



EXPLORING AWARENESS AND USAGE OF LABEL INFORMATION AMONG CONSUMERS OF PACKAGED FOOD PRODUCTS IN MUMBAI

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Abstract:

This study explores consumer awareness and usage of food labels on packaged products, focusing on FSSAI regulations and the impact of the "Label Padhega" social media campaign. Despite rising health concerns and the demand for transparency, many consumers do not fully utilize label information in purchasing decisions. A survey of 220 respondents in Mumbai and its suburbs revealed that while key label elements were recognized, actual usage remained low. The "Label Padhega" campaign had a moderate impact, highlighting awareness gaps. The findings emphasize the need for stronger consumer education and stricter enforcement of labelling regulations. This research provides valuable insights for policymakers, the food industry, and public health advocates.

Keywords: Awareness, Usage, Food Labels, Consumer Behaviour, Legal Aspects, Label Padhega Campaign, Packaged Food, FSSAI, Nutritional Facts, Ingredient List, Regulatory Compliance.

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Introduction:

In recent years, the consumption of packaged food has surged, particularly in urban areas, due to evolving lifestyles, increasing disposable incomes, and the rapid expansion of the food processing industry. Packaged food products, including snacks, beverages, ready-to-eat meals, and frozen foods, have become an integral part of modern-day consumption patterns. Their widespread availability, affordability, and convenience make them a preferred choice for individuals and families seeking quick and easy meal solutions.

As consumers become more health-conscious and informed, food labels play a vital role in shaping purchasing decisions. Labels provide crucial information about a product's nutritional content, ingredients, allergens, preservatives, and additives, enabling consumers to assess a product's health implications. Additionally, details such as expiry dates, manufacturing processes, and quality certifications contribute to consumer trust and safety. However, despite the availability of this information, the extent to which consumers are aware of and actively use food labels in their decision-making remains a key area of interest.



Label Padhega India Campaign:

Launched on **11th May, 2024**, by food crusader **Revanth Himatsingka**, this social media challenge raises awareness about consumer rights, labeling issues, and informed purchasing. Aiming to bridge the information gap between manufacturers and consumers, it encourages mindful label reading for healthier, sustainable food choices. By promoting consumer activism, the campaign combats the growing trend of consuming unknown ingredients, fostering a culture where consumers actively seek and evaluate product details before making purchasing decisions. The campaign goals were:

- **Raise Awareness:** The primary objective is to raise public awareness about the nutritional value, safety, and quality of packaged food products. This includes educating consumers on how to interpret nutritional facts, ingredient lists, and other critical label components.
- **Empower Consumers:** The campaign aims to empower individuals to make healthier, informed decisions by providing them with the knowledge and tools necessary to evaluate food products effectively. By understanding labels, consumers can identify hidden sugars, unhealthy fats, preservatives, and allergens, enabling them to choose products aligned with their health goals.

Impact of the campaign:

- **Increased Consumer Engagement with Food Labels:** There has been a noticeable rise in the number of consumers who actively read and interpret food labels before making purchases. Shoppers are more conscious of checking details like calorie counts, sugar content, and ingredient quality.
- **Improvement in Consumer Understanding of Ingredients and Nutritional Content:** Consumers now demonstrate a better

understanding of complex nutritional terms, such as trans-fats, sodium levels, added sugars, and artificial additives. This enhanced awareness has led to healthier purchasing decisions, reduced consumption of processed foods, and increased demand for transparent labelling practices from food manufacturers.

