

# IMPACT OF NUTRITION LABELLING ON CONSUMER BUYING BEHAVIOR IN COIMBATORE CITY

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**ABSTRACT:** *Nutrition label plays a vital role in providing the required nutrition information to consumers. Inclusion of nutritional label on food items is considered to be an important packaging decision for the food processors. Nutritional labels simplify the concept of healthy eating. It helps to know the amount of fat and sugar, sodium and fiber, protein and carbohydrates. Therefore, the nutritional panel is a guide to a better diet and a healthier life. Nutritional labeling affect the consumer purchase behavior significantly. Some evidence reveals that provision of nutrition information may allow consumers to switch consumption away from 'unhealthy' products in those food categories toward 'healthy' products in food categories more easily. Hence, a study was conducted to know the impact of nutrition label on consumer buying behavior and the factors that influence the consumer willingness-to-pay for nutritional labeling. Data were collected from a random sample of 520 consumers of Coimbatore city.*

**Key words:** *Nutrition labelling, purchase decision, nutrient values.*

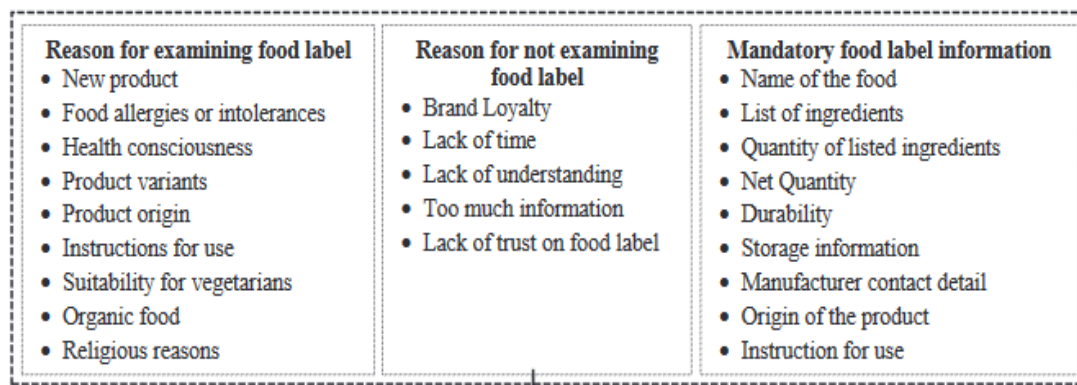
## INTRODUCTION

Labeling, the written, printed or graphic content on any article or container wrappers, is the description of the product given in short phrase or word. The purpose of labeling is to communicate the customer about the product. The term is commonly intended to highlight the factual information that label is a description applied from outside, than something intrinsic to the labeled item. Consumer's attitudes towards the nutritional aspect of the foods are increasing rapidly. In this context, labels of food products play a significant role in providing the relevant nutrition information to consumers.

Market contains packaged food products that do have labeled wrappers. It is considered essential for the packaged food products to have such labels describing the nutritive value of the product. The release of overall nutrition guides is of general educational purpose. In some cases, the guides are based on different dietary targets for various nutrients than the labels on specific foods.

Nutritional label, that simplifies the whole concept of healthy eating, plays an important role in providing the relevant information to consumers. It helps consumers to keep away consumption of "unhealthy" products and switch to "healthy" products more easily. It is a guide to the consumer in food selection. Nutrition information provided on labels should be truthful and not mislead consumers.

The labeling regulation provides incentives to manufacturers to develop products that promote public health and assist consumers in following dietary recommendations. A portion of population in many countries would benefit from information about the composition of foods. In such cases, the countries should consider the necessity to provide appropriate labeling and its presentation relative to existing guidelines and approaches. As nutrition-labeling efforts have evolved, various approaches and legal requirements have been established. These create challenges in developing and harmonizing nutrition information listings, which have broad international applications.



