the peoples' perception regarding nutritional values of vegetables.

Table-1: Nutritional Values of different indigenous and exotic Vegetables (per 100 g)

Name of Vegetable	Minerals (g)	Calcium (mg)	Iron (mg)	Vit. A (micro-g)	Vit. B-1 (mg)	Vit. B-2 (mg)	Vit. C (mg)	Calorie (Kcl)
Cabbage	0.5	31	0.8	0	0.06	0.05	3	28
Cauliflower	0.8	41	1.5	0	0.027	0.03	91	41
Knolkhol	1.3	25	0.4	0	0.01	0.03	53	41
Lettuce	1.2	50	2.4	990	0.09	0.13	10	21
Spinach	1.8	98	10	8470	0.03	0.09	15	30
Bakful	3.1	1130	3.9	5400	0.21	0.09	169	93
Bathua	2.6	150	4.2	1740	0.01	0.14	35	30
Kanchushak	2.2	227	10	10278	0.22	0.26	12	56
Methishak	1.5	395	16.5	2340	0.04	0.31	52	49
Noteshak	3.3	200	0	0	0	0	0	26
Pudina	1.6	85	15.6	13300	0.09	0.08	28	49
Kalmishak	1.1	107	3.9	10740	0.14	0.4	42	46
Lalshak	1.6	374	0	11940	0.1	0.13	43	43
Puishak	1.4	164	10	12750	0.02	0.36	64	27
Sajina	1.9	21	5.3	750	0.04	0.02	45	60
Kanchkala	1	11	0.6	0	0.09	0.06	4	83
Brinjal	0.8	28	0.9	850	0.12	0.08	5	42
Green papaya	1.3	13	0.9	560	0.4	0.02	6	36

Source: <http://www.ais.gov.bd/home/publication/nutrition-89.html>

Table-2: Ranking of different indigenous and exotic vegetables according to Nutritional Values

Rank	Minerals (g)	Calcium (mg)	Iron (mg)	Vit. A (micro-g)	Vit. B-1 (mg)	Vit. B-2 (mg)	Vit. C (mg)	Calorie (Kcl)
1	Noteshak	Bakful	Methishak	Pudina	Green papaya	Kalmishak	Bakful	Bakful
2	Bakful	Methishak	Pudina	Puishak	Kanchushak	Puishak	Cauliflower	Kanchkala
3	Bathua	Lalshak	Spinach	Lalshak	Bakful	Methishak	Puishak	Sajina
4	Kanchushak	Kanchushak	Kanchushak	Kalmishak	Kalmishak	Kanchushak	Knolkhol	Kanchushak
5	Sajina	Noteshak	Puishak	Kanchushak	Brinjal	Bathua	Methishak	Methishak
6	Spinach	Puishak	Sajina	Spinach	Lalshak	Lettuce	Sajina	Pudina
7	Pudina	Bathua	Bathua	Bakful	Lettuce	Lalshak	Lalshak	Kalmishak

8	Lalshak	Kalmishak	Bakful	Methishak	Pudina	Spinach	Kalmishak	Lalshak
9	Methishak	Spinach	Kalmishak	Bathua	Kanchkala	Bakful	Bathua	Brinjal
10	Puishak	Pudina	Lettuce	Lettuce	Cabbage	Pudina	Pudina	Cauliflower
11	Knolkhol	Lettuce	Cauliflower	Brinjal	Methishak	Brinjal	Spinach	Knolkhol
12	Green papaya	Cauliflower	Brinjal	Sajina	Sajina	Kanchkala	Kanchushak	Green papaya
13	Lettuce	Cabbage	Green papaya	Green papaya	Spinach	Cabbage	Lettuce	Spinach
14	Kalmishak	Brinjal	Cabbage	Cabbage	Cauliflower	Cauliflower	Green papaya	Bathua
15	Kanchkala	Knolkhol	Kanchkala	Cauliflower	Puishak	Knolkhol	Brinjal	Cabbage
16	Cauliflower	Sajina	Knolkhol	Knolkhol	Knolkhol	Sajina	Kanchkala	Puishak
17	Brinjal	Green papaya	Noteshak	Noteshak	Bathua	Green papaya	Cabbage	Noteshak
18	Cabbage	Kanchkala	Lalshak	Kanchkala	Noteshak	Noteshak	Noteshak	Lettuce

On the other hand, very unfortunately, the respondents of the study identified few kinds of exotic fruits like apple, orange, grape etc. as the nutritious fruits. It is to mention here that once upon a time Bangladesh was very much rich in diversity of seasonal fruits which were available throughout the country all the year round. In every household there were different kinds of seasonal fruit trees for mainly family consumption. The respondents of the study identified various kinds of indigenous fruits which were available either at their homestead or at the village. The few of the fruits are Jackfruit, Mango, Litchi, Guava, Blackberry, Jujube (Ber), Golden apple, Banana, Papaya, Coconut, Carambola, Pummelo, Lemon/Lime, Sapota, Monkey jack, Jamun, Rose apple, Bullock's heart, Custard apple, Indian dellenia, Satkara, Fig, Karonda, Burmese grape, Bel/wood apple, Elephant's foot apple, Riverebony, Tamarind, Palmyra palm, Pomegranate, Star gooseberry, Longan, Olive, Date palm, Wax apple, Cowa (mangosteen), Aonla, Toikar, Waterchesnut, Phalsa, Melon, Pineapple, Watermelon, Bilimbi, Santol, Jaboticaba, Mulberry etc. Now-a-days only very few of them are available in the rural area of the country. Those fruits were easily available and accessible for almost all people so didn't have commercial value because, in fact, nobody had to purchase most of those fruits from the market. Now those fruit trees have been replaced by few commercial timber trees like Mahogany, Acacia, Eucalyptus etc. Only very few of them are now available in the rural area.

