

The Impact of Food Labelling on Consumer Awareness and Health Outcomes: An Analytical Study

Victry Samanta

Department of Food Science and Technology, Maulana Abul Kalam Azad University of
Technology,

Email: victrysamanta74797@gmail.com

Abstract

Food labeling plays a critical role in shaping consumers' nutritional awareness & influencing their perceptions of health choices. In recent years, the importance of transparent and informative food labels has gained significant attention due to the rising concerns over diet-related health issues and the need for individuals to make informed decisions about their food consumption. The objectives of the study are- i) To find out the usefulness and perceptions of food labeling; ii) To analyse the impact of food labeling in spreading consumer awareness; iii) To investigate the relationship between food labeling & consumer health. By examining health implications, this study aims to shed light on the ways in which food labeling can provide consumers with healthier choices and promote a more socially responsible food industry. In terms of resources and techniques, the questionnaire for the research purpose was written out on a google form. An anonymous survey was taken by 25 consumers. Secondary data have been collected from books, journal and online sources. Various reports & Govt. statistics are used. This paper is of analytical type. Findings are reached from analysing the data. The results (Table 1) of the online survey showed that 50% of consumers generally do not read food labels. However, an increase in the reading of has been observed when the product was new at the time of purchase or has a new manufacturing condition or intended use. Table-1 also indicate that 85% of consumers did not consider mislabeling as a risk for public health. The results of the present study highlight the needs to improve food labeling, provide education to consumers to raise their awareness on importance of reading and use of food labeling information to make an informed choice of the food.

Keywords: Consumer awareness, Consumer protection Act-2019, Food Labelling, Health Outcomes.

Introduction

Food labels are an important bridge between consumers and food producers and play a key role in disseminating important information about food. The purpose of implementing the new food labeling policy is to improve food safety and public health by announcing mandatory information and nutritional values. The main purpose of food labeling is communication between food industry operators and consumers, which can often influence the consumer's choice to buy food. Since food labels contain information about the properties of the product, the correct interpretation of all the mentions is essential to choose the right food according to the preferences, lifestyle and health status of the consumer. In recent years, consumers have become concerned about the type of food they consume, so they demand more transparent labels, such as a full list of ingredients, including additives, nutritional value or real health benefits. The Harmonization of Information Display on Food Labels has been implemented in India to strengthen consumers' rights to choose and use food according to their nutritional requirements. While the goal of this regulation is transparency and consumer and public health trust, all those efforts are wasted if consumers don't have the habit to read it. Consumers generally do not read food labels due to lack of trust, education or lifestyle. Thus, it should be evaluated how consumer understanding of food labeling improves with respect to new mandatory indications, as it depends on factors such as literacy and/or lifestyle. One effective strategy for positive consumer behaviour is the introduction of sustainability labels on food and beverages. This type of labeling not only informs consumers about the environmental, economic and social aspects of the product, but also increases the sense of social responsibility of buyers. Additionally, the lack of a formal education

system to raise awareness of healthy packaged foods means that food labels are often the most important source of nutritional information for people. By implementing initiatives such as traffic light labeling at the point of purchase, consumers can be more aware of health aspects and make informed and healthier choices when choosing products. From a consumer perspective, food ethics labels provide valuable insights and recommendations to the food industry and authorities, emphasizing the importance of transparency and accountability in food marketing. Comprehensive reform of nutrition labeling regulations can curb deceptive marketing practices, allowing fair competition between farmers and grocers and allowing consumers to make informed choices. Essentially, food labeling is a key public health tool that empowers people to prioritize health and make informed decisions about the foods they consume, emphasizing its importance in promoting overall well-being. Most food labeling research assesses how consumers perceive certain food label features, such as nutritional composition, label design and layout, mention of high-quality products or local products, etc. However, the usefulness of the information provided to consumers has not yet been evaluated. Therefore, this study evaluates the importance of food labeling, the impact of food labeling on spreading consumer awareness and the relationship between food labeling & consumer health.

