

# A Study to Assess the Awareness of Food Adulteration among Consumer in Bijnor City

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**Abstract**—Food is essential sustenance of life. The world is facing a potential crisis in terms of food security, due to lack of production and supply of safe and nutritional food. Adulteration seems to be getting deadlier and serious problem present in over society that should be eradicated. Adulteration of food cheats the consumer and can pose serious risk to health in some cases. The present study was planned with the main objective of identifying buying practices of consumers and their extent of awareness related to food adulteration. To achieve this objective data has been collected from primary and secondary sources and with effective analysis. Purposive sampling method with questionnaire cum interview schedule was adopted to collect data. Study revealed that respondent's awareness related to rights and responsibilities was good but poor related to food adulteration. Education, family income and occupation had an effect on extent of awareness.

**Keywords:** Adulterants, Adulteration.

## 1. INTRODUCTION

Consumer is the largest economic group and central point of all marketing activities. With the rise in the income of people, the quality, the quantity and the sophistication of the consumer goods has also increased. The market is literally overflowing with the new products based on intricate technology. It is very difficult for the consumer to select one food item because of misleading advertisements, improper media emphasis and food adulteration. As a result of these malpractices, the ultimate victim is a consumer, who innocently takes adulterated foods and suffers.

A Substance added to food-item to reduce its quality in order to increase its quantity is called as an adulterant. Adulteration, the act of debasing a pure or genuine commodity for pecuniary profit, by adding to it and inferior or spurious article, or by taking from it one or more of its constituents. The term is derived from the Latin word 'Adultero', which in its various inflections signifies to defile, to debase, and to corrupt.

## 2. TYPES OF ADULTERATION:

There are three types of adulteration namely:

- **Intentional adulterants:** Intentional adulterants are sand, marble chips, stone, mud, chalk powder, water, mineral oil and coal tar dyes. This adulteration cause harmful effects on the body.
- **Metallic contamination:** Metallic contaminations include arsenic from pesticides, lead from water, and mercury from effluents of chemical industries, tin from cans etc.
- **Incidental adulterants:** Incidental adulterants are pesticide residues, tin from can droppings of rodents, larvae in foods. Metallic contamination with arsenic lead, mercury can also occur incidentally.

## 3. SOME COMMON WAYS OF DETECTING FOOD ADULTERATION:-

- Papaya Seeds are used to adulterate Black Pepper Seeds. Add some of the adulterated sample to glass water, Papaya Seeds float while Pepper Seeds do not.
- Kesari Dal is an Adulterant in Aarahar Dal and Chana Dal. Kesari Dal pointed and wedge shaped Chana Dal/ Aarahar Dal is Smooth and Round.
- Starch is used as an Adulterant in Milk, put few drops of Iodine solution in Milk. Blue or Black color indicates Starch.
- Old used spices are often mix with spices sold as fresh smell. The Spice no or less smell indicates the Adulteration.
- Add solution of Washing Soda and shake well if froth appears on top Cheap Oil has been added to Vanaspati.
- Artificial Dye in Tea Leaves put Tea Leaves or Moistened Blotting Paper. Artificial color leaves will impart to Blotting Paper.

#### 4. SOME PRECAUTIONS:-

- Take only packed items of well known Companies.
- Buy items from Reliable Retail Shops and Recognized Outlets.
- Check the ISI mark or Agmark.
- Buy products of only air tight popular brands.
- Avoid craziness for artificially colored sweets and buy only from Reputed Shops.
- Do not Buy Sweets or Snacks kept in open.
- Avoid buying things from Street Side Vendors.

#### 5. STATEMENT OF THE PROBLEM:

To know about what are the problems that have been faced by the customer's or people who have consumed the food adulteration products is whether necessary to know what are the products are to become a food adulteration.. Food adulteration is prevalent largely due to lack of awareness among common people, proper food laws, business ethics among the money minded manufacturers and standardization of food substances. A limited number of people die without food but large population have been suffering from complicated diseases related to food adulteration and finally die. These factors make food adulteration, one of the most serious problems present in our society that should be eradicated.

#### 6. OBJECTIVES OF THE STUDY:

- To study the profile of the respondents.
- To measure the extent of awareness related to food adulteration among selected group of consumers.
- To assess the knowledge of consumers related to food safety and consumer law.

#### 7. SCOPE OF THE STUDY

In future food adulteration may be reduce by laws and procedures. Food safety and security agencies may provide many rules and regulations that have to be followed by the manufacture of the products. The people can give their complaints about the products which has been adulterated. By doing this survey based on food adulteration many common people may know about the adulterated products that they are using in day to day life. They can get awareness about the food adulteration that causes many health issues in human life.

