

## Does our decision of buying edible oil and butter depend on how much cholesterol it contains?

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### Abstract:

In the era of health problems, consumers are very choosy and cautious to buy and consume anything, and the manufacturers has scored greatly in this field by keeping the taste of product intact by reducing the harmful substances in it. One of such content in the food items is cholesterol. Though **cholesterol** is an integral part of our body, it also has many ill effects on health of people. The Oil and Milk Products such as **Butter** are high in **cholesterol** content and people are particular about buying the specific brand or make to meet their need of the product and in the same time to keep the cholesterol in abeyance. It is important to note that India is the largest butter producing country in the World and the industry is ever growing. In the similar manner, the edible oil market in India is the world's fourth-largest after the USA, China and Brazil. The study is aimed to find out how does health related information about cholesterol influences a decision of a prospective buyer. It also tried to find out if advertisement gives out needed information about any product, which may influence the buyer to buy (influenced by positive information) or not to buy (influenced by negative information) a given product. Now, this research is being conducted among the consumer as to find out how does awareness and information about the cholesterol level changes decision of buying a product. This paper also throws light on the influence of advertising on buying trends, as in the information, about its content etc. does change the way a buyer perceives his perception about the product.

Keywords: **Cholesterol, Butter, Edible oil, Advertising, Buying trend.**

### Introduction

Correct information about a product to choose that particular product is the blessing on part of prospective buyers out of millions of options available in today's world and can play most significant role in selection. Manufacturers are continuously trying innovative ideas and doing all possible researches to find out what actually caters to the need of the prospective consumers to promote their products or brands over the competitors. Although, there is no set norm with regard to choosing a product over other but creating a positive attitude by promoting certain health aspect in food products can play a vital role. Out of the many variables which can influences the buying trend, health benefits and avoiding health dangers may play the very crucial role in demoting competitors' product and promoting their own products or brands.

As time becoming the most important aspect in one's life mostly in urban centres, people do not like to spend huge amount of time in cooking food items and prefers mostly package or ready-made food in an urban centre. So, obesity and other health problems are the major issue in today's urban world. Lack of time for exercise and meditation is also another reason for this. So, in this regard, whenever an urban family like to choose a product, their product selection is influenced by the health benefits or to reduce the health dangers in their life from the product consumption. Marketers takes this as an

opportunity to promote their products where they have health advantage over their competitors even though the advantages are not that significant. But they promote their brands or products simply on this USP and can become very successful. One of such content in the food items is cholesterol. Though cholesterol is an integral part of our body and as it is an essential structural component of mammalian cell membranes it has many ill effects on health of people. It can cause serious health problems including Heart Attacks, etc. There are regular researches and studies being conducted to find out the ill-effects of the cholesterol, if taken in excess.

Recent studies have reported that high cholesterol is present in 25-30% of urban and 15-20% rural subjects. Gupta, R. et. al (2020). The problem is more in urban areas because of consumption of a lot of unhealthy food items compare to the rural areas. The edible Oil and Milk Products such as Butter are high in cholesterol content and people are particular about buying the specific brand or make to meet their need of the product and in the same time to keep the cholesterol in control. It is important to note that India is the largest butter producing country in the World and Annual growth rate of butter production in India is 12%. Moreover, the output has increased by 4.4 lakh tonne since 1991 and the industry is ever growing. In the similar manner, the edible oil market in India is the world's fourth-largest after the USA, China and Brazil. A growing population, increasing rate of consumption and increasing per capita income are accelerating the demand for edible oil in India.

India has a huge market for edible oil and butter. So, cholesterol consumption is also high in India. Although, there are many such substances available in food items which are more harmful for human health but marketers pick the cholesterol content as their USP to create all the awareness about its ill health benefits. The market is full of promotional commercials where they show how bad the cholesterol is for our health and why should we control it. In response to the ever-growing market and the scattered information and awareness about the Cholesterol content of any product has created a vicious circle, whereby the demand of less cholesterol presence in any given product, keeping the taste and other specification intact, is being preferred by the consumers. The information about the cholesterol is being displayed in the product pack for more awareness and to attract a buyer. And as more and more people are becoming informed about the Cholesterol and its ill effects due to the publicity technique of certain brands of edible oil and butter, it can work as precaution to have preference to certain brands and dislike for the others.

