

# Study on Awareness about Food Adulteration and Consumer Rights among Consumers in Dhaka, Bangladesh

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## Abstract

Combating food adulteration is a great challenge in Bangladesh. The customer is the leading economic community and the focus of all commercial activities. The price, availability, variety, and attractiveness of consumer products have increased with the rise in people's incomes. The business sector is practically bursting with complex technology-based new products. Regardless of misleading advertising, unsuitable media coverage, and food adulteration, it is challenging for the customer to select a particular foodstuff. The primary victim is a customer who casually takes adulterated food and pays the price of such corrupt practices. Bangladesh Government has enacted the Food Safety Act, 2013 to ensure food safety. But, consumer awareness is one of the most important steps towards reducing the adulteration of foods. Consumer faces different kinds of challenges to ensure food safety for them. To effectively face these challenges, consumers need to prepare themselves against these issues. In our present study, we have analyzed the different consumer behavior considering food adulteration and their awareness about consumer rights.

**Keywords:** Bangladesh, Consumer Awareness, Consumer Behavior, Food Adulteration, Food Safety Act

## 1. Introduction

Customer behavior is an important issue in controlling food adulteration in a country. The consumer buying behavior involves the nature and outlook of the market and offers a rational way of managing the overwhelming range of knowledge about factors affecting purchasing practices<sup>1,2</sup>. Buying practices include deciding the type, price, and quantity of products purchased by the buyer through market agencies<sup>3</sup>.

In general, customer behavior remains unchanged, but they need to be dynamic. The buyer needs to figure out the ideal quality of the sold products at reasonable prices. Buying takes a significant amount of time, energy, and resources. Successful purchasing includes advanced knowledge of the products' material, their resources, and their use<sup>3-5</sup>.

Food contamination has been a problem since the dawn of civilization because it diminishes the standard of food items as well as leads to a variety of

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adverse health effects. Significant food hazards include microbial hazards, pesticide residues, misuse of additives, chemical contaminants, including biological toxins and adulteration<sup>6-10</sup>. Food adulteration occur for the following reasons in a nutshell-

- To increase the volume of products and reduce cost, with intent to defraud the consumer;
- To increase the quantity and make more profit;
- To have an increased shelf life of food;
- To attract the consumers;
- To make the profit margin at the expense of the health of public or consumer, and so on.

Customers face a wider variety of buying situations than in the past; one result is that there has been, and will continue to be, an increase in the number of consumer complaints and issues relating in particular to consumer rights and regulation<sup>7,10-14</sup>. Here a technology is increasing opportunities for practitioners of fraud exploitation and misrepresentation. So, knowledge and awareness about food adulteration risks, necessary laws and the consumer are essential<sup>14-24</sup>.

## 2. Background of the Study

Nimkar's (1976) and Pande (2000) suggest that homemakers or women were the main purchasers in the family for the milk<sup>25,26</sup>. They have taken independent decisions in all fields of food purchasing except monetary sides. "Money resource availability and product quality" were the most critical factors in the industry, while "food habit" and "nutritional needs" were the least noteworthy variables when purchasing a product<sup>18-23</sup>. But the low-income community women chose the rationing shops, as well as the independent grocery store and various products. For the range of low-income stores, women put greater emphasis on credit facilities, the lowest price, but not the food quality<sup>11-15, 20-24</sup>. In our present study, we have analyzed the different consumer behavior considering food adulteration and their awareness about consumer rights.

## 3. Literature Review

The food products which were usually adulterated in Bangladesh include fruits, meat, milk, vegetables, fish,