Key Labelling Requirements:

All pre-packaged food products must comply with the Food Safety and Standards (Packaging and Labelling) Regulations, 2011, introduced by the Food Safety and Standards Authority of India (FSSAI). This regulation provides clear guidelines on how food products should be labelled for consumer awareness and safety. These regulations apply to all "pre-packaged" or "pre-packed" food, meaning any food placed in a sealed package and ready for sale, where the contents cannot be altered without tampering. Some of the important labelling requirements for all pre-packaged food sold in India are:

1. **Language:** The label should be in English or Hindi, though additional languages may also be included as needed.
2. **Accurate Information:** The label must contain factual and clear information. False, misleading, or deceptive content is strictly prohibited to avoid confusing consumers.
3. **Permanent Labeling:** The label should be securely attached to the product's container and should not be easily removable.
4. **Ingredient List:** A list of ingredients should be provided in descending order of their weight or Nutritional Information
 - a) Nutritional information per 100g or 100ml (or per serving) must be provided, including details such as:
 - Energy value (in kcal)
 - Protein content



- Carbohydrates, with sugar amounts specified
 - Fat content (in grams or milliliters)
- b) If a product makes any health or nutrition claims, it must be validated with test data as they are closely regulated by the FSSAI.
- c) Industry-Specific Symbols : Food products must display symbols indicating whether they are vegetarian (green circle) or non-vegetarian (brown circle). This is mandatory and helps consumers make informed dietary choices. If the product contains only egg as a non-vegetarian ingredient, the manufacturer must declare this.
- d) Food Additives, Colours, and Flavours: If food additives or colorants are used, they must be declared. For example, the statement "Contains permitted natural color" should appear below the ingredients list. Flavors should also be mentioned as "Contains added flavor".
- e) Manufacturer and Origin Information: The manufacturer's name and complete address must be displayed on the product label. For imported foods, the name and address of the importer must be included.
- f) Labels must clearly display the net quantity of the product, excluding packaging weight. Additionally, a lot number, batch code, or batch number is mandatory for all prepackaged food, allowing for effective traceability and product recall if necessary.
- g) Date of Manufacture and Expiry Date: The date of manufacture, packing date, and the best-before date must be mentioned on every product. This is particularly important for items with short shelf lives, such as dairy products, bread, and packaged food.
- h) Country of Origin (For Imported Food): Imported food products must mention their

country of origin on the label. If processing occurs in another country that significantly changes the food, that country will be listed as the origin.

- i) Instructions for Use: Instructions for use or preparation must be included if necessary. This ensures consumers know how to correctly utilize the product, especially for items that require reconstitution or special preparation methods.

Rationale of the Study:

In May 2024, the Indian Council of Medical Research (ICMR) highlighted the misleading nature of packaged food labels in a report shared on Twitter, emphasizing the need for consumer awareness. Given this concern, a cross-sectional study was conducted to assess consumer understanding and usage of food labels, serving as a post-facto evaluation of the "Label Padhega India" campaign. The findings provide insights for policymakers, FSSAI, and food manufacturers to refine regulations, enhance transparency, and build consumer trust. By identifying behavioral and demographic factors affecting label comprehension, the study supports targeted educational campaigns, ultimately promoting informed and healthier purchasing decisions among consumers.

Review of Literature:

The study "Exploring Consumer Knowledge and Usage of Label Information in Ho Municipality of Ghana" (Azila-Gbettor et al., 2013) surveyed 1,800 respondents, revealing low label-reading levels, varying by gender and age. However, those who read labels showed a strong link between knowledge and purchasing behavior, highlighting the need for consumer education initiatives.

The study "Assessment of Consumer Awareness About Usage of Food Labels and Its Impact on Food Buying Behaviour" (Kaur et al., 2016)

surveyed 60 respondents in Pilibhit, Uttar Pradesh. While all were aware of food labels, reading frequency was low. Gender significantly influenced both purchasing frequency and label usage in food choices. The study **"Effect of Labelled Information and Sensory Attributes on Consumers' Intention to Purchase Milk"** (Hoque et al., 2018) explored how label information and sensory attributes influence milk purchases. Conducted on 117 university participants, the research found both factors positively impacted buying intentions. Structural equation modeling revealed that for pasteurized fresh milk (PFM), sensory perceptions mediated the relationship between label information and purchase intent, highlighting nutritional facts and health responsibility as key commercialization drivers.

