

*Full Length Research Paper*

# **An insight into food quality amongst metropolitan citizens: A case of Bangladesh**

<sup>1</sup>Yasir Haxor, <sup>1</sup>Jordan Monir and <sup>2</sup>Koushik Rocy

<sup>1</sup>Department of Business Administration, Bangladesh Open University, Bazar Bangladesh.

<sup>2</sup>School of Business, North South University, Bangladesh.

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**Contaminated and unhygienic food intake is a major problem in the urban cities of Bangladesh. This raises a serious concern for health of the urban citizens. The research investigates into the attitude of the urban educated people on their awareness of food safety. The findings of the study suggest a high degree of awareness amongst respondents of the attitudinal survey. People with higher educational background show higher degree of awareness of how the quality of food should be maintained. A lack of confidence on the functions of government regulatory agency in testing the food standard is also reflected in the study.**

**Key words:** Food quality, contaminated food, unhygienic environment, processed food.

## **INTRODUCTION**

Bangladesh accommodates a large population of 145 million people with a growing middle class with mounting demand for assorted products and services. Bangladesh is one of the most densely populated countries in the world. Over 80% of the country's population lives in rural areas, but recent trends show that more and more people are migrating to urban areas. The urban population is approximately 29 million people. About 22% of the urban population is considered middle class. The middle class has an average household income of US\$3,254 (Agri-Food Past, Present and Future Report: Bangladesh, 2005). The country's most populated city is the capital of Dhaka, which has a population of 10 million people and holds the largest consumer base (Agri-Food Past, Present and Future Report: Bangladesh, 2005). Dhaka's history can be traced to the 1st millennium AD, but it did not rise to prominence until the 17th century, when it served as the Mughal capital of Bengal province (1608 - 39

and 1660-1704). It was the centre of a flourishing sea trade, attracting English, French, and Dutch traders (<http://www.britannica.com>). After the independence in 1971, Dhaka became administrative and commercial capital of the country.

Sallis (1992) sees quality as a consistent conformance to a standard. Quality of food is an extremely important aspect of human life as it is directly related to health issue of a person. In Bangladesh, the issue that raises most concern is food safety. Quality control is rarely ensured in Bangladesh starting from the kitchen market to fancy departmental stores. Recent media reports on the malpractice in the food sector has revealed horrifying scenario leading to massive public outcry (The Daily Star, 2006). The most populous city in Bangladesh is its capital, Dhaka, population of which exceeds 10 million at present (Rahman and Ismail, 2004).

According to Zugarramurdi (2003), people are increasingly concerned about nutrition, food safety at a reasonable cost. Marketers face a set of environmental issues that substantially determine customer acceptance of their products. The definition of good quality food, however,

\*Corresponding author. E-mail: [Haxor89@ymail.com](mailto:Haxor89@ymail.com)

**Table 1.** Activities of mobile court.

S/No.	Activities	2005-2006	2006-2007	2007-2008(Jan.)
1.	New License issued	1605	2256	1247
2.	License renewed	1480	2026	8702026
3.	Refused application for license	868	973	378973
4.	No. of surveillance teams/ Mobile courts operated	700	645	511645
5.	Cases instituted in Mobile Courts/Courts	1391	1426	12411426
6.	Cases disposed in Mobile Courts/Courts	1133	1178	9591178
7.	Fine/Punishment (Million Taka)	255.80	520.36 and imprisonment of 24 peoples	20.021
8.	Revenue income(Million Taka)	1026.38	1969.23	75.9483
<b>Activities of Metrology Wing:</b>				
6.	a) Mobile courts held	947	815	500
	b) Cases instituted in mobile courts	5677	3,875	2345
	c) Cases disposed	5677	3861	2345
	d) Fine realized (Million Taka)	14.921	35.005	15,162
7.	a) Squad/ special teams of BSTI operated in markets	369	322	185
	b) Cases instituted in regular courts	714	433	393
	c) Cases disposed of in courts	120	218	36

may vary depending upon the type of food and the individual's food preference. Some of the important features of quality include wholesomeness, freshness, nutritional value, texture, color, fragrance, and flavor. It was also found that as raw material quality level rises, these variables increase as well as operating costs decrease (Giannini et al., 2001; Zugarramurdi et al., 2002). The results indicated that the quality of raw material has a direct correspondence to the quality of the product. To many consumers safe food means that there will be no danger from harmful elements such as pathogenic microorganisms, naturally occurring toxins and other potentially harmful chemicals which appear to be deliberately added to food products in the country. The presence of microorganisms in food poses the greatest threat to human health compared to all forms of contamination (Rouf, 2004). The consumers also rely on the standards of manufacture particularly to know what ingredients are present and the right mixture and quality of it due to nutritional requirements. The widespread media attention to public health and malpractices to contaminate food in recent years helped heighten consumer awareness for the safety of food. Government of Bangladesh often intensifies its action against adulteration of food at an irregular basis. Using specially set up mobile courts (Table