wheat, butter, ghee, spices, rice, bacon, sweetmeats, beverages, baby foods, etc.<sup>15-32</sup>. The fruits were mixed with calcium carbide, thiophene, formalin, color injections, and sweeteners. Formalin and harmful dyes are often used in vegetables, while formalin is used in fish<sup>28-30</sup>. Many daily food products such as cabbage, potato, banana, tomato, mango, etc. were infected with poisonous pesticides, as National Food Safety Laboratory (NFSL) reported<sup>29</sup>. DDT (Dichloro diphenyl trichloroethane) was being used at a high amount in dried fishes<sup>11,28-31</sup>. Milk was found to be contaminated by formalin or water or extracting fat or wheat flour or powder milk or thickeners. Powder milk is mixed with melamine or aldrin<sup>11,28-32</sup>. Poisonous color and formalin were used in meat<sup>11,28,32,33</sup>. Vegetable oils were contaminated with inedible oils, which are cheap<sup>28,35</sup>. Rice was contaminated with pieces of urea, pebbles and dyes<sup>32,36</sup>. Chili powder was mixed with brick dust and Sudan red color, while metanil yellow and colored chalk powder adulterated the turmeric powder<sup>11, 28-33</sup>. Black pepper was contaminated with dried papaya seeds, and colored sugar syrup is used for honey<sup>28</sup>. Tea was adulterated with wasted tea leaves and sawdust. While highly injurious to health, textile dyes were used spontaneously as coloring agents in many types of food products<sup>31-34</sup>. Carcinogenic substances artificially ripen the papayas and bananas<sup>11,28-37</sup>. Preservatives are being used in different food over permissible level<sup>38</sup>.

In a discussion on hazards of food contamination in public life "Way Forward" held at the Daily Star center in Dhaka, S K Roy, a scientist at the ICDDR, B presented that more than 76 percent foodstuffs found in the market were marked as adulterated in a study conducted by the Public Health Laboratory of Dhaka City Corporation in 2004<sup>39,41,42</sup>.

Government came forward to the necessary steps to alleviate and eradicate food adulteration problems and formed Food Safety Act 2009. In Bangladesh, food safety is now largely governed by the 2013 Food Safety Act together with the 2014 Food Security Law and the 1967 Bangladesh Pure Food Laws. As of February 01, 2015, the Food Safety Act 2013 was enacted and this act abolished the 1959 Bangladesh Pure Food Ordinance, which previously regulated food security in this country<sup>40,42,44</sup>.

For ensuring rights of consumers, Consumer Rights Protection Act 2009 was enacted. According to the Consumer Rights Protection Act 2009, intentionally selling or promising to sell some adulterated drug or

medication and deceiving customers by false/untrue ads constitute crimes against consumers. This act created a National Commission for the Protection of Consumer Rights, a National Office for the Protection of Consumer Rights and an Association for Consumer Rights<sup>42-44</sup>. The Mobile Courts Act 2009 empowers executive magistrates to act as mobile courts to understand and prosecute certain offenses on the location; the court has the authority to prosecute offenses under the laws and regulations set out in the Act's schedule. The court maintains the power to seize and dispose of any perishable, toxic or hazardous material<sup>43,44</sup>.

So, the food safety awareness among consumers is a very important and interesting research issue.

## 4. Aim of the Study

- To identify the popularly used type of foodstuff.
- To classify, popularly used foodstuff type to evaluate homemaker buying practices related to selected foodstuffs.
- Assess the correlation between the degree of homemakers' knowledge about food contamination and their age, employment, and education.
- To figure out the government's approach to address this issue.

## 5. Methodology

In the present study questionnaire was prepared based on the following considerations:

- General information of the respondents
- Consumer behavior
- Consciousness about food adulteration
- Knowledge about Consumer Rights Protection Act 2009

## 6. Research Design

### 6.1 The Research was Designed in Two Parts

- Data Collection
- Data Analysis

### 6.2 Data Collection Method

The awareness among consumers was analyzed with questions that are based on actual facts about the obligations of consumers and risks of adulteration regarding food. As the questionnaire was being prepared, precautions were taken to include all those queries which would generate the details required to achieve the project's goals. 100 customers were randomly picked from a few grocery stores in different locations in Dhaka<sup>20,45</sup>.

The questionnaire was completed; then the collected information were analyzed and evaluated. Consumers have been questioned about their information of food safety adulteration and the Consumer Rights Protection Act 2009.

### 6.3 Data Analysis Method

On the basis of the questionnaire, the awareness of the consumers was analysed in Microsoft excel. The results were shown using the pie charts and tables.

### 6.4 Location of Study

Data was collected from consumers found in grocery shops markets in different areas of Dhaka, Bangladesh eg. Dhanmondi, Palashi Market, Karwan Bazar, Mohammadpur and Mirpur.