Research Gap:

The literature review highlights a gap between consumers' claimed awareness of food labels and their actual purchasing behavior, particularly across diverse demographic groups. Understanding how socio-economic factors influence label usage is crucial. Additionally, with the rise of online grocery shopping, research on consumer engagement with digital labels compared to physical ones remains limited. The impact of label design—layout, font size, and complexity—on comprehension remains underexplored, as does the effectiveness of government and NGO-led awareness campaigns in driving long-term behavioral change.

Health literacy's role in label interpretation is insufficiently studied, along with the alignment of regulatory standards with consumer expectations. Psychological barriers like time constraints, decision fatigue, and brand reliance, as well as marketing tactics overshadowing nutritional facts, require further investigation to enhance labeling policies and consumer education.

Objectives of the Study:

1. To assess consumer awareness and frequency of usage of food labels.
2. To gauge consumer knowledge regarding legal aspects related to food labels.
3. To determine whether labels simplify and influence the purchasing process.
4. To understand the awareness and influence of Label Padhega India challenge on consumer empowerment.

Limitations of the Study:

The sample size is small and hence results cannot be generalized.

1. Convenience sampling method was used.
2. The quality of responses may change in the course of time.

Research Methodology:

The present study is both descriptive and evaluative, incorporating primary data from consumers and secondary data from reliable sources for qualitative and quantitative analysis. An online self-administered survey with a close-ended questionnaire of 17 questions was conducted among packaged food consumers in Mumbai. Using convenience and snowball sampling methods, data was collected from 225 respondents in Mumbai and its suburbs. Qualitative analysis involved percentage analysis, while inferential analysis used the Chi-square test to examine associations between demographic attributes (age, gender, and education) and awareness, comprehension, and usage of label information. This statistical method determines whether significant associations exist between categorical variables. By analyzing differentiated label usage patterns, the study aims to provide insights that can inform more effective labelling policies and targeted consumer education strategies in the future.



Data Analysis:

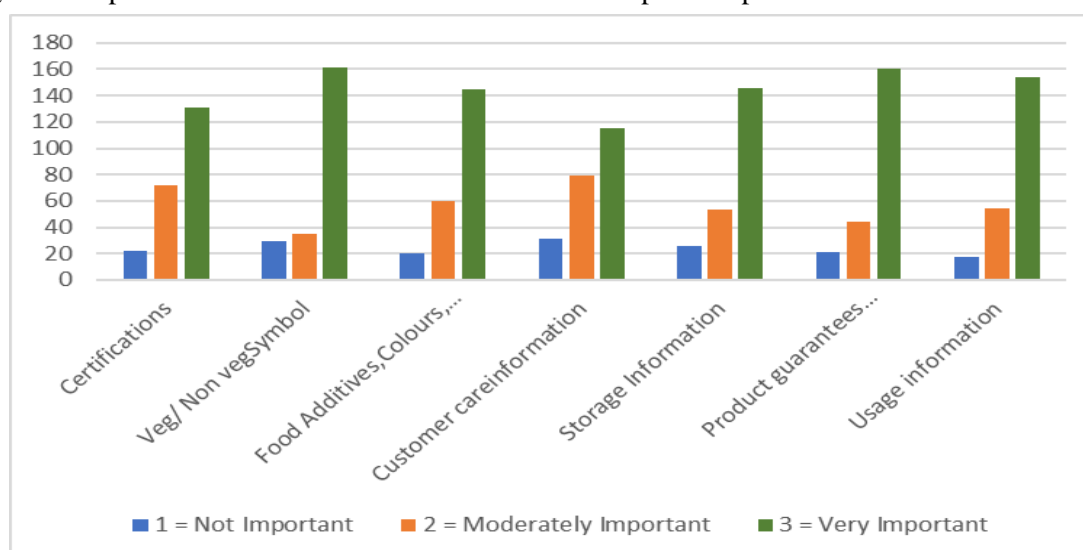
1) Demographic composition of respondents