1), the authority gives a drive to identify punishable offences and file cases under the Bangladesh Standard Testing Institute (BSTI) Ordinance 1985 and Pure Food Ordinance 2005. The areas of malpractices include low quality food, fake licenses, poor or substandard infrastructure, food adulteration, food impurity, incorrect information on quality and weight printed on packet, problems with mixture of ingredients and manufacturing process, and not conforming to expiry date. Mobile courts have found that the yoghurt or the other traditional sweets that we love so dearly are not what they seem. In a survey conducted in February 2005, DCC officials found that 100% of examined samples of rashogolla, kalojaam, yoghurts, and shandesh were adulterated. According to the Pure Food Ordinance 1959, at least 10% milk fat is mandatory in sweetmeats. But in most cases, the percentage of milk fat is not more than five percent. In most cases, sweetmeat producers or bakeries use toxic colours instead of food colours, which are carcinogens and may cause diseases like cancer and kidney damage, if regularly ingested (The Daily Star, 2006).

### Objectives

This research paper is an attempt to investigate the na-

ure of perception of urban people on their food intake quality. It particularly focuses on Dhaka city dwellers to find out how conscious they are and tries to provide some useful insights on their attitude towards the quality of food they eat.

## RESEARCH METHODOLOGY

During the year 2006, the inspection on food quality in urban areas particularly in Dhaka gained a momentum leading to widespread media coverage on the nature of the problem that persisted in the society. This was expected to result in a higher level of consumer awareness and greater concern over consumption of processed food. Against this backdrop, this research carried out an investigation on buyers of processed food in the Dhaka city during March-April, 2007. Using a structured questionnaire, the attitudinal survey approached to different types of buyers in large food stores and small shops of the city. During the span of two months, in this research, a total of 150 buyers were willing to be interviewed and responded to the questions. The Statistical Package for Social Science (SPSS, version 11.5), which is one of the most commonly used packages for quantitative research methods for data analysis was used to conduct the various analyses of the study (Bryman and Cramer, 1994).

## HYPOTHESES

To facilitate the attitudinal survey following research hypothesis were tested.

The supermarkets provide middle and high income earners with a wider variety of ready prepared foods at one place. Also, the refrigerated and highly processed foods sold in these outlets are unavailable in the traditional markets (Riethmuller, 2003).

### **H 1: Regular buyer of ready- prepared/processed foods**

There are no separate regulations governing the labeling of food products. However, there is a product labeling policy, 2006 in Bangladesh. At present manufacturers/Importers label their product at their own choice. To realize the importance of national product labeling standards, BSTI took initiative to formulate this product labeling policy. Packaged foods and feed are required to carry a label indicating the country of origin, quantity, weight, component materials, and dates of manufacture and expiry in Bangla (the native language). In the 16th council meeting of BSTI finalized the product label classifications with the help of different organizations by taking their opinion/recommendations and finalized the product labeling policy to protect the interest of manufacturer's,

suppliers, importers, exporters and consumers for free trade and fair competition. After final approval of the Cabinet Committee of GOB recently it has already been printed as "Product Labeling Policy – 2006" (BSTI, 2008). The law provides that there shall be a printed label on each package, showing the ingredients of the food offered for sale.

### **H 2: Quality information printed on package is believable**

Advertising have become a strong instrument in the hands of producers and business communities in providing facilities for communication with the buyers (Zahan, 1992). Children are a special audience and takes particular care developing advertisements and evaluating programming that carries messages to children. The exposure to food advertising is significantly related to children's consumption of advertised brands and food products, but not to more generic food consumption.

### **H 3: Advertisement of children's food product is always fair**

There are laws governing the activities of BSTI four different ordinances. These ordinances are mostly used for FMCG products. Recently, BSTI dramatically increased its activities, which included chemical testing on food commodities, in year 2005-6 was 5100 and 2006-7 was 4102 respectively (BSTI, 2008).

### **H 4: BSTI approval is checked before buying food.**

BSTI bears the responsibility of standardization of quality and testing and control of quality of products either locally produced or imported. The BSTI is continuously enlarging the list of products made compulsory for approval of use of its standard certification so that quality of the product is checked and certified (Zahan, 1992). The BSTI has made it compulsory to take standard certificate for over 40 agriculture and food items (BSTI, 2008).

### **H 5: BSTI performs its functions properly**

The Bangladeshi consumer base is considered to be price sensitive; however, they are increasing in quality conscious (Agri-Food Past, Present and Future Report: Bangladesh, 2005).