Review of Literature

- 1) **Robert et al. (2017)** conducted a study in India on consumer knowledge and use of food labels and reported that pre-packaged food labeling information was low among consumers. It also revealed that less than half of all respondents often read food packaging.
- 2) **Jain et al. (2018)** assessed consumer awareness and food labeling status in selected supermarkets in Puducherry: the study found that food compliance was 70.2 percent for locally produced food. Nutritional information was provided for 59.5 percent of branded products and 34 percent for local products. A similar finding 52 percent was reported in a 2010 study in Hyderabad. Although there has been improvement over the years, it is not that high. Compliance checks for all kind of food categories must be strengthened.
- 3) **Chincholkar (2018)** studied the awareness of management students on food labeling and reported that the study was conducted in Mumbai and showed that female students pay more attention to other types of information on food labeling information such as usage, storage etc.
- 4) **Ponnudurai et al. (2019)** assessed the use of food labels among supermarket shoppers in Shah Alam, Malaysia, and reported that a large proportion of shoppers are aware of food labels and often use food labels when purchasing packaged foods. They use it to raise health awareness, mainly for the prevention of non-communicable diseases. Demographic factors such as gender and income can be said to influence the use of food labels.
- 5) **Kereth et al. (2021)** conducted their research assessment of consumer awareness of packaged food label information when purchasing packaged food and found that the educational level and occupation of respondents were significantly related to the importance of using packaged food. Due to public health concern for people, it is recommended to invest in awareness education measures to increase consumer awareness of reading and using the information on packaged foods before purchase.
- 6) **K Perumal, B Balakrishnan, MZ Idris (2022)** reported that, food labeling stands as a crucial public health tool that empowers individuals to prioritize health and make informed decisions about the foods they consume, underscoring its significance in promoting overall well-being.

Definition of Important Terms

Food Labelling: Food labelling refers to the information on the food package that describes the product's content, nutritional value, ingredients and other related information. This information helps consumers make informed choices about the foods they buy and consume. Food labels usually include information such as product name, list of ingredients, nutritional information (e.g. calories, fat content, vitamins), allergen information, expiration date and sometimes additional information such as country

of origin or special certifications (e.g. gluten-free). Regulatory agencies often establish food labeling guidelines and requirements to ensure product accuracy and consistency.

Consumer Rights: On March 15, 1962, US President John F. Kennedy introduced the Bill of Rights in Parliament, which officially deals with consumer rights. President Kennedy remarked, if a consumer is offered inferior products, if prices are exorbitant, if drugs are unsafe or worthless, if the consumer is unable to choose on an informed basis, then the consumer can file a complaint against the manufacturer for providing him substandard service. The four fundamental rights he highlighted for consumers were- (i) right to safety, (ii) right to choose, (iii) right to information and (iv) right to be heard.

Consumer protection Act-2019: This act creates an administrative structure to enhance consumer safety by introducing both a formal and judicial dispute resolution, exclusively for consumers. The previous law establishes a three-tier system of quasi-judicial consumer dispute resolution at the national, state and regional levels. The goal is to provide consumers with simple, fast and cost-effective solutions. There are currently 678 district commissions, 35 state commissions and the highest national commission in the country.

Objectives of the study are:

- i) To find out the usefulness and perceptions of food labeling.
- ii) To analyse the impact of food labeling in spreading consumer awareness.
- iii) To investigate the relationship between food labelling & consumer health.

Population & Sample: Population of study is all Indian consumers. Sample is taken from West Bengal only.

Data & Sources Data: The primary data have been collected in the form of questionnaire for the research project. Secondary data have been collected from books, journal and online sources. Various reports & Govt. statistics are used.

Methodology:

Study Design and Study Population:

A cross-sectional study using survey method was conducted in West Bengal in the month of April, 2024. A total of 25 consumers answered the online survey.

Sampling Strategy:

Simple random sampling techniques are used. 6 questions are written on a Google form & distribution was mainly performed by email invitation for a period of 1 month (10th April, 2024- 10th May, 2024).

Questionnaire Tool:

To assess the usefulness of food labeling information for consumers, a specific online questionnaire was designed on Google Forms and it comprised of 6 questions based on the Indian food safety policy and scientific literature reviews regarding food labeling and food product choices. The survey distribution was mainly performed by email invitation for a period of 1 month (10th April, 2024- 10th May, 2024). Appropriate information was provided to survey participants, allowing them to decide their participation in this research study. All questions were measured on a 5-point Likert scale (1 = never; 2 = rarely, 3 = sometimes, 4 = frequently, 5 = always). Questions concerning socio-demographic characteristics, such as sex, age, lifestyle and health of respondents were also included.

Sample size:

Total 25 consumers answered the online survey.
Findings have been reached after analysing the data.