Table 1

Gender	Count	Percentage (%)
Male	76	33.80
Female	149	66.20
Total	225	100.00
Age group	Count	Percentage
20 - 29	70	31.10
30 - 39	32	14.20
40 - 49	30	13.30
50 - 59	66	29.30
Above 60	27	12.00
Total	225	100.00
Education Level	Count	Percentage
Up to 10th	1	0.40
Up to 12th/ Diploma	6	2.70
Graduate	86	38.20
Postgraduate	98	43.60
Doctorate/ Professional	34	15.10
Total	225	100.00

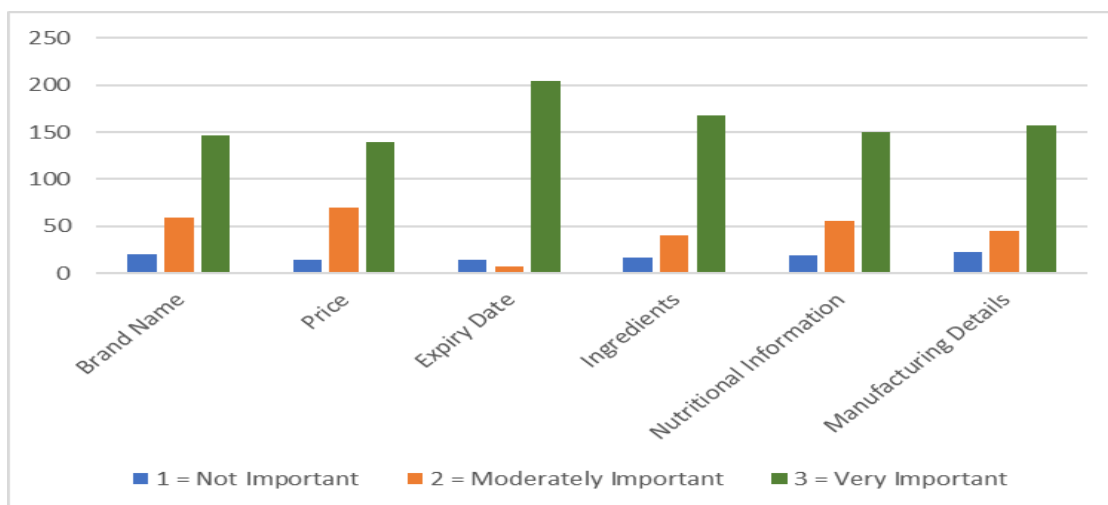
Source: Primary data

2) The degree of importance attached to label information on a 3 point Importance scale.



Source: Primary data

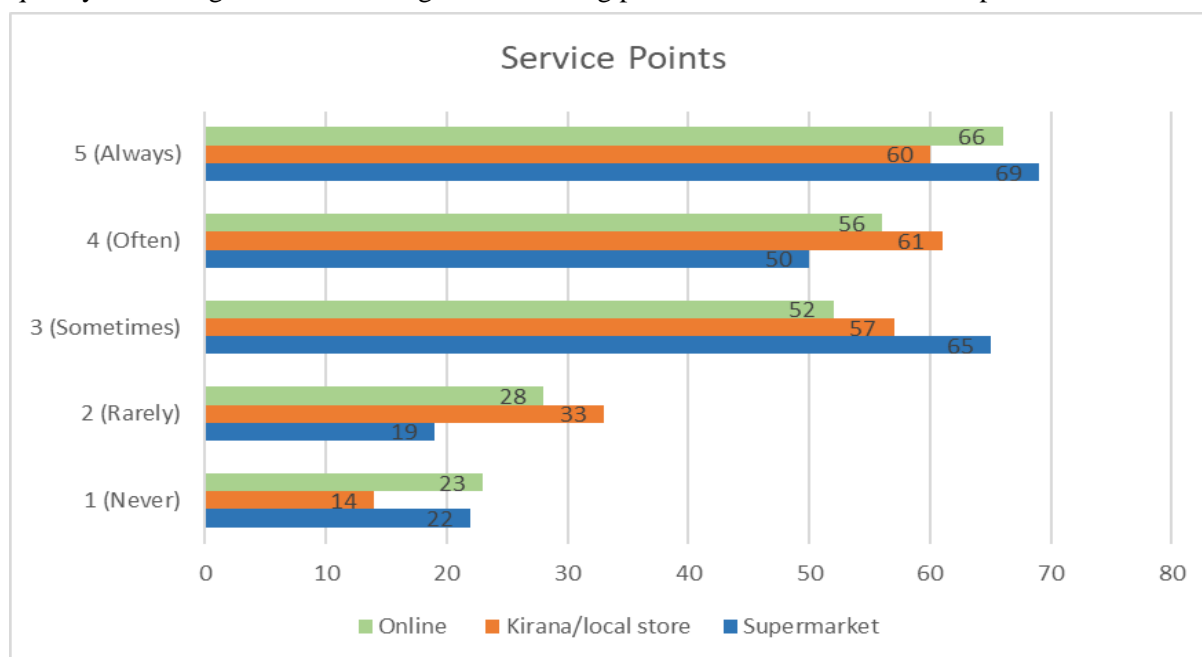
It is evident from the above figure that "Usage" and "Guarantee" are the most significant concerns, prioritized by approximately 70% of respondents, followed by "Storage" at around 60%, while "Certification" and "Additives" are the least prioritized, with less than 20% of responses.