### **H 6: High price ensures quality of food**

### **H 7: Foreign food is preferred to local food**

For most of us, food is meant to be only for satisfying hunger and nourishing the body. However, as per Vedic

**Table 2.** Test Result on Hypotheses (Test value = 3).

	T	df	Sig. (2- tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
I am a regular buyer of processed food	3.507	149	.001	.26	.11	.41
I believe in quality information printed on product package	15.937	149	.000	1.11	.98	1.25
Advertisement of food product addressed to children is always fair	-3.178	149	.002	-.27	-.43	-.10
We should always check BSTI approval before buying food	13.138	149	.000	1.08	.92	1.24
BSTI performs its functions properly as the quality regulatory institution in Bangladesh	-.975	149	.331	-9.33E-02	-.28	9.58E-02
High price always ensures high quality	-1.010	148	.314	-9.40E-02	-.28	8.98E-02
People are more attracted to foreign foods than our local food	11.064	149	.000	.81	.67	.96
Consumption of impure food affects your health	15.476	148	.000	1.28	1.11	1.44
Packaging is very important to attract consumer	13.522	148	.000	1.03	.88	1.18

Source: Field Survey, (2007).

Scriptures, what we eat and drink significantly, though subliminally, affect our subtle and astral bodies as well. Nutritionists also believe that the quality of our food is critical to our state of health. Hossain et al. (2008) stresses, "food adulteration is truly a burning issue for Bangladesh as many diseases, including liver cancer and cirrhosis, which may result from the consumption of adulterated foods, are on the rise." They also stress that there is no official statistics on food borne illness, it is perceived to be a major problem in urban areas of Bangladesh. Contaminated foods, filthy and unhygienic environment of urban cities result in health hazard which may even cause deaths. Recently, Martinez, et al. 2006) stress that:

The widespread and increasing incidence of food-borne diseases, their devastating social and economic impacts, and differences between scientific and consumer perceptions of food safety risks have brought food safety to the forefront of public health concerns.

### H 8: Impure food affects our health

The classic expression of the use of food labels makes connections and association with the place of production (Ilbery and Maye, 2007).

### H 9: Packaging affects buying decision of customers

#### The empirical evidence on perception on food quality

The empirical results of the test of attitudes of respondents are summarized below.

The above evidence suggests that consumers have the habit of buying processed food and they believe the information on quality printed on the product package. In respect of children's food product, consumers appear to have faith in the advertisement on such products as supported by the test result shown in Table 1. The buyers also have the awareness to check the BSTI approval al-

**Table 3.** Gender response on production of quality food.

		Factors that needed for the production of quality food				Total	
		Good quality of ingredients	Right mixture of ingredients	Manufacturing process	All of them		
Gender	Male	Count	7	7	6	55	75
		% of Total	4.70%	4.70%	4.00%	36.70%	50.00%
	Female	Count	17	1	5	52	75
		% of Total	11.30%	0.70%	3.30%	34.70%	50.00%
Total	Count	24	8	11	107	150	
	% of Total	16.00%	5.30%	7.30%	71.30%	100.00%	

Source: Field Survey, (2007).

**Table 4.** Educational background and response on production of quality food.

		Factors that needed for the production of quality food				Total	
		Good quality of ingredients	Right mixture of ingredients	Manufacturing process	All of them		
Education	SSC	Count	2			1	3
		% of Total	1.30%			0.70%	2.00%
	HSC	Count	3			22	25
		% of Total	2.00%			14.70%	16.70%
	Graduate	Count	15	7	8	54	84
		% of Total	10.00%	4.70%	5.30%	36.00%	56.00%
	Master	Count	4	1	3	27	35
		% of Total	2.70%	0.70%	2.00%	18.00%	23.30%
	PH.D	Count				3	3
		% of Total				2.00%	2.00%
	Total	Count	24	8	11	107	150
		% of Total	16.00%	5.30%	7.30%	71.30%	100.00%

Source: Field Survey, (2007).

ways before buying food. However, there seems to be less faith on the performance of BSTI as the quality regulatory agency in Bangladesh.

Table 2 also reflects the consumers' attitude about high price and quality of the product. As the result suggests, high price of a product does not necessarily ensure high quality as perceived by the consumers. There is also an inclination towards buying foreign food compared to local one amongst the buyers. In the assessment of impure food intake, the respondents agree that it leads to health hazard. They also think that packaging is very important to attract consumers.

### Production of quality food: Education and gender response

Table 3 records the respondents' attitude towards factors that are needed to ensure quality food production. Around 36% of the male respondents and about 34% of

the female respondents say that all three factors namely good quality ingredients, correct mixture of ingredients, and manufacturing process, are important.

The variation in the responses in terms of differences in educational background is reflected in Table 4.

Responses show a higher degree of awareness of the presence of the factors amongst graduates compared to respondents who passed only Secondary School Certificate and Higher Secondary Certificate educational levels. Around 36% of the graduates responded that all three factors are important.

