



# MEASUREMENT OF CONSUMER SATISFACTION

(With special reference to the edible oil consumption)

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## Introduction

Every human being is a satisfaction maximiser. Satisfaction is the effect of the consumption of the goods and services. Consumer satisfaction is purely subjective phenomenon and an intangible factor and it depends on the consumer state of mind both at the time of purchase and more importantly at the time of consumption. Measurement of consumer satisfaction has been done mostly at superficial level and with certain degree of satisfaction derived by the consumers. Consumer satisfaction with respect to edible oils is operationally defined as the degree to which a consumer fulfills His/Her needs and expectations from the edible oils. An attempt is made in this study to measure the consumer satisfaction with special reference to edible oil consumption.

### **Assumptions of the Study:**

1. Satisfaction derived by consumers can be measured in quantitative terms.
2. The five factors selected influence the consumer satisfaction.

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### **Objectives of the Study:**

1. To identify the factors influencing the satisfaction of the consumers with respect to edible oils
2. To develop a model to measure the satisfaction levels of the consumers.
3. To compare the level of satisfaction among various groups of edible oil consumers.
4. To offer suggestions on the above study.

### **Hypothesis of the Study:**

- $H_1$ : There is significant difference in the levels of satisfaction with respect to overall group of buyers.
- $H_2$ : There is significant differences in the levels of satisfaction derived by different group of buyers.
- $H_3$ : Various influencing factors do cause in the variation in their satisfaction.

## **Method to Measure Consumer Satisfaction**

120 respondents were selected and divided into six classes of consumers of edible oils.

They include:

1. Household and Non-household buyers.
2. Loose oil and Packed/Branded oil buyers.
3. Buyers from producers/mills and buyers from Retailers.
4. Literate buyers and Illiterate buyers.
5. Below Rs. 3000 pm income group and above Rs. 3000 pm income group buyers.
6. Urban group buyers and Rural group buyers.

A sampling frame could not be prepared and simple convenient sampling was followed. This study is a survey research where the opinions of the respondents constituted the main object of study. The researcher used the interview schedule for collecting data. The interviews were conducted through casual and natural conversation.

### **Variable used in the Study:**

Considering the objective of the study, the dependent variable is Consumer Satisfaction. There are five factors, which are independent variables. Components of consumer satisfaction with respect to edible oils are:

- Price
- Quality
- Taste and colour
- Weight
- Health value

These independent and dependent variables are capable of being measured by using different scales. In order to measure the extent of satisfaction, an attempt is made in the present investigation to develop an instrument to measure the consumer satisfaction as contemplated by Bradley (1994) and Chunawalia (1995). Satisfaction scale was developed with some modification. The scale was based on a scoring scheme in which the opinions of the respondents on the various aspects of the edible oils were recorded as highly satisfied, moderately satisfied and least satisfied. Satisfaction of each respondent was separately measured with the respective scales.

### **Development of Consumer Satisfaction Index:**

In the course of analyzing the data relating to 120 consumers the average satisfaction score for various classes of buyers are computed from the following formula:

$$\text{Average satisfaction score} = \frac{\text{Total score}}{\text{Total number of respondents}}$$

Student 't' test used for testing the significant difference of average satisfaction score between the various classes. Similarly Chi-square test was used to test whether the set of observed satisfaction levels have significant differences with overall group of buyers with respect to various influencing factors.

## **Results**

### **Satisfaction derived by Different Classes of Buyers: (Table 3.1)**

The average satisfaction score indices of group 'a' (consists of household buyers, loose oil buyers, buyers from mills, literate buyers, urban buyers and buyers below

**Table 3.1. Relationship between various groups of consumers and satisfaction score.**

Sl No.	Groups	Average score of satisfaction index & 't' value		
		Group (a)	Group (b)	't' value
1.	a) Household buyers b) Non-household buyers	11.7 (10)	10.7 (10)	0.46
2.	a) Loose oil buyers b) Branded oil buyers	10.0 (10)	12.6 (10)	2.28
3.	a) Buyers from mills and wholesalers b) Buyers from retailers	11.6 (10)	8.9 (10)	2.98
4.	a) Literate buyers b) Illiterate buyers	10.5 (10)	7.9 (10)	3.50
5.	a) Urban buyers b) Rural buyers	9.8 (10)	9.2 (10)	0.45
6.	a) Below Rs. 3000 pm Income buyers b) Above Rs. 3000 pm Income buyers	10.9 (10)	10.4 (10)	0.37
7.	Overall	10.75 (60)	9.95 (60)	1.73

Rs. 3000 pm income) possess a higher level of satisfaction with an average value 10.75 as against group 'b' (consisting of non household, branded, buyers from retailers, illiterate, rural and group of buyers above Rs. 3000 pm income) with an average value 9.95. The student 't' test between group 'a' and group 'b' do not exhibit significant differences in their level of satisfaction at 0.05 level (1.73).

Degrees of freedom are  $V = 60 + 60 - 2 = 118$ , the table of 't' at 5 percent level is 1.98. The calculated value 1.73 is less than the table value, hence there is no significant differences in the satisfaction level.