The rural people never thought that these fruits are essentials for food security in terms of nutrition security for supplying essential vitamins & minerals. On the other hand, the open market economy has changed their mindset that the exotic fruits, which are full of poisons and very much costly, are very much nutritious and good for health. That's why now-a-days the people feed their children & patients with these fruits for getting nutrition. As a result, these exotic fruits are now available even in the remote rural market throughout the country. The people are buying those fruits with very high price though those fruits are neither more nutritious nor fresh compared to the very cheap indigenous fruits.

The nutritional values of few indigenous and exotic fruits are presented in table-3 and the ranking of the fruits in terms of nutritional values is presented in table-4. The data presented in the table shows that many of the indigenous fruits contain much more different nutrient elements compared to the exotic fruits Apple, Grape & Orange. The table-4 shows that according to mineral contents the ranks of Grape, Apple & Orange are 12, 15 & 16 among the listed 17 fruits. The data also shows that in terms of calcium content the ranks of Grape, Orange and Apple are 8, 9 and 17 respectively among the listed 17 fruits while in terms of iron content the ranks of the three fruits are 12, 14 and 16 respectively.

Therefore, it is obvious that many of the indigenous fruits contain more minerals compared to costly exotic fruits. On the other hand Grape, Orange & Apple contain very negligible amount of Vitamins while there are many indigenous fruits rich in vitamins. The data shows that the rank of Apple, Grape and Orange are 9, 10 & 11 in Vitamin-A content; 17, 6 & 15 in Vitamin-B-1 content; 17, 6 & 16 in Vitamin-B-2 content and 16, 11 & 9 in Vitamin-C content respectively. Therefore, it is also obvious that many of the indigenous fruits contain more Vitamin-A, B & C compared to costly exotic fruits. In terms of calorie content the ranks of Grape, Apple and orange are 3, 7 and 11 respectively.

Table-3: Nutritional Values of different indigenous and exotic fruits (per 100 g)

Name of Fruit	Minerals (g)	Calcium (mg)	Iron (mg)	Vit. A (micro-g)	Vit. B-1 (mg)	Vit. B-2 (mg)	Vit. C (mg)	Calorie (Kcl)
Apple	0.2	6	0.08	54	0	0	4.6	52
Grape	0.5	22	0.5	0	0.1	0.06	29	97
Orange	0.1	22	0.3	0	0.04	0.01	40	43
Guava	0.7	10	1.4	100	0.21	0.09	210	51
Mango	0.4	16	1.3	8300	0.1	0.07	41	90
Jackfruit	1.1	20	0.5	4700	0.11	0.15	21	48
Blackberry	0.1	22	4.3	120	0.09	0.02	60	11
Papaya	0.7	31	0.5	8100	0.08	0.03	57	42
Hogplum	0.6	55	3.9	800	0.28	0.04	92	66
Pummelo	0.3	37	0.2	120	0.06	0.04	105	38
Banana	0.9	13	0.9	0	0.1	0.05	24	109
Ata	0.9	17	1.5	0	0.07	0.14	38	90
Fig	0.6	80	1.1	162	0.06	0.05	5	37
Bel	0.9	38	0.6	0	0.8	0.03	0.02	9
Katbel	2.2	59	0.6	0	0.8	0.03	13	49
Jujube	1	11	0	0	0.02	0.05	51	104
Arbarai	0.7	34	1.2	0	0.02	0.08	463	19

Source: <http://www.ais.gov.bd/home/publication/nutrition-89.html>

Table-4: Ranking of different indigenous and exotic fruits according to Nutritional Values

Rank	Minerals (g)	Calcium (mg)	Iron (mg)	Vit. A (micro-g)	Vit. B-1 (mg)	Vit. B-2 (mg)	Vit. C (mg)	Calorie (Kcl)
1	Katbel	Fig	Blackberry	Mango	Bel	Jackfruit	Arbarai	Banana
2	Jackfruit	Katbel	Hogplum	Papaya	Katbel	Ata	Guava	Jujube
3	Jujube	Hogplum	Ata	Jackfruit	Hogplum	Guava	Pummelo	Grape
4	Banana	Bel	Guava	Hogplum	Guava	Arbarai	Hogplum	Mango
5	Ata	Pummelo	Mango	Fig	Jackfruit	Mango	Blackberry	Ata
6	Bel	Arbarai	Arbarai	Blackberry	Grape	Grape	Papaya	Hogplum
7	Guava	Papaya	Fig	Pummelo	Mango	Banana	Jujube	Apple
8	Papaya	Grape	Banana	Guava	Banana	Fig	Mango	Guava
9	Arbarai	Orange	Katbel	Apple	Blackberry	Jujube	Orange	Katbel
10	Hogplum	Blackberry	Bel	Grape	Papaya	Hogplum	Ata	Jackfruit
11	Fig	Jackfruit	Papaya	Orange	Ata	Pummelo	Grape	Orange
12	Grape	Ata	Grape	Banana	Pummelo	Papaya	Banana	Papaya
13	Mango	Mango	Jackfruit	Ata	Fig	Bel	Jackfruit	Pummelo
14	Pummelo	Banana	Orange	Bel	Orange	Katbel	Katbel	Fig
15	Apple	Jujube	Pummelo	Katbel	Jujube	Blackberry	Fig	Arbarai
16	Orange	Guava	Apple	Jujube	Arbarai	Orange	Apple	Blackberry
17	Blackberry	Apple	Jujube	Arbarai	Apple	Apple	Bel	Bel