## 7. Results and Discussion

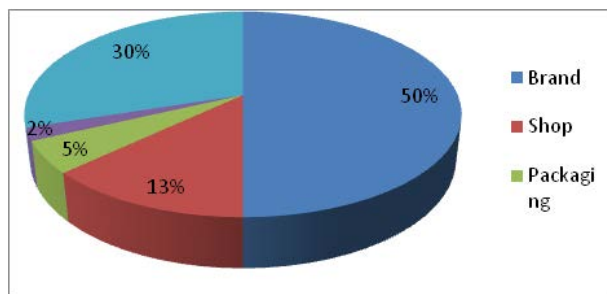
The consumers were asked to write background information like name, sex, age, educational qualification, house rent (to assess financial condition). They were also asked to answer the following questions. According to the survey taken on consumer awareness the following analysis was attained:

### 1. Which form of products do you prefer?

(a) Open (b) Packaged

In a survey of which type of product is preferred, 64% consumers preferred packaged product and 36% preferred open products.

### 2. Which is the main parameter of choice during buying a product?



**Figure 1.** A chart showing percentage of parameter of choice during buying a product.

The chart in figure 1 shows that 50% consumers like products based on brand, 13% consumers like product based on shop where they are found, 5% consumers like products based on packaging, 30% consumers choose products based on price and 2% consumer's like that product based on other factors.

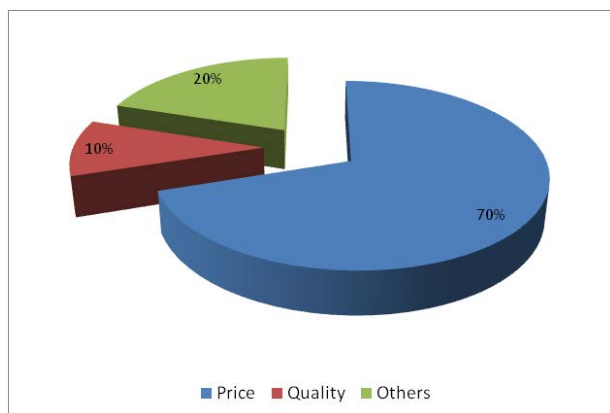
**3. If a new brand of product is launched in the market will you buy it?**

Yes/No

The responses showed that if a new product is launched in the market 6% consumers do not buy it as it is new 40% consumers like trying new products.

**4. If yes to question3, then what would be the main consideration?**

Price of the Product	
Quality of the product	
Others	



**Figure 2.** A chart showing percentage of consideration of factor during buying a product.

Figure 2 shows that if a consumer buys new products when they are launched in market, 70% of the consumers constituted the price 10% costomers consider the quality and 20% consumer's consumer thinks other factors.

If a new product is launched in the market and that is cheaper than other product already available in market, 70% consumer goes for the new product due to a less price. 10% of the consumers buy the product for special features of the products. 20% consumer buys the product because of different factors like being informed by someone, due to packaging or some other reasons.

**5. Do you examine the expiry date the food items when you buy them?**

- a) Yes
- b) No
- c) Sometimes

The result from the filled questionnaires indicated that when the consumers were asked whether they check the expiry date of the food items, 90% of the respondents said that they check the expiry date, 5% replied never to check expiry date and 5% stated they sometimes check the expiry date.

**6. Do you check the MRP (Maximum Retail Price) before buying a product?**

- a) Yes
- b) No
- c) Sometimes

When the consumers were asked whether they check the MRP of the food items, 75% of the respondents said that they check the MRP, 5% replied to never check and 5% stated they sometimes check MRP.

**7. Are you charged the MRP or more than/less than the MRP?**

- a) Yes
- b) No
- c) Sometimes

When the consumers were asked whether they are charged more or less than the MRP of the food items, 63% of the respondents said yes, 20% replied no and 17%stated they sometimes are charged more or less than the MRP.

**8. Have you ever cross checked the weights of the products mentioned on the item?**

- a) Yes
- b) No
- c) Sometimes

When the consumers were asked whether they ever cross checked the weights of the products mentioned on the item, 19% of the respondents said yes, 75% replied no and 6% stated they sometimes check.

**9. Are you aware of the effects of adulterants that can cause health problem?**

Yes/No

When the consumers were asked whether they are aware of the effects of adulterants that can cause health problem, 95% of the respondents said yes and 5% replied no.