Data Analysis:

TABLE 1: Consumer perceptions and usefulness about food labeling (results expressed as %)

SL. No.	Item	Never	Rarely	Sometimes	Frequently	Always
Q.1	Reasons why consumers do not read food labels					
Option 1	Food product brand confidence	31.8	2.5	22.1	19.5	5.8
Option 2	Lack of time	20.8	18.5	33.1	23.7	3.8
Option 3	Information displayed in the food product labeling is difficult to understand	24.7	28.2	35.1	10.7	1.3
Option 4	Food product labeling provided excessive information	23.1	34.1	28.2	7.5	2.9
Option 5	Lack of consumer confidence on information displayed on the food product labeling	27.3	34.1	28.2	7.5	2.9
Q.2	Reasons why consumers read food labels					
Option 1	New food product	0	0	100	0	0
Option 2	Consumer presented some food intolerance or allergies	62.0	17.2	7.5	6.8	6.2
Option 3	It is aware of existence of healthy products	2.6	6.8	23.1	36.4	31.2
Option 4	Interest of country of manufacture/origin of the foodstuff	2.9	14.0	29.2	29.5	24.4
Option 5	Comparison to similar products	3.2	7.8	29.5	44.8	14.6
Option 6	Interest on the instructions for use	2.3	12.3	26.3	39.9	19.2
Option 7	Appropriate for vegetarians	62.0	17.2	10.7	3.9	6.2
Option 8	Verification of organic food product	20.8	24.4	28.9	15.9	10.1
Option 9	Existence of certification	10.7	19.8	31.5	22.7	15.3
Q.3	Factors affecting consumer buying decision					
Option 1	Brand	6.5	27.3	44.8	19.5	1.6
Option 2	Price	-	4.2	25.6	39.3	30.5
Option 3	Appearance	1.6	10.4	25.3	39.9	22.4
Option 4	Country of origin	14.0	21.1	26.9	28.2	9.4
Option 5	Shelf life	1.6	4.9	19.5	19.5	54.2
Option 6	Nutritional value	6.8	15.6	28.2	29.9	19.2
Option 7	Ingredients	4.9	11.7	29.5	32.1	21.4
Q. 4	Usefulness of food labeling					
Option 1	Product constitution	1.9	7.1	19.2	40.9	30.8
Option 2	Nutritional value	1.9	10.7	21.4	34.4	31.2
Option 3	Shelf life	0.3	6.8	10.7	25.3	56.8
Q.5	Reading frequency of food labels					

Option 1	Meat and meat products	11.4	21.1	22.4	30.5	14.6
Option 2	Fish and fish products	11.7	19.5	22.1	30.8	15.9
Option 3	Milk and dairy products	5.2	13.6	27.9	34.1	19.2
Option 4	Frozen products	3.9	12.3	22.4	35.7	25.6
Q.6	Perception of food mislabeling					
Option 1	Risk to public health	61.4	23.1	13.3	2.3	0
Option 2	Loss of consumer confidence	33.1	39.9	24.4	0.6	1.9
Option 3	Benefit for the food business operator	41.9	33.1	20.1	2.6	2.3

Source: Compiled by the researcher

Findings:

A total of 25 consumers answered the online survey. The sample set consisted of 26.9% men and 73.1% women. Regarding respondent education and lifestyle 81.2% were graduates, 95.8% of whom declared having a healthy lifestyle and 41.3% practised sport regularly. Additionally, 37.7% respondents declared some dietary restriction and only 2.9% were vegetarians.

Evaluation of usefulness and perceptions food labelling:

Food labeling is a way to communicate information to consumers about a product, including what it contains, how to prepare and eat it, and how to handle it safely. Labels can be written, printed, or embossed on a food container, or attached to it. Food labels can include information such as: Ingredients, Quality, Nutritional value, Manufacturing date, Expiration date, Usage instructions, Weights and measures of product, Country of origin, Allergens and additives, Nutrition and health claims.

Labels are important because they help consumers make informed decisions, especially if they have allergies, dietary restrictions, or other health concerns. The verification of the usefulness of instructions was related to age, education and sports practitioners. It was observed that age, practicing sports, or the existence of food restrictions influenced the evaluation at the time of purchase, in respect to appearance, product origin or the list of ingredients.

The results (Table 1) of the online survey indicated that consumers do not usually read food labels. However, an increase in the frequency of reading was observed when a new product is present at the time of purchase or if it has a new preparation condition or intended use. Moreover, consumers scarcely read the allergenic ingredients or the suitability of food products for vegetarians.

The reasons why consumers mentioned not reading food labels showed that over 50% declared "lack of time", almost 45% considered they have excessive information and about 50% trusted the brand name.