3.6 Dietary Pattern and Nutrition Issue

Consumption pattern of different food items by different categories of households based on land ownership in the study area is presented in table-5 and the requirement and actual intake of different food items nationwide and in the study area are presented in table-6. The data presented in the table shows that the peoples of the study area consume on an average 575 grams of food grains (mainly rice) per person per day while the Landless, Small & Marginal and Medium & Big households consume 567, 574 and 584 grams of food grains per person per day respectively. The data indicates that the consumption of food grains little vary among the household categories. The highest amount of food grains is consumed by Medium & Big households (567g per person per day) followed by Small & Marginal (574g per person per day) and landless (584g per person per day) households. It is important to note that all the households consume significant amount of potato (on an average 97g per person per day) which is also a carbohydrate containing food item. Therefore, cereals make up the largest share (64 percent excluding potato and 75 percent including potato) of the diet of the people of study area. It is obvious that the consumption of carbohydrate containing food items is too high (total 672g per person per day) compared to the actual requirement which is 490g per person per day proposed by National Council of Nutrition (NCN) and 397g according to FAO standard.

Table-5: Consumption of different food items by different classes of households.

Household Category	Food grains	Potato	Fish	Meat	Egg	Vegetables	Dal	Milk
Landless household (hh)	567	91	47	17	5	119	15	3
Small & Marginal hh	574	96	38	11	6	123	18	5
Medium & Big hh	584	104	70	26	0	134	17	11
Total	575	97	52	18	4	125	17	6

Source: Field level data collected under the study.

Table-6: Requirement and Actual Intake of Different Food Items Nationwide and in the Study Area [Gram Per Capita Per Day]

Food item	Requirement proposed by NCN	Requirement FAO Standard	Actual Intake According to FAO	Actual Intake in study area
Cereals (Rice, wheat etc.)	490	397	536	575
Potato	---	---	74	97
Fish	45	26	41	52
Meat	20	37	10	18
Egg	14	---	4	4
Dal	30	74	13	17
Milk & milk products	30	99	44	6
Vegetables	235	342	154	125
Fruits	50	44	34	-
Total:	914	1019	910	894

Sources: <http://www.fao.org/ag/humannutrition/nutrition/en/>; Rashid M. Mamunur (2003) and Field level data collected under the study

On the other hand, the data presented in the tables shows that the people of the study area consume on an average 52g of fish, 18g of meat, 4g of egg, 125g of vegetables, 17g of dal and 6g of milk per person per day. The consumption of fruits could not be calculated because fruits are only consumed during season when available. But, during study period no fruit consumption data was available.

However, from the data it is interesting to note that the people of the study area still consume good amount of fish (52g per person per day) which is higher than the amount both proposed by National Council of Nutrition (NCN) and according to FAO standard. But, consumptions of other food items are much lower than the requirement as proposed by NCN and according to FAO standard. Most importantly, the consumptions of vegetables and dal are much lower than the requirement though vegetables are the major sources of vitamins & minerals and dal is the source of protein for the rural people of Bangladesh which are very much important for maintaining good health. The scarcity of vegetables and dal is not only reason behind such low consumption rather the lack of nutrition awareness is the root cause in this regards. If the peoples of the rural area are aware of their nutrition they can easily create many sources of vegetables even at their homestead without investing much money. Therefore, massive awareness campaign is a burning issue in order to ensure food and nutrition security of the rural people of Bangladesh.

3.7 Mal Practices and Superstitions in Eating Habit

It is already mentioned that the scarcity of food is considered to be the root cause of malnutrition of the people specially of rural poor people of Bangladesh which is not fully true. Rather, the lack of knowledge about food and nutrition is the root cause in this regard. There are various superstitions and malpractices in eating habit of the people of the country which making food security of the country almost unachievable. Some of the superstitions and mal practices in eating habit collected from the respondent of the study are presented below-

1. Most of the people discard the water from boiled rice at the time of cooking because they are not aware that most of the nutritional value of rice specially the water soluble vitamins, minerals & starch are gone away from the rice with the discarded water. It is not a practice only in the rural area but also in the urban area among the educated people. Similar practice is found during cooking vegetables when the people discard the water come out from the vegetables during cooking.
2. In fear of getting hum (one kind of skin disease) of the newly-borne baby the mother is not given any fish or meat up to 40 days after delivery.
3. The pregnant woman is not given much nutritious food because of the fear that the size of the baby would be larger which would cause difficulties during delivery.
4. The pregnant woman is not given egg of duck because the people believe that duck egg cause asthma of the baby.
5. The pregnant woman is not given mrigel fish because of the fear that the baby will be attacked by epilepsy (locally called mrigi disease) disease.
6. The pregnant women is not given fishes like hilsa, puti, boal, shrimp etc. and beef and some other protein based food because the people belief that these food cause puerperal sickness.
7. Newly-borne baby is not given any solid food up to one year with a fear of getting diarrhea.
8. Giving food is stopped when a child or anybody get diarrhea and fever.

9. The rural people have a general belief that if a patient of diarrhea is given water to drink he will get cholera. Therefore, a patient of diarrhea is not given water to drink which is very much dangerous that even cause death of the patient.
10. Modern women are not interested in breast-feeding for their fashion consciousness.
11. In most of the cases the newly borne baby is not given Shal-dud (first breast milk) in a fear that the baby might cause diarrhea.
12. The people believe that sugar, ghur, sweets etc. cause stomach worm and diabetes.
13. The peoples believe that ripen banana and papaya cause cold of children.
14. No fruits should be taken at night. No water should be taken after eating fruits.
15. Taking much vegetables cause gastric disease.
16. Taking milk after eating pineapple cause poisoning.
17. Taking leafy vegetables cause swollen of stomach for the children.
18. Taking unripe pineapple cause abortion.
19. The women should take food after all the male members of the family have taken food.
20. The male and aged person of the family or family head are given the most nutritious food compared to the women and children.
21. On a special occasion or when a relative come to one's house the people arrange different kind of fishes, meat, dal etc. in huge amount at a time all of which are protein containing costly foods. But, the other days they don't take any protein containing food for many days.