#### 8. LIMITATION OF THE STUDY:

As The Study Was Conducted By A Student Researcher Who Had Limited Time And Other Resources At Her Disposal The Study Was Confined To Only Bijnor District. Therefore The Findings Of The Present Study Have The Limitations Of Under Generalization. In spite Of These Limitations Every Effort Was Made By The Researcher To Keep This Study As Objectives As Possible Hence The Findings Of The Study Would Be Applicable Only To The Regions Where Similar Conditions Exists.

#### 9. REVIEW OF LITERATURE

1. NIDHI GUPTA AND PRITI PANCHAL ET AL (2009):- A DESCRIPTIVE STUDY WAS CONDUTED AWARENESS AND EXTENT OF FOOD ADULTERATION AMONG 60 FAMILIES OF MAHADEV VILLAGE FO GUJARAT STATE. DATA REVEALED THAT 15% SAMPLE HAS LOW AWARENESS 60% HAD MODERATE AWARENESS AND 25% HAD HIGH AWARENESS ON FOOD ADULTRATION. THE MAXIMUM POSSIBLE SCARE WAS 33. THE MEAN SCORE OBTAINED BY THE PRATICIPANTS WAS 23-15 1 WHTH S.C OF 2.77 .
2. KHAPRE MP, MUDEY A, SONALI CHAUDARY ET AL(2011) :- A STUDY WAS CONDUCTED ON BUYING PRACTIES AND PREVALENCE OF ADULTRATION IN SELECTED FOOD ITEMS IN A RURAL AREA OF WORDHA DISTRICT. DATA REVELATED THAT 68.5% HOUSE HOLDS WIFE (HOME MAKER) BUYS THE GROERY. MAJORITY OF THEM NEVER READ THA FOOD LABELS. ALL THE SELECTED FOOD ITEMS WERE ADULTERATION RANGING FORM 76% TO 11% MEAN PERCENTAGE FO PURITY WAS HIGHEST IN LITERATES (47.5=22.48) THAN ILLITERATES AND JUST LITERATES FOOD BARNE ILLNESS WAS PERVALENT IN HOUSEHOLD WITH LOW PURITY OF FOOD ASSOCIATION WAS FOUND BETWEEN CAPITA INCOME AND PERCENTAGE OF PURITY (0.765).
3. LAXMI V, LABS RV ET AL(2012):- A STUDY WAS CONDUCTED BY THE SAFETY STANDERS AUTHARITY OF INDIA ( FSSAI) ACROSS 33 STATES IN 2012. THE STUDY CONCLUDED THAT MILK IN INDIA IS ADULTERATION WITH DETERGENT GOT AND EVEN UREA SAS WELL DILUTED WITH WATER OF THE 1791 RANDOM SAMPLE FORM 33 STATES JUST 31.5% OF THE SAMPLE TESTED (565) CONFARMED TO THE FSSAI STANDARDS WHILE THE REST 1226 (68.4%) FAILED THE TEST.

## 10. MATERIAL AND METHODS

The research is based on the consumer awareness towards food adulteration. It is used to obtain the current information the current status of the phenomena to describe what exists.

**AREA OF THE STUDY:-** BIJNOR VARIOUSLY SPELT AS BIJNAUR AND BIJNOUR, IS A CITY AND A MUNICIPAL BOARD IN BIJNOR DISTRICT IN THE STATE OF UTTAR PRADESH, INDIA. IT IS HISTORICAL PLACE SITUATED AT THE BANK OF RIVER GANGA AND VIDUR ASHRAM DESCRIBED IN MAHABHARATA IS SITUATED HERE.

### SAMPLING:-

**SAMPLING UNIT:-** IN THE STUDY ONE CONSUMER WAS CONSIDERED AS A SAMPLE UNIT,

**SAMPLE SIZE:-** COUSUMERS WERE SELECTED FOR THE STUDY 40 MALE AND 40 FEMALE RESPONDENTS WERE CHOOSE.

**INSTRUMENT FOR DATA COLLECTION: -** KEEPING IN VIEW THE OBJECTIVE AND THE VARIABLES UNDER STUDY AN INTERVIEW SCHEDULE WERE FARMES TO COLLECT DATA WHICH HAS TWO PARTS FIRST PART CONSIST OF SOCIO PERSONAL CHARACTERISTICS OF THE RESPONDENTS SECONDS PART CONSISTED OF QUESTION REGARDING AWARENESS OF RESPONDENTS ABOUT CONUMERS RIGHTS AND FOOD ADULTERATION. ALL QUESTIONS WERE MULTIPLE CHOICE QUESTIONS AND EACH CORRECT ANSWER BY THE RESPONDENTS CARRIED I MARK NO MARKS WAS DEDUCTED FOR ANY WRONG ANSWER.

**METHOD FO INVESTIGATION:-** SURVEY METHOD WAS USED FOR COLLECTION OF DATA QUESTIONNARIE WAS USED FOR COLLECTION OF DATA.