Now, this research is being conducted among the consumer to find out how does awareness and information about the cholesterol level changes decision of buying a product. This study also throws light on the influence of advertising on buying behaviour of consumer who were exposed to those advertisements in product labels or in the TV commercials. Does product preference and perception towards the products or brands get changed due to such negative exposure of cholesterol level of food products which contains harmful substance compare to others?

### **Objectives of the study**

The primary objective of this research is to study the effectiveness of advertisement containing cholesterol information for edible oil and butter on consumer preference and to co-relate the demographic profile, attitudes and lifestyles of consumers with consumption of butter and oil (with more cholesterol or less cholesterol level).

### **Hypothesis**

H1: Concern for cholesterol level and exposure of advertising showing negative health benefits from Cholesterol has significant impact on the preference of brands of butter.

H2: Concern for cholesterol level and exposure of advertising showing negative health benefits from Cholesterol has significant impact on the preference of brands of edible oil.

.H3: Advertising and health information leads to significant change in consumers' tastes, preference and their perceptions of product quality

### **Parameters:**

In this paper, consumers' tastes and preferences, and hence their perceptions of product quality, are assumed to be subject to change through advertising and health information. Although information can be defined in several ways (Pope), in this analysis it is defined as anything that alters beliefs (Hirschleifer).

Another explanation, called attribution theory, states that the causes of information are important (Mizerski). That is individual process information according to its perceived cause and considers information provided by the factual performance of the entity in question more reliable than information provided by other factors (e.g., vested information, as might be the case with advertising). Consequently, unfavourable information has more dispositional value to an object, is discounted less, and therefore disproportionately influences impressions, beliefs, and attitude (Feldman).

A related hypothesis suggests that the source and type of information are more influential than non-personal and market-oriented information (Engel and Blackwell). Information from personal interaction is more influential because of the potential for feedback between sources and receptors. Information of a neutral nature, such as that provided by the news media or other objectives sources, is more effective because it is considered more credible than advertising and other market oriented sourced. In short, information resulting from personal interaction is considered more effective than information obtained from the news media, which, in turn, is considered more effective than information contained in advertising.

### **The Model:**

Consumer preferences are assumed to depend on what and how much they know about the product. Swartz and Strand (1981) suggest that consumers' perceptions of the quality (Z) of a good (X) affects the satisfaction or utility experienced in consuming the good. Further, consumer's perceptions of product quality will depend on the information (N) that a consumer has about product attributes. Thus the consumer's utility function can be expressed as

$$(1) \quad U=U(X(Z(N))).$$

Recognizing that not all information has the same impact on the consumer, equation (1) can be re-expressed as

$$(2) \quad U=U(x(Z(N1, N2 (A))))).$$

Where N1 represents unfavourable product information provided by neutral source and N2 represents favourable product information provided by non-neutral sources, e.g., advertising (A). Here, N1 is hypothesized to have negative impact and to be more effective than N2 in influencing consumer quality perceptions, Hui-Shung Chang and Henry W. Kinnucan (1991). So, if we would like to find out impact on sale by advertisement can be expressed:

$$S_x=S(X(Z(N1))) + (S(X_a(Z(N1)))- S(X_a(Z(N2))))$$

Where  $S_x$  represents total sale of product X, which is influenced by product quality(Z) and favourable information(N1) of the product by advertising and in addition to the sale lost due to unfavourable information(N2) of the alternative product ( $X_a$ ).

**Data:**

Primary data was collected through a survey. The questionnaire was prepared considering various parameters and thus had a mix of open and close-ended questions using Likert scales to measure the responses and draw easy conclusions from the study.

The use of previously conducted researches by various organisations has been done to derive sales figures, history of the brands and other factual information. However, none of the secondary data has been used for analytical purposes.

For the purpose of the study, the research was conducted in Guwahati city only. The population was selected from entire Guwahati City, covering all strata of the society. The population have been segmented further on to have a very specific sample group covering all the decision-makers in the case of butter and edible oil.

For the purpose of conducting the survey 3 sample units have been considered, they are- home-makers, bachelor students and working professionals. Judgmental quota sampling has been undertaken in the selected areas and sample units have been defined in the said criteria.