3.8 Religious concept of food

Religious beliefs and myths have immense influence on traditional food culture of the country. Here only Muslim and Hindu religions have been considered because the peoples of other religions are not available in the study area. However, mythologically food is considered as gift of God for human being by both Hindus & Muslims. According to Islam religion food is called 'Rizik' given by Allah. There is a myth among Muslims that nobody can take food if Allah don't allocate food (Rizik) for him or her. Therefore, according to Muslim myth everybody should respect food. If somebody don't respect food then he will be deprived of food by Allah. Muslim myth also says that food should be taken when the body is net & clean i.e. holy. The Muslims have to say "Bismillah-hir-Rahmanur Rahim" (in the name of Allah the absolute kind) and at the end they have to say "Alhamdulillah" (grateful to Allah for giving food). Food should be taken with due respect. So, one should not talk with others during taking food.

On the other hand, according to Hindus myth Food is also as the gift of the God Laxmi. Food comes from vander (Storage) of Laxmi. So, every Thursday the Hindus Pray to Laxsmi with flowers (white flower like Belful) & Tulsi leaf for food. During prayer (Puja) they also offer food (different kind of sweets like Sandesh, Batasa, fruits etc.) to the God Laxmi. These foods are then distributed to the family members as Prasad so that they remain free from disease. The Hindus believe that if the God Laxmi becomes kind on someone, he will have plenty of food and wealth. According to Hidu myth the

otithi (guest) is considered as representative of Narayana (God). That is if anybody comes to the house of a Hindu they treat him/her as representative of God. So, the guest has to be entertained with foods to make him/her satisfied. The guest will be entertained with his preferable foods. Just after arrival the guest is given ready foods like puffed rice, flattened rice, sweets, yogurt, fruits etc. which are available at home. If the guest stay for longer time then he/she is fed with his/her preferable foods.

There are some foods which are restricted in Hindu and Islam religion. The Hindus never eat beef because they consider cow as one of their Gods. But, they drink the milk of cows. The Hindus also do not eat onion and garlic in most of the cases specially during the period of puja (prayer by Hindus). Fish & meat are also prohibited during puja period in most of the cases. On the other hand, the Muslims never eat the meat of pig because it is prohibited in the religion Islam. Wines or such kind of hard drinks are also prohibited in Islam.

There are some religious practices like holy fasting (Ruja in Islam & Upabash in Hindu) in both Islam and Hindu religion when taking food is restricted. The practices might have significant influence on controlling eating habit of the people of Bangladesh. Because controlling eating habit is necessary for human being for maintaining good health. Because, by born human being is devoted to take more and more food. So, it is difficult for a human being to control its eating habit. For example, if the food is delicious naturally human being, specially the people of Bangladesh who have little consciousness about nutrition, can not abstain themselves from taking more food. Religious abstinence or holy fasting might be helpful for gaining self-control over the by-borne habit of taking more food i.e. more rice.

3.9 Bengali Food Festivals

Bangladesh is ethnically homogeneous, with Bengalis comprising 98% of the population. The majority of Bangladeshis (about 90%) are Muslims and a small number of Hindus, Christians and Buddhists are also living in the country. People of different religions perform their religious rituals with festivity in Bangladesh. All of these rituals form an integral part of the cultural heritage of Bangladesh. Bangladesh is a country of festival. “Thirteen Festivals in Twelve Months” is a well known proverb that indicates the intensity of festivals in the country. Most of the festivals are religious festivals observed by both Muslims & Hindus. There are also some festivals which are common Bengali festivals. Food is an integral part of the festivals. Various kinds of foods are prepared during the festivals that expose the traditional food culture of the country. The most common festivals and the integrated food culture are described below.

3.9.1 Muslim Festivals

3.9.1.1 Eid-ul-Fitre & Eid-ul-Adha

The Muslims observe two big festivals every year which are Eid-ul-Fitre & Eid-ul-Adha. Eid-ul-Fitre is observed on the 1st day of Shawal of the Islamic lunar calendar after one month of Ruja (holly fasting) during the month of Ramadan of the Islamic lunar calendar. On the other hand, Eid-ul-Adha is observed on 10th of Jilhaj of the Islamic lunar calendar. In both of the festivals the Muslims arrange different kind of foods according to their financial ability. The most important characteristics of Muslim festival is food with meat. The rich people eat huge amount of meat during the festival while the poor people also arrange some meat in any way. During the Eid-ul-Adha Kurbani (Sacrifice animals

in the name of Allah) is a must to do for the financially able Muslim people. Mainly cows and often goat are slaughtered as Kurbanī by almost every Muslim household except the very poor one. Therefore, there are huge amount of meat to eat at that time. According to Muslim religious law one-third of the meat have to be given to the poor relatives and neighbours. The meat of Kurbanī is also exchanged among the relatives as a very common tradition. Therefore, during Eid-ul-Adha almost every Muslim household have some meat. Beside the meat different kinds of sweet items specially Semai are cooked. Different kinds of home made cake are also prepared. Polao, Kurma, Rejala are very common food during the Eid festivals.