### **Satisfaction between Household and Non-household Buyers:**

The average satisfaction score indices values for household buyers (11.7) shows higher than that of non-household buyer (10.7). However the 't' test proves that there is no significant differences in their level of satisfaction at 0.05 percent level (0.46).

### **Satisfaction Between Loose and Branded Oil Buyers:**

Branded oil buyers derive higher satisfaction than that of loose oil buyers. The respective average score 'of satisfaction' index are 10.0 (loose oil buyers) and 12.6 (branded oil buyers).

The 't' test conducted on these scores indicate a significant difference in their level of satisfaction. The 't' value was 2.28 which was significant at 0.05 percent level.

### **Satisfaction between Buyers from Mills/Wholesalers and Retail Buyers:**

Buyers from mills/wholesalers derive higher satisfaction values 11.6 (Mill buyers) and 8.9 (Retail buyers). The 't' test conducted on these values indicates there is significant difference in their level of satisfaction. The 't' value was 2.98 which was significant at 5 percent level.

### **Satisfaction between Literate and Illiterate Buyers:**

The average satisfaction level of literate buyers is 10.5 whereas it is 7.9 with respect to illiterate buyers. The 't' value was 3.5 which was significant at 5 percent level. Hence it is proved that there is significant difference in level of satisfaction between literate and illiterate group buyers.

### **Satisfaction between Urban and Rural Buyers:**

The average satisfaction level with respect to urban and rural buyers are 9.8 and 9.2 and there is no difference in their level of satisfaction between urban and rural buyers ('t' value = 0.45)

### **Satisfaction and Income Group Buyers:**

With regard to satisfaction level between buyers whose monthly income is below Rs. 3000 and above Rs. 3000 does not differ significantly and this is evident from their respective average satisfaction value being 10.9 (below Rs. 3000 income buyers) and 10.4 (above Rs. 3000 income buyers). This was proved by the student 't' test that there is no significant differences in their level of satisfaction at 0.05 percent level (0.37).

### Satisfaction derived by All Classes of Buyers (Table 3.2):

The average score of satisfaction of overall group of buyers is 32.5 (highly satisfied), 72.2 (moderately satisfied) and 19.5 (less satisfied). Degree of moderately satisfied buyers are more in numbers compared to other groups.

**Table 3.2. Relationship between all the group of buyers and satisfaction score.**

Sl. No.	Group	No. of Respondents	Average Score of satisfaction			Total
			Highly satisfied	Moderately satisfied	Less satisfied	
1.	Household Buyers	10	4.7	6.2	0.8	11.7
2.	Non-household buyers	10	2.4	6.2	2.1	10.7
3.	Loose oil Buyers	10	1.2	6.2	2.6	10.0
4.	Branded oil Buyers	10	3.9	7.8	0.9	12.6
5.	Buyers from Mills/W. S.	10	3.0	7.4	1.2	11.6
6.	Buyers from Retail shops	10	1.5	3.8	3.6	8.9
7.	Literate Buyers	10	1.5	8.1	0.9	10.5
8.	Illiterate Buyers	10	0.6	4.4	2.9	7.9
9.	Urban buyers	10	3.8	4.9	1.1	9.8
10.	Rural buyers	10	0.6	7.2	1.4	9.2
11.	Below Income Rs. 3000 pm	10	6.4	4.4	0.5	10.9
12.	Above Income Rs. 3000 pm	10	3.3	5.6	1.5	10.4
			32.5	72.2	19.5	124.2

However chi-square test indicates that for 22 degrees of freedom at 5 percent level of significance table value  $\chi^2$  is 33.92.  $\chi^2 = (O-E)^2/E = 20.57$ .  $v = (r-1)(c-1) = (12-1)(3-1) = 11 \times 2 = 22$ . The calculated value of  $\chi^2$  is 20.57 less than table value. Hence there is no significant differences in the level of satisfaction derived by different groups of buyers.

### Relationship between Satisfaction and Various Influencing Factors:

Table 3.3 shows the details of the average score of satisfaction of all 120 consumers from various influencing factors and they are 2.98 (Highly satisfied), 5.18 (Moderately satisfied) and 1.42 (Less satisfied). Moderately satisfied score is higher than highly satisfied score and less satisfied score. However chi-square test proved that for 8 degree of freedom at 5 percent level of significance table value  $\chi^2$  is 15.50. The calculated value of  $\chi^2 = 0.35$  is less than table value. Hence there is no significant differences in the level of satisfaction derived with respect to various influencing factors.