Source: Primary data

It is evident from the above figure that "Expiry" is the most critical factor for respondents, prioritized by approximately **70%**, followed by "Ingredients," "Nutritional Information," and "Manufacturing Details" at around **60%** each, while "Brand" and "Price" are less significant, with less than **30%** prioritizing them.

3) Frequency of reading *Labels* of Packaged Food during purchase from various service points

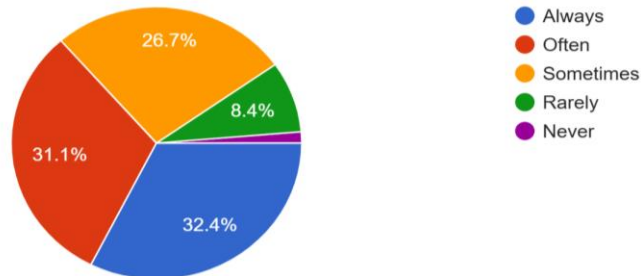


Source: Primary data

It is evident from the above figure that "Supermarket" is the most frequently used service point for label reading, with **69%** of respondents using it Always, followed by "Online points" at **66%** and "Kirana/local store points" at **60%**. The trend remains similar for "Often" label reading, with "Supermarket" at **61%**, "Online" at **56%**, and "Kirana/local store" at **50%**. However, "Kirana/local store" sees the highest "Rarely" label reading at **33%**, compared to "Online" at **28%** and "Supermarket" at **19%**. This indicates that label reading frequency and comfort is highest at supermarkets followed by online shopping and lastly Kirana stores.



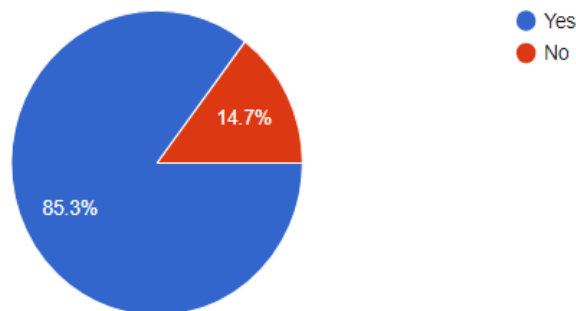
- 4) Willingness to pay more if **Label** indicates traditional preparation or environment friendliness on a 5 point frequency scale



Source: Primary data

It is evident from the above figure that **32.4%** of respondents are "Always" willing to pay more for traditional or environmentally friendly food, followed by **31.1%** who are "Often" willing to pay more. This is followed by **26.7%** of the respondents opining their willingness to "Sometimes" pay more while **8.4%** "Rarely," and **1.3%** "Never" expressing their willingness to pay more.