3.9.1.2 Ruja (Holly fasting)

During the month of Ramadan the Muslims practice abstinence by taking no food or drinks during day time. Food is taken at the end of night within certain period of time before sunrise which is called Seheri. In seheri the Muslim people take food as they take in a common lunch or dinner. But, it is always tried to make the food rich and delicious based on the financial ability. In seheri rich people arrange different dishes of fish, meat, vegetables along with rice while the poor people often can't arrange fish, meat who depend mainly on dal and vegetables. Then the whole day up to sunset no food even water is taken. Just after sunset they take food which is called iftar. The Muslim people arrange different kinds of foods in iftar based on the financial ability where Muri (puffed rice), Chira (flattened rice) are common. The rich people arrange Piaji (made of pulses), Beguni (made of brinjal), Chap (made of potato sometimes with egg), Chchola bhaja (boiled gram cooked with onion, garlic and other spices & condiments), salad, different kind of sweets, date & other fruits, sarbat (mixture of lemon juice, water and sugar) etc. in iftar. On the other hand, the poor people arrange panta, hotchpotch, puffed rice etc. as iftar. According to Muslim religion feeding anyone who is observing holy fasting with iftar is a matter of virtue. So, during the month of Ramadan many Muslim arrange iftar party. Iftar party is also arranged by political & nonpolitical parties, social organizations, business organizations, businessmen or individuals.

The 27th night of Ramadan is called shab-e-kadar. The Muslim arranges special sweet food, beef or mutton with bread of rice powder on the occasion. Feeding Mullah (religious leader or learned man) on the occasion is considered as a matter of virtue. Actually, during the whole moth of Ramadan, as the Muslims believe, feeding Mullah is a matter of virtue.

3.9.1.3 Akika

Akika is a religious obligation for the Muslim when the name of a Muslim child is declared. In this occasion cow or goat is slaughtered and a part of the meat is distributed among the neighbours & relatives. Many people specially the rich people arrange feeding ceremony on the occasion. In this ceremony the people arrange different delicious food like Polao, Kurma, Rejala, roast, sweets, yogurt, salad etc. for the guests.

3.9.1.4 Khatna (circumcision)

Khatna means cutting off the foreskin, according to Muslim and Jews religious law. Although there is no religious obligation to arrange any ceremony at the time of Khatna many people specially rich people arrange ceremony on the occasion and feed the relatives and surrounding people. On this

occasion the people arrange different delicious food like Polao, Kurma, Rejala, roast, sweets, yogurt, salad etc.

3.9.1.5 Challisha

It is a common religious ritual of the Muslims which is held on occasion of death of a Muslim person. The ritual is arranged after 40 days of the death of a Muslim person. In Bengali language 40 means challish. So, the program is called Challisha. In this program the people feed specially the Mollas (the religious leaders), poor people or beggars and also the relatives and the community people based on the ability of the arranging family. On this occasion food is arranged based on the taste and ability of the arranging family but commonly the food is meat based. Plain rice and fish, beef and or mutton, vegetables are very common on the occasion. Some people also arrange Khichuri (hotchpotch). In that case the hotchpotch is cooked with mutton or beef which is called Bhuna khichuri.

3.9.1.6 Milad

Milad is another Muslim religious ceremony arranged on various occasions. The main objective of a Milad is to pray to Allah for something good. Different kind of foods are arranged in Milad but the sweet foods are very common. Among the sweets Jilapi, Batasa, Khir, Payesh are very commonly served in the Milad. In the Milad relatives & neighboring peoples are invited. But, the common and main invitees are Moulavi (Islamic educated people or religious leader).

3.9.1.7 Shab-e-barat

Shab-e-barat is observed on the night of 15th of Shaban of the Islamic lunar calendar. The preceding night is known as Laylatul Bara'ah or Shab-e-barat. On this occasion, traditionally the Muslims arrange different food items. The rich people arrange beef or mutton and bread (ruti) of rice powder while the poor people arrange halua & ruti. Different kinds of sweet items namely halua, suji, payesh, khir etc. are also arranged. Exchange of food is very common tradition on the occasion. The Muslim families send foods whatever they prepare to the neighbours' house and also get foods from the neighbours vice-versa.

3.9.2. Hindu Festivals

Hindu religious festivals have some similarity with the Muslim festivals but there is also much dissimilarities. Among the similarities holy fasting (upabash) is a very common one. But, the Hindus observe holy fasting twice in every month which is called Ekdashi. Besides, the Hindus also observe holy fasting during many of their Puja (religious festival or prayer of Hindu). But, not all Hindus observe the holy fasting. Among the dissimilarities the most vital one is in case of food arrangement. For example, no fishes and meat are taken by Hindus during the period of any Puja. Mainly vegetarian foods are taken during Puja. The respondents of the study could not explain the reason behind the ritual. They just follow this as a religious obligation. But, now-a-days situation is little bit changing. Some people sometimes disobey this restriction but not in public. However, the common and vital Hindu festivals relevant to traditional food culture of Bengali are described below.

3.9.2.1 Durgapuja

It is the biggest religious festival of the Hindus. During this Puja the Hindus don't take any fishes or meat for five days. They also don't take any onion, garlic in their food during this period. During the Puja period they usually take flattened rice (chira), puffed rice (muri), murki (another kind of muri), coconut naru (small hard ball-like structure made with coconut) and different kind of sweets, yogurt etc. and vegetarian foods. During the Puja the Gods are feed with different kind of fruits and sweets including banana, milk, muri, chira, yogurt etc. which is called Prasad. This Prasad is then eaten by all. After the end of the Puja all kind of foods including fishes and meat are eaten. On occasion of this Puja the Hindus invite relatives and community peoples each other and feed with different kind of delicious foods.

3.9.2.2 Basanti/Kartika/Kaitani Puja

This Puja is similar to Durgapuja but only held in town or big bazaar or within greater community.

3.9.2.3 Rash Puja (Rash Utsab/Rash Mela)

This is big Hindu religious festival continue for seven days. During this Puja big fair & Jatra Pala (one kind of cultural event) are arranged in the place of Puja. Individual family don't arrange anything during this Puja. The people go to fair and enjoy themselves and purchase many things from the fair including different kind of sweet food which are distributed among the family members and community people.