**Analysis and Findings:**

Concern for cholesterol level and exposure of advertising showing negative health benefits from Cholesterol has significant impact on the preference of brands of butter.

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
cholesterol levels and impact on product selection	0.203	0.1	0.383	2.032	0.043
(Constant)	0.941	0.182		5.168	0

**Table: 1**

It shows that the level of cholesterol information created by the advertising has significant difference in product buying. The high and low concern for cholesterol made a significant change in purchase decision for butter and edible oil.

In this study, the analysis of product attribute preferences has been carried out in order to identify the attributes on which the customers put much emphasis while making the decision to purchase butter brands. Respondents were asked to rate the various attributes of the brand of Amul, on a scale of 1-5 where 1= not important to 5=very important. On the basis of the ratings given by the respondents, means of the ratings on various attributes were compared. Among all the attributes considered in this study, the most importance attribute was the brand image of Amul. Other attributes like “taste”, “price” and “cholesterol level” were also rated high but image created by Amul over the years is most significant attribute for selecting a butter brand.

Analysis on the brand attribute preferences of the consumers of Nutralite has been conducted during the study in order to identify the main attribute of the brand nutralite, a substitute for butter and low in cholesterol content as perceived by the customers which also acts as a potent factor in determining purchase decisions

The respondents were asked to rank the various attributes that are provided by Nutralite on a 5 point scale where 5=most important and 1= least important, it was instructed that same ranking could be provided to different attributes. It is seen that “cholesterol level” is the most preferred attribute. This shows that the respondents who are highly concerned about the cholesterol levels in a product, prefer **Nutralite** over **Amul**. This is because of brand promotion of Nutralite using the USP of low cholesterol level. Although the brand Nutralite

Accordingly, for edible oil also, the study tried to identify the most important attribute which influences consumers in their purchase decision. The respondents were asked to rank the attributes on a 5 point scale with 1 being not important to 5 being very important. From the analysis it is seen that the consumers of Saffola gives highest preference to the cholesterol content. Brand image is second important attribute for the consumers of Saffola whereas low preference is given to price and availability. This result shows the similar implication as in case of Nutralite because Saffola was portrayed themselves as low cholesterol edible oil brand like in case of Nutralite. This means, as both the brands, Saffola in case of edible oil and Nutralite, in case of Butter, have scientific evidence of low cholesterol compare to the most popular and existing market leader brands, can successfully influence a niche market by showing only one characteristic i.e, low cholesterol level.

This study also incorporates, the importance given by the respondents on the details given in the product packaging, the product labels, which carries the information about product ingredient, their quantity and other persuasive information. It is found that the consumers largely agree that while purchasing butter or edible oil, they do not look at the details given in the package of the product. It was also identified that most of the respondents were indifferent in their approach and do not give much weightage to details given in the package. Hence it is implied that the consumers of butter and edible oil were more or less indifferent and most often do not go through the information portion of the package of the product. So, it is mostly the television and outdoor advertisement from where customer get to know about various information regarding product quality (butter or edible oil). So, marketers need to create more Television/radio or other advertising media which can dramatize the ill effect of cholesterol for human and can score more on it.

### Hypotheses testing:

This Hypothesis was formulated to examine, if there exists a significant relationship between the most preferred butter with that of concern for cholesterol level among the respondents.

To find if there is any significant relation between **the most preferred brand of butter and concern for cholesterol level** Chi-Square test is done on the two attributes.

### Hypothesis 1

**H1:** Concern for cholesterol level and exposure of advertising showing negative health benefits from Cholesterol has significant impact on the preference of brands of butter.

First, we find out the observed frequencies as shown in the following table:

	Brand X	Brand Y	Brand Z	Total
Yes	17	13	7	37
No	14	3	6	23
Total	31	16	13	

Secondly, we find out the expected frequencies as shown in the table below:

	Brand X	Brand Y	Brand Z
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Yes	19.12	9.86	8.01
No	11.88	6.13	4.98

Now, we find out the Chi-square value using the following formula:

$$X^2 = \sum \frac{(\text{observed} - \text{expected})^2}{\text{expected}}$$

$$= 3.55$$

$$\text{Degree of Freedom} = (\text{Row}-1) \times (\text{Column}-1)$$

$$= (3-1) \times (2-1)$$

$$= 2$$

Lastly, we compare this value with the table value of Chi-square at 2 degree of freedom and at 0.05 level of significance (5.99) and find that the calculated value is less than the table value, so we accept H0 and reject H1. It means that the higher or lower concerned for cholesterol doesn't impact on the butter brand selection.