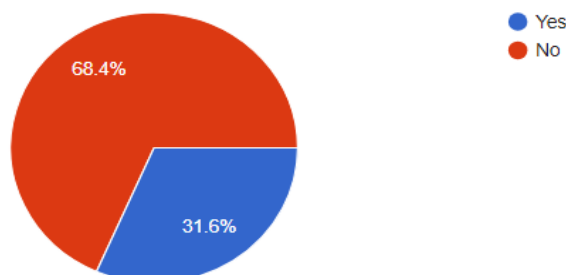
- 5) Avoidance of purchasing Food Products due to unclear or *misleading Label* information



Source: Primary data

It is evident from the above figure that **85.3%** of respondents have avoided packaged food due to misleading labels, highlighting the need for transparency to maintain trust and **14.7%** have not avoided the purchase.

- 6) Contact and interaction with customer service or any other authority regarding misleading information on the **Label** of a Packaged Food Product.

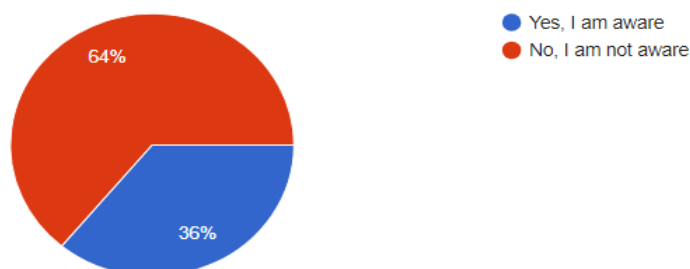


Source: Primary data



It is evident from the above figure that only 31.6% of respondents reported misleading labels to customer service, while 68.4% did not. This suggests a lack of awareness about FSSAI or state food department grievance redressal systems, leading to inaction despite consumer concerns.

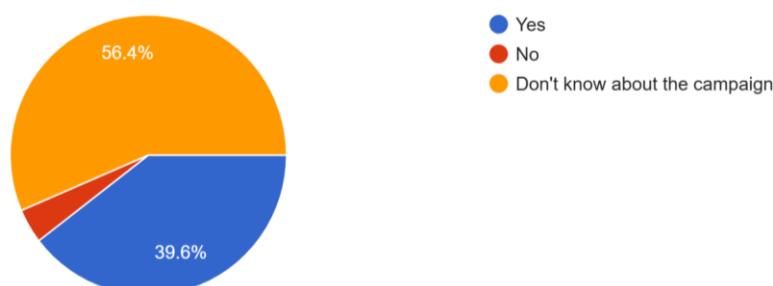
7) Awareness of the "Label Padhega India" social media campaign.



Source: Primary data

Interpretation: It is evident from the above figure that **36%** of respondents are aware of the "Label Padhega India" campaign, while **64%** remain unaware, suggesting the need for broader outreach.

8) The causative role of "Label Padhega India" social media campaign in empowering the respondent as a consumer of packaged products.



It is evident from the above figure that the campaign has empowered 39.6% of consumers, while 9% of them have not felt empowered with the campaign. The other 56.4% are unaware of this campaign reflecting its limited reach and impact.

9) Inferential Analysis and Discussion

Table 2: Hypothesis testing results about Packaged Food Products - Chi Square Test							
H ₀	Variables	Age		Gender		Education	
	LOS @ 5%	p value	Result	p value	Result	p value	Result
1	Ease of understanding of Label information	0.00072135	Reject H₀	0.26961416	Accept H ₀	0.20144575	Accept H ₀
2	Frequency of reading Label info. before purchasing	0.07936068	Accept H ₀	0.000001246	Reject H₀	0.65781176	Accept H ₀



3	Frequency of reading Label info. of trusted branded food products	0.91022144	Accept H_0	0.47085093	Accept H_0	0.8527466	Accept H_0
4	Frequency of finding Label info. not meeting expectations after purchase	0.59043107	Accept H_0	0.3174749	Accept H_0	0.54805745	Accept H_0
5	Frequency of using Label info. to compare brands before purchase	0.05851442	Accept H_0	0.07954669	Accept H_0	0.31359018	Accept H_0
6	Importance attached to packaged product labels in overall purchase decision	0.42648269	Accept H_0	0.9975747	Accept H_0	0.995508345	Accept H_0
7	Most important Attribute among <i>label</i> , <i>brand name</i> and <i>price</i> before purchase	0.1399242	Accept H_0	0.67048387	Accept H_0	0.99517166	Accept H_0

A summary of inferential analysis drawn from the above table is given hereunder.