3.9.2.4 Kali puja

This is a day long puja. During this puja no fishes and meat and even no food is taken for 24 hours. They take food at preceding night of the day of puja. Then the whole day and night they take no food and even they can not sleep. Then the next day they can take food as usual. In the next day morning they break their fasting by taking Prasad of sweets. Then they can take food going back to home from Mandir (Prayer place/house for Hindu). At this time in the morning they generally take Luchi (one kind of small bread fried in oil) & sweets when fasting is over. Then they are allowed to take all kind of foods including fish and meat.

3.9.2.5 Swarasati puja

This is also a day long puja. During this puja all foods are allowed except fishes and meat. The common foods in this puja as Prasad are sweets, fruits, chira, muri, murki etc. Generally, this puja is held with the fruit jujube. So, before this puja no Hindu take jujube fruit.

3.9.2.6 Ashwini/Gashi puja

This puja is quite similar to the Swarasati puja. Like Swarasati puja all foods are allowed except fishes and meat during this puja. The common foods in this puja as Prasad are sweets, fruits, chira, muri, murki etc.

3.9.2.7 Manasha puja

This puja is quite similar to kali puja but the fasting (in Bengali upabash) in this puja is little relaxed and shorter. In this puja food is taken at the preceding night and then the whole day is upabash. Then the puja is held at afternoon. Food is taken as usual after finishing of the puja.

3.9.2.8 Ekdashi puja

Like the Ruja of the Muslim the Hindus observe upabash twice in every month based on the lunar calendar. In this puja food is taken at the preceding night and then the whole day is upabash. During upabash no cooked food can be taken including chira, muri but fruits, non-cooked sweets, water etc. can be taken. In the next day morning food is taken as usual including fish and meat. It is to mention here that there is another kind of Ekdashi which is called Nirjala Ekdashi because no food even water can be taken during such upabash.

3.9.2.9 Basanti puja (Chaitra puja)

This puja is also similar to Durgapuja that continues for five days but the festival is not as gorgeous as Durgapuja. The arrangement of food in this puja also similar to the Durgapuja.

3.9.2.10 Chaitra snakranti

This puja is held at the end of Bangla month Chaitra. During the last seven days of Chaitra no rice is taken, only different kind of fruits are taken. After seven days Patha (He goat) is slaughtered in the name of God Kali like Kurban of the Muslim during Eid-ul-Adha. This is done only by them who are previously committed to do i.e. all Hindus are not bound to do so. Then the meat of goat is distributed to all the neighbouring people who like to take.

3.9.2.11 Janmastami

The birth day of the Hindu God Shrikrishna is called Janmastami. It is observed in the Bangla month of Bhadra according to Bengali Almanac. On the occasion every household prepare pitha (home made cake) with palm juice. Other sweet food like khir, payesh etc. are also prepared. Different kind of pithas are also prepared. Hotchpotch is also a common food on the occasion. The Hindu people invite neighboring people and relatives and feed with aforesaid foods on the occasion.

3.9.2.12 Namjagga

This an occasional program of the Hindu community where prayer is done through special kind of music which is called Kirtan. The program is organized community based where Hindu community people take part. The program continues for five days. The organizers generally arrange hotchpotch on the occasion and feed the gathered people for five days.

There are also some more puja of the Hindu community such as Charak puja, Bhrahma puja, Shithala Puja, Jagadatri puja, Shama puja, Shib Puja etc. but those are not much commonly observed. Besides, there are some other festivals observed by the Hindu community which is described below.

3.9.2.13 Annaprashan

In Bengali language 'Anna' means boiled rice (Bhat) and 'Prashan' means eating or feeding. Annaprashan is arranged when a child take Bhat for the first time in its life at the age of five months for the boy and seven month for the girl. It was asked to the respondents of the study why the girls are late in this case. In response the people said that the girls are late may be because one day after marriage the girl will go to husband's home or new home where they will have to take food at last after all the family members have taken food. So, the practice of taking food in late is started from very

childhood for the girl. However, the respondents also informed that even few years back no birth day were observed in the rural area. But, Now-a-days birth day is celebrated in many houses.

3.9.2.14 Satsangha

This program is just like Milad of the Muslims. In this program the Hindus feed thakore (religious leader) and community people with mainly vegetarian foods, different kind of sweets, yogurt etc.

3.9.2.15 Shradhdha (Gyatibhoj)

This is just like Challisha of the Muslims. After death of any of the parent the sons and daughters of the departed soul don't eat any fish, meat or any protein containing food up to 13 days after death. After that time they feed people relatives and community people with different food items including meat & fishes.

3.9.3 Some Common Bengali Festivals

3.9.3.1 Nabanna (New Crop)

Nabanna is a Bengali harvest celebration usually celebrated with food and dance and music. It is one of the numerous festivals that established the proverb "baro mase tero parban" (thirteen festivals in twelve months) to the land of Bengal. The villagers and local people from both the major religious groups join the festival with equal participation. The festival is celebrated with fair (in Bengali mela) which is called nabanna mela. The fair is held at a central place of the surrounding villages generally near the rural market. People from several villages come to enjoy the fair. The rural cultural programs like Baul song, Jatra, Kabi-gaan etc. are held in the fair specially at night time. Thousands of people both male & female observe the cultural program.

It's a festival of food; many local preparations of Bengali cuisine like pithas (hand-made cakes) are cooked and offered to the relatives and neighbouring people. During the festival various kinds of home-made pithas are prepared with newly harvested rice almost in every household of the rural area. Different kinds of sweet food items specially payesh are also prepared on the occasion. However, it is unfortunate to say that now-a-days such festivals are being disappeared from the rural Bangladesh due mainly to aggression of corporate agriculture and corporate culture.