**Fig. 1 Nutrition label variables**

## STATEMENT OF THE RESEARCH PROBLEM

In the present scenario of market condition, majority of consumers are facing the problem of nutrition deficiency mainly due to improper food intakes. The buying behavior of the consumer towards the purchase of a product is influenced by various factors and Nutrition labeling is one among those. Nutrition labeling of the food products help consumers to know about the percentage of nutrients in the food products. Thus a study was conducted for the impact of nutritional labeling on consumer buying behavior.

## OBJECTIVES OF THE STUDY

- To analyze the level of consumers' awareness towards the nutritional label information;
- To know the effects of demographic factors on the selection of food items with reference to nutritional labeling;
- To study the impact of nutritional labeling on consumer buying behavior with special reference to food products in Coimbatore city.

## RESEARCH METHODOLOGY

- **Research design** - Exploratory research
- **Sample design** - Convenience sampling technique
- **Sample size** - 520
- **Area and period of study** - Coimbatore, 2018-2019

## NUTRITION INFORMATION ON PACK

The traditional nutrition information was in table or grid form, usually found on the back of the food package. This, in recent years, has been supplemented by a variety of simplified nutrition labels that appear on the front of the pack, often called front-of-pack (FOP) signposting information. There are various formats of FOP labels being promoted, of which the most well known are labels based on the guideline daily amount (GDA) concept and labels based on a traffic light (TL) scheme.

This repeated information is an additional declaration provided by the company as a voluntary measure. This repetition of information is restricted to the following content alone:

- Energy only or
- Energy along with fat, saturates, sugar and salt.

This repeated information may also be provide with:

- Per 100g/ml only
- Per 100g/ml and per portion or
- On a per portion basis only

When providing this 'Front of Pack' information Energy must always be indicated per 100g/ml as a minimum.

## Presentation of Nutrition Information

Nutrition information must be presented in a tabular format with the numbers aligned. Where space does not permit, the declaration may appear in linear format. The energy value must be expressed in Kilo Joules (kJ) and Kilo Calories (kcal) and the amount of the nutrients must be expressed in grams (g).

## Calculation of Nutrient Values

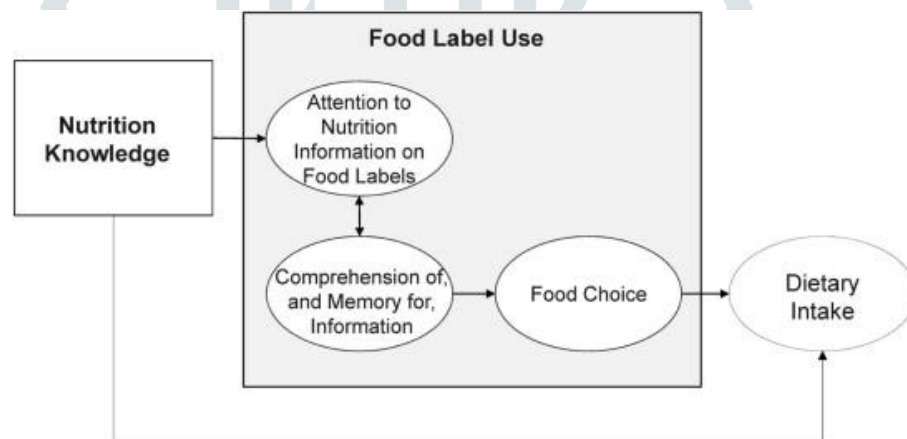
The legislation permits for numerous ways of calculating the nutrient values. It doesn't essentially need laboratory analysis and it should be potential for a food business operator to calculate the values themselves based on the kind of product. The declared values within the nutrition table are unit average values and should be based mostly on:

- The manufacturer's analysis of the food
- A calculation from the known or actual average values of the ingredients used; or
- A calculation from generally established and accepted data

The nutrient values are the average values to be taken into account of the natural variation in foodstuffs due to, for example, seasonality or supplier differences. The nutrient values must be in accordance with the food as sold. Moreover, the appropriate information may relate to the food after preparation and provide that sufficiently detailed preparation instructions that relates to the food as prepared for consumption.