**Data sources-**Both primary data and secondary have been used for the study purpose. The primary data are collected from the home makers with the help of a structured questionnaire. The secondary data has been collected by referring to Journals, Articles, and Magazines and various relevant websites.

## 11. RESULT AND DISCUSSION

### SOCIO PERSONAL CHARACTERISTICS

TABLE N. 1

AGE	RESPONDENSTS	%
20-25	15	12
25-30	20	16
30-35	12	9.6
35-40	13	10.4
40-45	8	6.4
45-50	5	4
50-55	7	5.6

### GENDER

MALE	49	39.2
FEMALE	31	24.8

### ORDINAL POSITION

FIRST	29	29.2
SECOND	22	17.6
THIRD	12	9.6
OTHER	16	12.8

### FAMILY SIZE

0-4 MEMBER SMALL	37	29.6
4-7 MEDIUM	43	34.4
7-10 LARGE		

### EDUCATION

IUITERATE	-	-
PRIMARY	1	0.8
MIDDLE	3	2.4
MATERIC	14	11.2
INTERMEDIATE	13	10.4
GRADUATE	34	27.2
POST GRADUATE	12	9.6
ANY OTHER	-	-

### MARITAL STATUS

SINGLE	13	10.4
MARRIED	67	53.6
OTHER	-	-

### EXPOSURE TO MASS MEDIA

NEWSPAPER	69	51.2
TELEVISION	72	57.6
MAGAZINES	37	29.6
DISCUSSINO	71	56.08
RADIO	71	56.08
EXHIBITION	-	-
MOBILE	45	36
COMPUTER	69	51.2
K.V.K	-	-

**SOCIO- PERSONAL CHARACTERISTICS OF RESPONDENTS:** - AN ATTEMPT HAS BEEN MADE TO KNOW THE DISTRIBUTION OF RESPONDENTS WITH RESPECT TO SOCIO- PERSONAN STATUS AND THE RESULTS ARE PRESENTED IN TABLE 1.ITS IS EVIDENT FORM TALBE 1 THAT (16%) OF RESPONDENTS WERE OF THE AGE BETWEEN 25-30 YEARS FOLLOED BY (12%) FO RESPONDENTS IN THE AGE GROUP OF (20-25) (10.4%) 35-40 YEARS (9.6) 30-35 YEAR, (6.4%) 40-45 YEARS (5.6% ) 50-55 YEAR AND REMAINING (4%) WERE IN THE AGE GROUP OF 45-50 YEARS.WITH REGARD TO GENDRE (39.2%) RESPONDENTS WERE MALE AND (24.8%) WERE FEMALE WITH REFERENCE TO ORDINAL POSITION IT CAN BE ELUCIDATED FROM TABLE 1 THAT (29.2%) OF RESPONDENTS WERE FIRST BORN IN THEIR FAMILY WHICH WAS FOLLOWED BY (17.6%) OF MIDDLE BORN AND (12.8%) OF OTHER REMAINING (9.6%) WERE THIRD BORN.AS OBSERVED FROM TABLE 1 MORE NUMBER OF RESPONDENTS (34.4%) BELONGED TO A MEDIUM FAMILY SIZE (29.6%) OF RESPONDENTS SMALL FAMILY THE ABOVE TABLE (27.2%) RESPONDENTS WERE GRADUATE (11.2%) WERE MATRIC (10.4%) INTERMEDIATE (9.6%) POST GRADUATE REMAINING (2.4%) MIDDLE SCHOOL EDUCATION WITH REGARD TO MARITAL STATUS 53.6% RESPONDENTS WERE MEARRIED AND REMAINING 10.4% SINGLE.(57.6%) RESPONDENTS ARE EXPOSED TO TELEVISION FOLLOWED BY DISCUSSION (56.08%) , (56.08%) RADIO, (51.2%) NEWSPAPER.

**Table No 2 : AWARENESS OF RESPONDENTS ABOUT CONSUMER RIGHTS AND FOOD SAFTEY:**

SI N...	CONSUMER RIGTHS / FOOD SAFTEY	F	%
1	FSSAI	67	53.6
2	CONSUMER PROTECTION	28	22.6
3	INFROMATION MEDIA FOR ADULTERATION PRACTICES		
	MAGAZINES/ NEWSPAPER	35	28
	TV/ COMPUTER	40	32
	FRIENDS	3	2.4
	FAMILY MEMBERS		
	FOAM	1	0.8
4	CONSUMER REDERSAL SYSTEM		
	YES	68	54.4
	NO	12	9.6
5	LABEL		
	YES	67	53.6
	NO	13	10.4

TABLE NO SHOWS THE AWARENESS OF RESPONDENTS ABOUT CONSUMER RIGTHS AND FOOD SAFTEY APPROX HALF THE CONSUMER WERE AWARE OF CONSUMER REDERSAL SYSTEM (54.4%) FSSAI (53.6%) AND LABEL (58.6%) (32%) CONSUMER OBTAINED INFROMATION ABOUT ADULTERATION FORM TV OR COMPUTER NEWSPAPER OR MAGAZINES WERE USED FOR INFORMATION FOR ADULTERATION BY (28%) CONSUMER (22.4%) RESPONDENTS PROTECITON ACT.