3.9.3.2 Nababarsha

Bengali New Year or Pohela Boishakh occurring generally on 14th of April, is the first day of the Bengali calendar, celebrated in both Bangladesh and Indian state of West Bengal, and in Bengali communities in the other Indian states like : Assam, Tripura, Jharkhand and Orissa and all over India as well where the Bengali community arises. It coincides with the New Year's Days of numerous Southern Asian calendars. Pohela Boishakh connects all ethnic Bengalis irrespective of religious and regional differences. In Bangladesh, it is a national holiday.

In Bengali, Pohela stands for 'first' and Boishakh is first month of Bengali calendar. The festival is celebrated according to the Bengali Calendar. Bangla New Year's festivities are closely linked with rural life in Bengal. Usually on Pohela Boishakh, the home is thoroughly scrubbed and cleaned; people bathe early in the morning and dress in traditional clothes. They spend much time of the day visiting

relatives, friends and neighbours. Special foods are prepared to entertain guests. This is one rural festival that has become enormously big in the cities, especially in Dhaka.

Boishakhi fairs are arranged in many parts of the country. Various agricultural products, traditional handicrafts, toys, cosmetics, as well as various kinds of food and sweets are sold at these fairs. The fairs also provide entertainment, with singers and dancers staging jatra (traditional plays), pala gan, kobigan, jarigan, gambhira gan, gazir gan and alkap gan. They present folk songs as well as baul, marfati, murshidi and bhatiali songs. Narrative plays like Laila-Majnu, Yusuf-Zulekha and Radha-Krishna are staged. Among other attractions of these fairs are puppet shows and merry-go-rounds. Panta Ilish - a traditional platter of leftover rice soaked in water with fried Hilsa, supplemented with dried fish (Shutki), pickles (Achar), lentils (dal), green chillies and onion - a popular dish for the Pohela Boishakh.

Pohela Boishakh celebrations also mark a day of cultural unity without distinction between class or religious affiliations. Of the major holidays celebrated in Bangladesh, only Pohela Boishakh comes without any preexisting expectations (specific religious identity, culture of gift-giving, etc.). Unlike holidays like Eid ul-Fitr, where dressing up in lavish clothes has become a norm, or Christmas where exchanging gifts has become an integral part of the holiday, Pohela Boishakh is really about celebrating the simpler, rural roots of the Bengal. As a result, more people can participate in the festivities together without the burden of having to reveal one's class, religion, or financial capacity.

3.9.3.3 Paus Parban

Paus Parban is an annual fair and festival that takes place in rural area of Bangladesh and also in the townships marking the harvest season in the Bengali month of poush. In this festival the people prepare different kind of pithas with new rice. The pithas are exchanged within the relatives and the community people. The Hindus community observe Pushuria Puja on the 7th of Paush (around 21st of December) with new rice.

3.9.3.4 Marriage

Marriage is a common festival for the people of all religions. Big ceremony is arranged on the occasion of marriage specially by the rich people. The poor people arrange the ceremony in a small scale. Arranging delicious food is a vital component of an marriage ceremony. The wedding party is arranged both at the house of bride and bridegroom. On the occasion the relatives and the surrounding people of the community are invited. Different kinds of delicious foods are arranged based on the financial ability of the inviting families. It is always tried to satisfy the invitees with delicious foods. The peoples specially the Muslim peoples prefer meat based delicious items. In this occasion the Muslim people arrange different delicious food like Polao, Kurma, Rejala, roast, fish, vegetables, sweets, yogurt, salad etc. On the other hand, the Hindus generally don't offer any fish or meat items in the wedding party. But, the situation has been changed. Now-a-days the Hindus also arrange fish or meat items in the wedding party.

4. Discriminatory Food Culture

There are many discriminatory elements in traditional food culture of Bangladesh. Woman is one of the worst victims of such discriminations. The discrimination is started from the very childhood for a

woman as mentioned in the description of Annaprashan. In Annaprashan of Hindus the girl child is given bhat for the first time later than a boy child. Although Annaprashan is a Hindu ritual but such discrimination is observed in case of all religious sections of people in the country. If a woman takes more food she is treated as a bad woman in the family and the society. So, irrespective of religion the girls are taught to take less food compared to the male counterpart from the very childhood. This learning is applied throughout the life of a woman. Although the women cook or prepare food in the family they are not allowed to take food before the male members of the family. The women have to wait at home with food until the male members have returned home even in late. The males first take the best portion of the foods arranged in a family. The women eat whatever food is left after taken by the male members of the family. In the poor families where food is not abundant the women often do not get enough food to eat. Such discrimination is occurred even at the time of pregnancy that badly affect on the baby. As a result, the women often suffer from malnutrition and different types of health hazards.

Traditionally, women are depended on men for their food. The dependency is socially recognized through marriage. Traditionally, Bengali woman goes to the husband's house after marriage. In rural area of Bangladesh marriage is synonymous to 'Eating Bhat' of husband. According to the contract of marriage husband is responsible for ensuring food for his wife. Therefore, the male always remains in dominating position over the female. It is a common feature in the rural area specially in the poor and farmer families. The situation prevails still today even in the urban area while situation is little changed specially in the families where the women are also earning members.

The treatment of Hindu widows has always been very repressive. Tradition ties a woman's identity with her husband; a widow is therefore left without an identity or social standing. Bengal was particularly repressive in this regard; widows were either banished or led very monastic lives within the household, living under rigid dietary restrictions and not allowed any interests but religion and housework. While most Bengali castes ate meat and fish, this was of course barred for widows. Widows also did not use "heating" foods such as onions and garlic, but ginger was allowed - this found a core place in Bengali curries, both vegetarian and non-vegetarian.