### Hypothesis 2

This Hypothesis was formulated to examine, if there exists a significant relationship between the most preferred edible oil with that of concern for cholesterol level among the respondents.

. H2: Concern for cholesterol level and exposure of advertising showing negative health benefits from Cholesterol has significant impact on the preference of brands of edible oil

### Observed Frequencies

	Brand W	Brand X	Brand Y	Brand Z	Total
Yes	20	5	3	9	37
No	5	7	8	3	23
Total	25	12	11	12	

### Expected Frequencies

	Brand W	Brand X	Brand Y	Brand Z
Yes	15.41	7.4	6.78	7.4
No	9.59	4.6	4.2	4.6

Now, we find out the Chi-square value using the following formula:

$$X^2 = 12.04$$

$$\text{Degree of Freedom} = (\text{Row}-1) \times (\text{Column}-1)$$

$$= 3$$

Lastly, we compare this value with the table value of Chi-square at 3 degree of freedom and at 0.05 level of significance (7.815) and find that the calculated value is more than the table value, so we reject H0 and accept H1. It means that the higher or lower concerned for cholesterol make a significant difference in preference of edible oil selection.

### Hypothesis 3

This Hypothesis was formulated to examine, if there exists a significant relationship between advertising and health information with that of consumers' perceptions of product quality and concern for cholesterol level in butter and edible oil.

H3: Advertising and health information leads to significant change in consumers' perceptions of product quality and concern for cholesterol level in butter and edible oil.

### Observed Frequencies

	High	Medium	Low	Total
Yes	18	12	7	37
No	6	5	11	23
Total	24	17	18	

### Expected Frequencies

	High	Medium	Low
Yes	14.8	10.48	11
No	9.2	6.51	6.9

Now, we find out the Chi-square value using the following formula:

$$X^2 = 6.26$$

Degree of Freedom= (Row-1) X (Column-1)

$$= 2$$

Lastly, we compare this value with the table value of Chi-square at 2 degree of freedom and at 0.05 level of significance (5.99) and find that the calculated value is less than the table value, so we so we reject H0 and accept H1.

### Conclusion:

As per the findings based on the primary and secondary data collected from various sources, it can be opined that the level of Cholesterol content in a given brand of butter does not significantly relate to the consumption behaviour. While there are brands, Nutralite for example, who aggressively portrays their brand is a low in Cholesterol content, however their popularity amongst the consumers brings forth the actual scenario; the taste is the most important factor, while making a decision to purchase. The brand superiority of Amul as one of most popular and pioneering milk brand score much on Nutralite which is a new brand and thus even high cholesterol level does make any difference. Taste of Amul butter also nullifies the ill health impact of cholesterol of Amul butter and remained most popular brand.

However, the scenario as regards to the edible oil, the people were more concerned about the content of Cholesterol. The refined edible oil, the brands like Saffola etc. score over others in a significant way over others. The consciousness about the Health is more of a trend while buying the edible oil, unlike the butter.

Another important finding is that the advertisement and the health information on the product, does influence the buying behaviour. But this trend is predominant only with regards to the edible oil which have a good number of brands available in the market but not for butter where choice is limited and Amul is a dominant brand. So, it can be summed up that **Butter** is more of 'tastemaker' because of Amul's peculiar and familiar taste, and the **Edible oil** is 'homemaker' where health is a concern thing in buying decision. So, people were more cautious about the oil and they choose the one with less Cholesterol in it. So, the content of cholesterol level has a significant impact on the product or brand preference but it is product dependent. It means, the concern for cholesterol may have impact in one product but it may not have any impact in product preference of other products. In our case, edible oil is highly influenced with cholesterol level but in case of butter, the cholesterol level has no impact on brand preference.

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