**10. Have you ever come across adulteration or duplication items?**

Yes/No

When the consumers were asked whether they have ever come across adulteration or duplication items, 90% of the respondents said yes and 10% replied no.

**11. Are you aware that chemical dye and toxic substances in food can lead to cancer and different vital organ diseases?**

Yes/No

When the consumers were asked whether they are aware that chemical dye and toxic substances in food can lead to cancer and different vital organ diseases, 52% of the respondents said yes and 48% replied no.

**12. If yes, do you buy things carefully to avoid adulteration?**

- a) Yes
- b) No
- c) Sometimes

When the consumers were asked whether they do you buy things carefully to avoid adulteration, 79% of the respondents said yes, 6% replied no and 15% stated they sometimes check.

**13. If yes, which kind of cautions do you take during buying?**

When the consumers were asked whether they do you buy things carefully to avoid adulteration, 79% of the respondents said yes, 6% replied no and 15% stated they

sometimes check. When they were asked which type of cautions they take, they replied for following:

Observing physical appearance of the product
Having odor
Comparing different available products
Previous Experience
Others

**14. Have you lessened the extent of food buying or intake due to adulteration?**

When the consumers were asked whether they lessened the extent of food buying or intake due to adulteration, 41% of the respondents said yes, 16% replied no and 43% stated they lessened consumption of some commonly known adulterated products often informed by media.

**15. What do you think which kind of steps should be taken to overcome food adulteration problems?**

In answer to this question, they replied for the following steps:

Government Steps
Public awareness
Media
Proper Information about adulteration

**16. Have you ever complained to any of following after coming across adulteration or duplication items?**

Shopkeeper / Main Supplier / Any Other

When the consumers were asked whether they ever complained to any of following after coming across adulteration or duplication items, 81% of the respondents said to complain to shopkeeper from whom they bought the product, 6% replied to complain the supplier and 13% stated complain to other persons not directly linked.

**17. How was the response to your complaint?**

Satisfactory / Not Satisfactory

When the consumers were asked whether their response were satisfactory or not, 70% of the respondents said yes and 30% replied no.



### 18. Are you aware of Consumer Rights Protection Act 2009?

When the consumers were asked whether they are aware of Consumer Rights Protection Act 2009, 84 %of the respondents said yes and 16 % replied no.

### 19. If yes, have you ever filed a case in the consumer court?

Yes/No

When the consumers were asked whether they have ever filed case in consumer court, 76% of the respondents said yes and 24 % replied no.

### 20. If yes, was the consumer court able to redress your grievance?

Yes/No

When the consumers were asked whether the consumer court was able to redress consumers' grievance, 97% of the respondents said yes and 3 % replied no.

## 8. Overall Findings

The consumer's are conscious about the food adulteration to a satisfactory extent. But they are not conscious about the Consumer Rights Act 2009 to a satisfactory level. And they don't use their rights to the expected level. It could also be inferred from this survey that low-income community participants were less educated and had low knowledge of their rights, expectations and obligations and most importantly risks of adulteration of food. High income people can go for high priced and branded products for better quality, but the low income people have to compromise the quality due to high price.

## 9. Limitation of the Study

Because many people were not interested to take the survey, so abiding by the ethical issues and taking full consents of the consumers for the survey was a challenge. The consumers were handled generously, but sometimes it was time consuming for them to fill up the questionnaire. In a hurry, they might not be able to answer questions with full concentration. The study was performed in relatively less number of sample that can only give an idea on consumer awareness, but not a full picture of consumer awareness due to time limitations.

There might be potential biasness as the consumers were chosen randomly.

## 10. Conclusion and Recommendations

It could be concluded from the present study that the low-income group respondents were less educated, appeared to lack awareness of their rights and accountabilities, and risks of adulterated food. Therefore, this community needs to be informed with a plethora of facts and continuing education on food adulteration challenges and aspects to voice their opinion when they feel offended. Our government has taken thoughtful measures to stop fraudulent practices by enacting appropriate laws. It is extremely improbable that further legislation or increased fines and terms of imprisonment alone would help to reduce malpractices. Greater vigilance and action on the part of consumers can help improve the situation. But these measures aren't successful when customers are aware of their rights and obligations themselves. Mass awareness in these situations is the most important issue at this moment, specially the awareness of low-income communities who struggle the most is of special importance. Further research on a large population.

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