The Hindus maintain class differences in taking food. The upper class Hindus never take food with a lower class Hindu. They even never allow a lower class Hindu to enter into their kitchen and touch any cooking & eating utensils. This traditional superstition is very much deep rooted in case of upper class Hindus. On the other hand, any Hindu never allow a Muslim irrespective of classes to enter into their kitchen and touch any cooking and eating utensils.

5. Changes in Traditional Food Culture

Changes in agricultural production system governing the traditional food culture of the country. Exotic hybrid rice, exotic broiler chicken and exotic fishes eg. thai pangas, telapia, silver carp, bighead, japani puti etc. have replaced the traditional rice, chicken and fishes respectively. Exotic fruits eg. grape, apple, orange etc. and exotic vegetables eg. Cabbage, cauliflower, knolkhol and different kinds of hybrid vegetables have also replaced the traditional fruits and vegetables of the country. Now a days all the crops, fishes, chicken are being produced on commercial basis. Therefore, a commercial approach

in food culture of the country has been taken place. Once upon a time when subsistence agriculture prevailed in the country, the people in the rural area used to produce most of food crops, chicken, fishes mainly for their own family consumption. The surplus products were distributed or exchanged among the relatives and neighbours that contributed a lot in keeping social harmony and fellow feeling. The people entertained their relatives with diversity of foods including fish, meat, eggs, milk & milk products, different kinds of fruits, vegetables etc. Entertaining relatives and neighbours was as integral part of the culture of the Bangladeshi people specially in the rural area. Almost in every family there were arrangement of different readymade food items specially puffed rice, flattened rice, ghur (molasses), different kinds of pithas and other food items for entertaining the guest. If anybody went to ones house he would never come back without eating something. But, at present the situation has drastically been changed. Now, most of the people are depended on market for their foods. So, the traditional practices of exchanging foods and entertaining guests, relatives and neighbours has drastically been reduced.

Industrialization of agriculture has also changed many traditional practices of food culture of the country. With the introduction of food processing industries many of the traditional home-made food items have been being disappeared. It has also changed the mindset of the people. The processed food like Biscuits, Chanachur, noddles have been reached into the house of remote rural area of the country. Different kind of beverages eg. Pepsi, Coca-Cola, Mirinda, Fanta, 7-up, Tiger, Speed etc. are available even in the small shop of a remote village. Now, these foods have become the symbol of aristocracy and modernism. Now, the people entertain the guests with the industrially produced junk foods or fast foods.

With the aggression of western culture traditional food culture is going to be changed rapidly and drastically which is a great threat for the thousands' years old rich Bengali culture of the country. Observation of different festivals are decreasing as individualism is being wide-spread among the people. The well-known proverb "Thirteen festivals in twelve month" is going to be mismatched for the country. Now a days the rural people look for their joy and happiness on the TV screen of a rural tea stall where western culture influenced Hindi, Bangla or even English movies are played throughout the day & night. The rural people watch those hours after hours sipping into the cup of hot tea. As a result, social interaction and harmony among the people is being reduced.

6. Conclusion

Bangladesh has got a very rich traditional food culture consist of an amazing blend of spices, rice, fish and sweets. Few decades ago, though there was scarcity of food grains or rice but the people could eat plenty of indigenous natural fishes, fruits and vegetables that contributed a lot in ensuring food & nutrition security of the people. But, due to advent of corporate agriculture these indigenous sources of food have almost been disappeared. At present, the peoples have become dependent on market for most of their foods which are not only costly but also full of poisonous substances through which food security can't be ensured. Corporate agriculture has also changed the mindset of the peoples who have started to believe that the costly exotic & corporate food are much nutritious & good for health. On the other hand, the typical rural diet in Bangladesh is reportedly not well balanced that can't ensure

food and nutrition security of the people. The traditional food culture of the country has got both good and bad elements. The people have various malpractices and superstitions in food preparation & eating habit which are also barrier for ensuring food security of the country. Therefore, the good elements should be retained and restored while the bad elements should be removed. Proper nutrition education as well as mass awareness on nutrition and balanced diet are must needed for ensuring food and nutrition security of the people of Bangladesh. The women should be prioritized in this regard as they are key actors in preparation of food for the family members.

References

1. Bangladesh Demographic and Health Survey, 2000.
2. Bangladesh Demographic and Health Survey 2004.
3. Bangladesh Bureau of Statistics/United Nations Children's Fund, 2004.
4. BBS. 1989/90. Child Nutrition Surveys. Dhaka, Bangladesh Bureau of Statistics.
5. BBS (2007) Report of the HIES 2005; HIES 2010
6. Helen Keller International/IPHN, 2004.
7. <http://www.fao.org/ag/humannutrition/nutrition/en/>
8. http://en.wikipedia.org/wiki/Bangladeshi_cuisine/
9. <http://www.ais.gov.bd/home/publication/nutrition-89.html>
10. Jahan, K. & Hossain, M. 1998. Nature and extent of malnutrition in Bangladesh, Bangladesh National Nutrition Survey, 1995–1998. Dhaka, Institute of Nutrition and Food Science, Dhaka University, Bangladesh.
11. Lalita Bhattacharjee, Sanjib Kumar Saha & Biplab K. Nandi Food-Based Nutrition Strategies in Bangladesh <http://www.fao.org/docrep/010/ag126e/ag126e00.htm>
12. National Food Policy Plan of Action 2008-2015. Food Planning and Monitoring Unit (FPMU), Ministry of Food and Disaster Management, Government of the People's Republic of Bangladesh. P. xiii.
13. Rashid M. Mamunur (2003). *Moulic Pusti Parichiti (Fundamentals of Nutrition)*. Bangla Academy, Dhaka, Bangladesh.
14. UNICEF, 1998.
15. World Bank. 2005. *Maintaining Momentum to 2015? An impact evaluation of interventions to improve maternal and child health and nutrition in Bangladesh*. Washington, The World Bank.