**Table 3.3. Relationship between various factors and satisfaction score**

Sl. No.	Factors	Average score of satisfaction			Total
		Highly satisfied	Moderately satisfied	Less satisfied	
1.	Price	0.40 (16)	1.27 (76)	0.23 (28)	1.90
2.	Quality	0.70 (28)	1.05 (63)	0.24 (29)	1.99
3.	Weight	0.63 (25)	1.03 (62)	0.28 (33)	1.94
4.	Health	0.70 (28)	0.70 (42)	0.42 (50)	1.82
5.	Taste & Colour	0.55 (22)	1.13 (68)	0.25 (30)	1.93
		2.98	5.18	1.42	9.58

### Relationship between Degree of Satisfaction and Number of Buyers:

Table 3.4 shows the satisfaction derived by 120 buyers belonging to different classes such as household and non household, loose and branded oil buyers, urban and rural buyer, high and low income buyer and literate and illiterate buyers. The

majority of buyers numbering 62 (51.67%) are moderately satisfied, 34 buyers (28.33%) less satisfied and 24 (20%) buyers highly satisfied.

**Table 3.4. Number of buyers and their degree of satisfaction.**

Sl. No	Degree of satisfaction	No. of Buyers	Percentage
1.	Highly satisfied	24	20.0
2.	Moderately satisfied	62	51.67
3.	Less satisfied	34	28.33
		120	100.00

## Discussion and Conclusions

### Satisfaction derived by Different Classes of Buyers:

Tables 3.1 and 3.2 show that the average score of satisfaction for different classes of buyers and overall satisfaction score with 't' test and chi-square test values. Average score of satisfaction for group (a) buyers and group (b) buyers are 10.75 (60) and 9.95 (60) and 't' value 1.73. Again Chi-square test was conducted on the above data, both the values proved that there is no significant difference in their levels of satisfaction derived by overall group of buyers.

Hence ( $H_1$ ) that there is a significant difference in the levels of satisfaction derived by overall groups of buyers, is rejected and an alternative hypothesis is that there is no significance difference in their level of satisfaction derived by overall group of buyers is accepted. However, the following classes of buyers found to have significant differences in their levels of satisfaction and they are:

- a) Loose oil buyers and branded oil buyers
- b) Buyers from mills or wholesalers and buyers from retailers and
- c) Literate buyers and illiterate buyers



### **The Reasons for the differences in their levels of satisfaction are:**

1. Maintenance of purity, safety in packing and composition of the oils, in branded and packed oils
2. Branded and packed oils display the brand name, and they are easy for pouring, easy for handling, pilfer-proofness, leak proofness.
3. Branded oils are sold at fixed rate
4. Mills or wholesalers charge reasonable price with assured quality
5. Literate buyers are generally well aware about the nutritional values and capable of judging the quality, purity and safety of edible oils while purchasing

Whereas in the following another 6 classes of buyers found no differences in their levels of satisfaction and they are:

- a) Household buyer and Non-household buyer
- b) Urban buyers and rural buyers and
- c) Income group buyers of below Rs.3000 and above Rs. 3000 pm.

There are no significant differences in their levels of satisfaction and it may be due to the following reasons:

1. Majority of buyers are interested in loose oils
2. Loose oils are cheaper than that of branded oils.
3. Non-household buyers are interested in cheap oils for commercial purposes
4. There is no change in supply of edible oil with regard to rural area or urban area. Hence ( $H_2$ ) that there is a significant difference in the levels of satisfaction derived by different group of buyers is accepted.

### **Relationship between Satisfaction and Various Influencing Factors:**

Table 3.3 shows that average score of satisfaction of 120 buyers with respect to various influencing factors. The highly satisfied score value is 2.98, moderately satisfied score value 5.18 and less satisfied score value 1.42 respectively. However chi-square test proved that there is no significant differences in the level of satisfaction derived by all the buyers with respect to various influencing factors of price, quality, weight, health value and taste and colour. As per Table 3.4 there are 62 out of 120 respondents who are moderately satisfied.

**The moderate satisfaction is due to:**

- 1) Satisfaction or Dissatisfaction to the buyers with respect to quality is directly proportional to what they have paid for.
- 2) There is continuous rise in the prices of edible oils.
- 3) No guarantee of purity of edible oils.
- 4) Unfair publicity practice about the edible oils in the market.
- 5) Poor nutritional value due to adulteration.
- 6) Change in the colour, taste and other attributes from one producer to another.
- 7) Quality deterioration due to time gap between crushing to consumption.

Hence ( $H_3$ ) that various influencing factors do cause the variations in their levels of satisfactions is partially rejected and alternative hypothesis is that various influencing factors do not cause the variations in their levels of satisfaction.

Based on the above study, the following conclusions could be drawn:

1. There is no significant differences in their levels of satisfaction derived by 120 buyers comprising different classes of buyers of edible oil consumption.
2. Similarly there is no significant difference in their levels of satisfaction with respect to various influencing factors.
3. Moderately satisfied buyers are higher than that of highly satisfied and less satisfied buyers. Mean values are highly satisfied (20%), moderately satisfied (51.67%) and less satisfied (28.33%).
4. Number of buyers responded for levels of satisfaction out of 120 buyers are highly satisfied (24), moderately satisfied (62) and less satisfied (34).

To conclude, assured quality, flavour, health value and reasonable price structure definitely bring the high levels of consumer satisfaction.

## References

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