The factors which influenced consumers at the time of purchase were price, presentation, product shelf-life and ingredients. Curiously, only 20% of consumers indicated the brand name as an important factor when purchasing, 75% considered the food label information important, although the name of the food manufacturer was not relevant for 40% of consumers.

Moreover, there were no differences in the usefulness and perceptions of compulsory mentions of food labeling among the different socio-demographic characteristics of the consumers surveyed.

The impact of food labeling in spreading consumer awareness:

Food labeling was observed to be more useful for specific consumer groups, such as, athletes, consumers with health conditions or consumers concerned with a healthy lifestyle. The results of the present study highlight the needs to improve food labeling, provide education to consumers to raise their awareness on importance of reading and use of food labeling information to make an informed choice of the food. Consumers need to be familiar with the terminology and language on the current nutrition panel, and the need for basic nutrition education and user-friendly label formats. A lot of work is needed to raise the level of awareness of the consumers about the nutritional aspects of the

food labeling in order to assist them in bridging the gap between current dietary practices and dietary recommendations which will be useful to make healthier food choices. Health programs and awareness campaign in Food Market centres are also required to educate consumers regarding food labeling and its benefits on preventing lifestyle-related diseases.

The relationship between food labeling& consumer health:

The results (Table 1) of the online survey indicated that 85% of consumers did not consider mislabeling as a risk for public health.

It also shows that, those consumers who regularly practice sports and those who declared a healthy lifestyle considered the information displayed on food labels helpful. Regarding the reasons of reading food labels, consumers with dietary restrictions paid more attention to the food composition. Consumers with more schooling and healthy habits had greater perception of healthy products.

This study indicates that when consumers are more health motivated, they are more likely to engage in activities and behaviours that can exert a positive effect on health. More health-concerned consumers are likely to be more interested in food-related issues and more prone to take advantage of nutritional information to achieve positive health outcomes.

Conclusion

Trade liberalization, globalization, and advances in food science and technology have led to an increase in the trade and consumption of packaged foods. Reading the information on food labels is important for making informed food choices. Food labeling is one of the most important and direct ways to communicate product information between buyers and sellers. The purpose of food labeling is to provide consumers with information about the environmental, technical and socio-economic conditions in which the products were produced, as well as the health and safety aspects of the food. Information on nutrition labels and the health effects of foods is one of the most important factors influencing decision-making. The modern package label has taken on the responsibility of informing the consumer about the product with a number of tasks, such as attracting, advertising and motivating at the point of purchase through the information on the label. Labels have been closely monitored for calories, fat, protein fibre, vitamins and minerals, either as a percentage of the Daily Value or Recommended Dietary Allowance (RDI) or per 100g or 100ml serving size. Considering the important role of consumer awareness of food labeling in making healthy food choices, this study aims to assess the knowledge, attitudes and practices of consumers regarding food labeling in West Bengal. This survey find that 50 percent of participants reported reading package information before purchasing packaged foods, and 85 percent of consumers did not consider mislabeling to be a public health risk. Health awareness was rated as the least important motivational factor. This study showed that there was little information among consumers about the labeling of packaged foods. It also revealed that less than half of all respondents often read food packaging. Furthermore, the findings indicated that. The level of education of the respondents was not significantly related to knowledge of nutrition labels.

References

- Chincholkar Tejus, S. 2018. A Study on Management Students' Awareness towards Product Labeling for Products in Mumbai. *Indian International Bulletin*, 9:91-100.
- Jain, S., Gomathi, R. and Kar, S. 2018. Consumer Awareness and Status of Food Labeling in Selected Supermarkets of Puducherry: An Exploratory Study. *Indian International Journal*,5(1) :36-40.
- Kereth, G. and Marcel, M. 2021. Consumer Awareness on Pre-Packaged Food Labeling Information towards the Purchase of the Pre-Packaged Food Product. *Research Journal in Advanced Humanities*,2.
- Perumal, K., Balakrishnan, B., & Idris, M. Z. (2022). Food labeling from consumers' perspectives: a review. *Muallim Journal of Social Sciences and Humanities*, 80-88.

- Ponnudurai A, N., Ghazi Faisal, H., Hasan Nezar, T., QaderAbdalqader. A, M.and Baobaid, M. (2019). Usage of Food Label Information Among Supermarket Shoppers in SHAH ALAM, Malaysia. International Journal of Medical Toxicology Legal Medicine, 22, 118-124.
- Robert Daniel, S.and Chandran, A. (2017). Survey on Consumers Knowledge and Use of Food Labels. Indian International Journal, 7(10), 203-209.