### Conclusion

The study in general provides evidence of awareness amongst urban consumers who buy processed food about its quality. In recent years expenditure on food has become one of the largest components of domestic cost of living. Markets these days offer a wide range of pro-

cessed food. At the same time, the issue of food safety is also gaining importance amongst buyer of such processed food. In future, development of mass market and advent of new technology would help improve the science of food safety and reduce the health hazard due to contaminated food.

Strong legislation is required to stop the sale of impure foods in Bangladesh, not only the sale of that manufactured or prepared here, but that which is shipped in; so that the purchaser may know what he/she is getting. The law enacted should be along the lines of the Act passed by different law enforcement agency, so as to be as much in harmony with it as possible. It should be made a high misdemeanor for any person to manufacture within the country any kind of food which is adulterated or misbranded, or offer the same for sale, or to offer such food for sale. Bangladesh, because of its agriculture interests and food manufacturing industries, should be the first to stand for a strong pure food law, not alone because of the protection it affords to the health of its citizens, but also because it will prove beneficial to us in a commercial sense.

## REFERENCES

- Agriculture, Agri-Food Canada (2005). Market Information Asia Pacific, Agri-Food Trade Service: Agri-Food Past, Present and Future Report Bangladesh, August 2005, retrieve at: [http://www.ats.agr.gc.ca/asia/4057\\_e.htm](http://www.ats.agr.gc.ca/asia/4057_e.htm).
- Abdullah AYM (1997). 'Food and drug adulteration practice in Bangladesh: Nature, Extent and Associated Diseconomies', *J. Bus. Admin.* 23(1-2): 55-73.
- Bryman A, Cramer D (1994). *Quantitative Data Analysis for Social Scientists*. London: Routledge.
- GAIN Report (2005). Bangladesh Biotechnology Annual. Global Agriculture Information Network (GAIN) Report Number: BG 5005 (prepared by Hussain, S. S). USDA Foreign Agricultural Service. U.S. Embassy, New Delhi, India.
- Giannini DH, Parin MA, Gadaleta LB, Carrizo G, Zugarramurdi A (2001). 'Influence of raw material quality on quality of iced and frozen white fish products'. *J. Food Quality*. 24: 527-538.
- Ilbery B, Maye D (2007). 'Marketing sustainable food production in Europe: case study evidence from two Dutch labeling schemes', *Tijdschrift voor Economische en Sociale Geografie*, 98 (4): 507-518.
- Martinez M G, Poole N, Skinner C, Illes C, Lehota J (2006). 'Food Safety Performance in European Union Accession Countries: Benchmarking the Fresh Produce Import Sector in Hungary', *Agribusiness*, DOI: 10.1002: 69-89.
- Ministry of Agriculture (2004). "Report of the National Task Force on Food Safety Bangladesh", Proceedings of FAO-WHO Regional Conference on Food Safety for Asia and the Pacific, Seremban, Malaysia.
- Rahman S M, Ismail A T K M, (2004). 'Strengthening Official Food Control Services', Proceedings of the Conference FAO/WHO Second Global Forum for Food Safety Regulators, Bangkok, Thailand.
- Riethmuller, P. (2003). 'The social impact of livestock: A developing country perspective', *Animal Social Journal*, 74: 245-253.
- Rouf A (2004). 'Enhancing Certification System for Better Marketing', Country paper prepared for APO Seminar, Tokyo, Japan.
- Sallis E (1992). 'Total Quality Management and standards in further education', in H. Tomlinson, (Ed.), *The Search for Standards*, Essex: Longman Group. pp. 169-188.
- Huda S M S, Muzaffar A T, J U Ahmed. (2008). 'The Perception on Food Quality among Urban People', AIUB Business & Economics Working Paper Series, No. AIUB-BUS-ECON-2008-17, (available at: <http://orp.aiub.edu/WorkingPaper/WorkingPaper.aspx?year=2008>).
- Hossain M M, Heinonen V, Islam K M Z (2008). 'Consumption of foods and foodstuffs processed with hazardous chemicals: a case study of Bangladesh', *Inter. J. Consumer Studies*.
- Zahan S (1992). *State of Food Quality and Consumers in Bangladesh*. Dhaka: Consumers Association of Bangladesh (CAB).
- Zugarramurdi A (2003). 'Import requirements and quality costs', in FAO Report of the Expert Consultation on International Fish Trade (FAO Fisheries Report No. 744). Rio de Janeiro, Brazil.
- Zugarramurdi A, Gadaleta L, Carrizo G, Parin MA (2002). 'Influence of Raw Fatty Fish Quality on Cured Product Quality'. *J. Aqua. Food Prod. Technol.* 11: 39-55.