## NUTRITION LABELLING: PURPOSE, SCIENTIFIC ISSUES AND CHALLENGES

Nutrition labels describe the nutrient content of a food and are meant to guide the buyer in choice of food. The nutrition information provided should be based on the dietary recommendations. The choice of the nutrient food parts to be listed ought to take into consideration label space, the analytical measurement of the actual organic process element at intervals of the food matrix, and therefore the relative prices of such analyses. Nutrition information provided on labels is essential to be truthful and should not mislead buyers.



**Fig. 2 Cognitive processes underlying use of Food labels**

## Importance of Nutrition Labels

Nutrition labels provide the factual information about the nutrition of a particular product. The serving size, number of servings in the package, calories per serving and the amount of various nutrients contained in the product are the basic information on the labels. A better understanding of the labels can help to follow a healthy diet and the choice of nutritious food is made easier.

## Making Healthy Food Decision

Nutrition labels do play a vital role in the food choices of people. When there exists two different foods and the decision is to be taken about its purchase, one can look at the nutrition labels to determine which food is more nutritious. The labels can be compared to determine which foods are lowest in calories, fat, saturated fat, trans fat, cholesterol, sodium and sugar, the ingredients you should limit for good health. Checking the ingredients list will help you avoid foods that contain additives or other ingredients that you want to avoid. The foods with the fewest ingredients and those that only contain ingredients that you would have in your own kitchen are healthier than those with lots of ingredients you don't recognize.

## Maintaining a Healthy Weight

Reading nutrition labels can help to make the right food choices while trying to lose weight or prevent weight gain. A few published studies say that, people told, advised by their doctors to lose weight for health reasons, use nutrition labels as guidance for consuming fewer calories, more fiber and less saturated fat, sugar and carbohydrates. Foods that contain at least 10 percent of the daily value for a nutrient are good sources of that nutrient, and foods that contain 20 percent of the daily value for a nutrient are considered high in that nutrient.

## IMPACT OF NUTRITION LABELS ON CONSUMERS BUYIN BEHAVIOR

Nutritional labeling is found to have a considerable impact on consumer purchase behavior mainly due to health consciousness. Nutritional panel labelling on the package enhances the demand for domestic food products and would be a suitable decisive task for the domestic food processors. This improves the competitiveness of the domestic manufactures in international markets where the nutritional label is a mandatory legal requirement. Some studies evident that provision of nutrition information enables the switch of unhealthy products to healthy ones. The interaction of demand and supply forces in food markets brings in Improvements in nutrient intake of the population .On the demand aspect, consumers' interest towards purchase of dietary product with high nutrition profiles do have a direct impact on nutrient intake. Consumers' ability towards choice of a diet depends partially on the volume and quality of information made available through a spread of sources, as well as nutrition panel food labels.

## RESULTS AND DISCUSSION

### Products purchased based on nutritional contents

Among the total number of respondents approached, 23% of the respondents look at labels in baked products, 22% look in soft drinks, 18% looks in beverages, 14% looks in chips and 11% looks in confectionaries and 13% looks in other products. Those who look to the nutrition label look mainly for the contents including fat, carbohydrates, calories, and sodium/ salt. The study revealed that 30% of the respondents look in for ingredients,24% look at calories, 22% look at carbohydrates, 12% look at sodium/salt content and 12% look for other related information.

### Reasons for purchase based on nutrition label

In this study it is found that 39% of the respondents say calories which make them look into the label, 26% looks because of healthy diet, 15% looks because of weight loss issues, 11% looks at list of ingredients and 9% looks because of attractive package.

It is observed that 60% of the respondents have stated others, 13% of them are obese, 10% have blood pressure, 9% are diabetic and 8% have a heart problem.

### Influential factor towards food labelling

It is observed that among the total 520 respondents, male respondents constituted to 308 (59.23%).

Among those male respondents, the most influential factor towards nutritional label was Calories among

**Table: 1 Influential factor among male respondents**

Factors	No. of observations	Percentage
Healthy diet	90	66.18
Weight loss issues	25	44.64
List of ingredients	53	66.25
Attractive package	18	40.91
Calories	122	59.80

122 respondents which constituted 59.80%. The nutritional factor followed by it was Healthy diet among 66.18% of male respondents.