- 1) The first H_0 for age group was rejected as the p-value was below 0.05, indicating an association between age and ease of understanding label information. However, gender and education and ease of understanding showed no association. This suggests varying perceptions across age groups, highlighting the need to foster label comprehension from a young age.
- 2) The second H_0 for gender was rejected as the p-value was below 0.05, indicating an association between gender and label-reading frequency. However, age, education and the reading of Label information in the before-purchase behaviour showed no association. This suggests gender differences in label-reading habits, guiding advertisers to promote label awareness equally among men and women for informed purchasing.

- 3) The third to seventh H_0 were accepted, indicating no significant differences in label-related choices across age, gender, and education. However, examining overall label perception remains essential. **32%** 'Always' read labels of trusted brands, while **12%** 'Rarely' or 'Never' do. **59.6%** felt label information 'Sometimes' failed expectations, and **35.6%** 'Often' used labels to compare brands. **77.7%** valued labels in purchasing decisions, with **56%** prioritizing labels, **31.6%** favoring brand names, and only **12.4%** considering price as the most important factor when purchasing food products.

Suggestions:

1. Important contents of labels should be mandatorily incorporated in visual and print advertisements. This will act as a reminder to consumers and develop a positive attitude towards labels.



2. It is essential to incorporate pictorial warnings on food labels as per defined legal standards to indicate high levels of sugar, sodium, and saturated fats.
3. The Ministry of Consumer Affairs and ICMR should invest in sustained food label education campaigns, using successful strategies from Swachh Bharat Abhiyaan to reach a wider audience, including rural communities.
4. The government should engage young sports stars and celebrities to promote label reading, inspired by RBI's financial fraud literacy campaign.
5. Media platforms, such as cinema halls and radio should be leveraged effectively by the FSSAI to promote food label awareness among the masses.
6. Doordarshan can develop talk shows with youth participants, nutritionists, and marketing professionals to discuss the health risks of ignoring food labels, focusing on cholesterol, sugar, and processed oils. Sponsorship for these programs should be encouraged under corporate social responsibility (CSR) initiatives.
7. The Government of India can use **National Nutrition Week** to promote label reading in schools and colleges, integrating nutritional awareness with the New Education Policy for lasting impact.
8. FSSAI and the Ministry of Consumer Affairs should organize mobile app development, quiz, poster making competitions, etc. in schools to promote food label awareness.
9. FSSAI can collaborate with FICSI, an NSDC-promoted NPO, and similar organizations in the food processing industry to conduct sensitization programs on Food Safety and Standards (Labelling and Display) Regulations, enhancing industry awareness and compliance.
10. Since consumer awareness and activism for complaints is low, FSSAI should enhance publicity

for **Food Safety Voice**, **Food Safety Connect** app, and toll-free services, enabling consumers to report poor labeling, expired products, and compromised food packaging.

Conclusion:

While consumer awareness of food labels is growing, their practical use remains inconsistent across demographics. FSSAI regulations ensure transparency, enforcement, and label improvements. The "**Label Padhega**" campaign has raised awareness, but further initiatives are needed to drive behavioral change. Strengthening consumer education and designing simpler, more informative labels can promote healthier purchasing decisions. Emphasizing consumers' right to information is crucial to highlight the health risks of ignoring labels.

Future research should explore factors like health literacy, marketing influence, and barriers to label use. Expanding studies to other packaged products can offer deeper insights. Enhanced education, regulatory improvements, and transparent labeling will empower consumers to make informed choices, fostering healthier societies and reducing diet-related health issues.

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