**Table No 3: DISTRIBUTION OF THE RESPONDENTS FOR CONSUMER RIGHT AND FOOD SAFTEY BASED ON AWARENSS INDEX**

S. No	LAVEL	RANGE	F	%
1	LOW	2-4	2	1.6
2	MEDIUM	4-6	2	1.6
3	HIGH	6-10	76	60.8

TABLE NO 3:- SHOWS THE DISTRIBUTION OF THE RESPONDENTS FOR CONUSMER RIGTHS AND FOOD SAFTEY MAXIMUM NO OF CONSUMER (60.8%) WERE FOUND TO BE IN HIGH LEVEL OF AWARENESS ABOUT NO OF RESPONDING (1.6%) EACH WAS FOUND IN MEDIUM AND LOW LEVEL OF AEARNESS ABOUT CONSUMER RIGTHS AND FOOD SAFETY.

**Table No 4: DISTRIBUTION FO RESPONDENTS FOR KNOWLEDGE OF CONSUMER ABOUT COMMAN ADULTERANTS BASED ON KNOWLEDGE INDEX:-**

S. No	LAVEL	RANGE	F	%
1	LOW	0-10	16	12.8
2	MEDIUM	10-20	34	27.2
3	HIGH	20-30	30	24

TABLE NO 4 SHOW THE DISTIRBUTION OF RESPONDENTS FOR KNOWLEDGE OF COMMON ADULTERANTS (27.2%) RESPONDENTS WERE FOUND TO BE IN MEDIUM LEVEL OF KNOWLEDGE (24%) WERE FOUND IN HIGH LEVEL OF KNOWLEDGE AND (12.8%) CONSUMERS WERE FOUND IN LOW LEVEL OF KNOWLEDGE OF COMMAN ADULTERANTS.

**12. SUMMERY AND CONCLUDING**

FROM THE PRESENT STUDY IT COULD BE CONCLUDED THAT LWO INCOME GROUP RESPONDENTS WERE LEAST EDUCATED HAD LOW AWARENESS ABOUT THEIR RIGHTS AND RESPONSIBILITES AN FOOD ADULTERATION. SO THIS GROUP NEEDS TO BE ARMED WITH LOT OF INFORMATION AND TARINING ON THE ISSUSE OF FOOD ADULTEATION AND WAY TO REAISE THEIR VOICE WHEN FELT CHEATED. THEY HAD LIMITED

INCOME, SO THEY COULD NOT REACH THE STANDARD ITEM OF THEIR CHOICE ON SEEING SUCH CONDITION OF CONSUMER OUR GOVERNMENT HAS MADE SINCERE EFFORTS TO CURB THE FRAUDULENT PRACTICES BY ENACTMENT OF VARIOUS LAWS . IT IS HIGHLY UNLIKELY THAT MORE LEGISLATION OR INCREASING FINES AND JAILS ALONE WILL HELP REDUCE ADULTERATION PARTICULARLY GIVEN THE CORRUPTION THAT EXISTS IN THE ENFORCEMENT AREA AND THE LAW CONVICTION RATE GREATER CONSUMER VIGILANCE AND ACTION ALONE CAN HELP IMPROVE THE SITUATION BUT SUCH EFFORTS ARE NOT TRUTHFUL UNLESS CONSUMERS THEMSELVES ARE AWARE OF THEIR RIGHTS AND RESPONSIBILITIES UNDER THESE CIRCUMSTANCES, CONSUMER LITERACY IS THE NEED OF THE HOUR WITH SPECIAL ATTENTION TO LOW INCOME GROUPS WHO SUFFER THE MOST .

### 13. RECOMMENDATIONS

**To the government**-Proper food laws should be formulated by the government and rigid testing procedures should be adopted for standardizing the food products. Low quality products should be completely eradicated.

**To the manufacturers**-Manufacturers these days are largely focused on increasing the profit and they care least about the wellbeing of the consumers. This attitude among the producers should be avoided and they work on the principles involving business ethics.

**To the wholesalers**-It is mandatory that the wholesalers choose quality products and stock them under clean and hygienic environments.

**To the retailers**-Retailers should choose wisely and purchase the best quality products. Since they are the closest channel to the consumers and they should take the initiative and suggest them the best products.

**To the consumers**-Consumers being the ultimate users of the food products should be fully aware of the adulteration practices that are prevalent among a large number of manufacturers. They should educate themselves with the standardizing techniques and select

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