These factors were further analyzed among female respondents which revealed that the same Calories and Healthy diet topped the positions. 59.09% of female respondents opined that the influential factor was Attractive package and those of 55.36% stated it to be Weight loss issues.

The Chi- Square test results revealed that there exists significant relation between the gender and influential factor towards nutritional label.

**Table: 2 Influential factors among female respondents**

Factors	No. of observations	Percentage
Healthy diet	40	33.82
Weight loss issues	36	55.36
List of ingredients	27	33.75
Attractive package	26	59.09
Calories	80	39.21



**Table: 3 Nutritional label influencing purchase decision**

Age (Years)	No. of observations	Better purchase decision	Percentage
<20	68	32	47.06
21- 30	168	100	59.52
31- 40	128	72	56.25
41- 50	92	44	47.83
>50	64	52	81.25

The nutrition labelling influence purchase decision. This factor was analyzed among respondents of different age group. It was observed that 168 respondents are of age group between 21 – 30 years and of those 59.52 percent agreed that the nutrition label influence purchase decision. Chi- Square test results revealed that there is significant association between the age group and purchase decision based on nutrition label.

### Accuracy of labelling information

The nutrition labelling provides information regarding the ingredients and others nutritional content of the product. *The consumers may not be aware of their nutrient content if the products are not labeled. The*

*Consumers must have their own beliefs about nutrient content based on advertising, public health messages,*

*and their general knowledge of food science prior to the purchase decision. However, this eventually leads to*

*underestimates or overestimates of the content of particular nutrients in unlabeled food items. Similarly, the extent*

*of reliability of the information in the label is also questionable. Hence an analysis was carried out to know the*

*agreeability towards the genuineness of nutrition label information among the respondents of different level of*

*Educational Qualification.*

**Table: 4 Reliability of information by educational qualification**

Educational Qualification	No. of observations	Reliability of information	Percentage
Higher secondary	72	27	37.5
Graduation	224	160	71.43
Post Graduation	184	125	67.93
Others	40	28	70.0

72 respondents possess Higher Secondary level of education of those 37.5 responded that the nutrition label contains accurate information and is reliable. Those with at least a degree count to 224 of those 160 (71.43 percent) agreed that the nutrition label information is reliable.

### Willingness to pay

Additional Willingness to pay was obtained by indicating the average price of the product in the supermarket as base price. The willingness to pay additional for the nutrition labelling was tested among the respondents based on their income level.

Among the total number of respondents, 128 were identified to fall under the income group between 31,000-40,000 comprising 45.31 percent. 120 respondents had monthly income less than 20,000 and of which 40 percent were willing to pay extra for nutrition label. Chi- square test results revealed that there is significant association between the income level and willingness to pay.

**Table: 5 Monthly income by Willingness to pay**

Income (Rupees)	No. of observations	Willingness to pay	Percentage
<20,000	120	48	40
21,000- 30,000	116	43	37.07
31,000- 40,000	128	58	45.31
41,000- 50,000	88	47	53.41
>50,000	68	52	76.48

## CONCLUSION

This study shows that consumers use nutritional labelling while arriving at purchase decision and it especially happens due to health consciousness. It is observed that male respondents are more focused towards the nutrition label information. *A majority of the respondents revealed their willingness to pay additional for the nutritional information provided on food items. Of those who are willing to pay additional, a greater proportion was in the income category of people earning above 50,000 per month. Those with educational qualification being graduation are strong opinion that the nutritional label provides reliable information. Similarly, respondents of age group above 50 years agree that nutrition information helps in better purchase decision. A majority of the respondents revealed that the Calories specification to be the most influential factor towards the need for nutrition labelling. Further, Chi-Square tests results state that there exists significant relation between the gender and influential factor towards nutritional label. Also there exists significant association between the age group and purchase decision based on nutrition label. It is also evident from the analysis that there is significant association between the income level and willingness to pay.*

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