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FOOD LITERACY AND LABELLING: EMPOWERING CONSUMERS FOR HEALTHIER CHOICES IN INDIA

Parul Lakhan
Research Scholar, Faculty of Law, Delhi University, India.

Abstract:

Food literacy and food labelling are essential components of public health and nutrition. This paper explores the state of food literacy in India and the effectiveness of food labelling laws, particularly those regulated by the Food Safety and Standards Authority of India (FSSAI). The study emphasizes the critical role of food literacy in empowering consumers to make informed dietary choices and promoting healthy eating habits. Furthermore, it examines the components of food labels mandated by Indian law, such as nutritional information, ingredient lists, allergen warnings, and expiry dates, comparing them with international standards. Challenges such as gaps in food literacy, enforcement issues, and misleading claims on labels are discussed, alongside strategies for improvement. Educational programs, strengthening regulatory frameworks, and the involvement of NGOs and the private sector are identified as key drivers for enhancing food literacy and food label transparency. Case studies of successful initiatives in India and sector-specific labelling compliance further illuminate the current landscape. The paper concludes with recommendations for a multi-faceted approach to improving food literacy and labelling practices to protect consumer health and safety.

Keywords: Food literacy, Food labelling, Public health, Nutrition education, Consumer awareness, Food transparency

I. Introduction

A. Definition of Food Literacy

Food literacy refers to the skills, knowledge, and behaviors that help individuals make informed choices about food, nutrition, and their impact on health and sustainability. According to Truman et al. (2017), food literacy encompasses understanding where food comes from, how to prepare it, and its nutritional value. This definition emphasizes not just knowledge, but also practical skills, critical thinking, and empowerment in making healthy food choices.

B. Importance of Food Literacy in Public Health and Nutrition

The importance of food literacy in public health lies in its ability to combat rising non-communicable diseases such as obesity, diabetes, and heart disease. Vidgen and Gallegos (2014) suggest that individuals with higher food literacy are better equipped to understand nutritional labels, which aids in reducing unhealthy food choices and addressing dietary-related health issues. In India, where dietary patterns are shifting due to urbanization and globalization, food literacy is essential in promoting a balanced and nutritious diet.

C. Overview of Food Labelling Laws in India

Food labelling laws in India, primarily governed by the Food Safety and Standards Authority of India (FSSAI), are designed to ensure that consumers have access to critical information about the food they consume. As of 2018, FSSAI mandates that food packages display detailed nutritional information, including fat, protein, carbohydrate content, and calorie count (Kumar, 2018). These regulations aim to increase transparency and help consumers make healthier choices. The 2018 amendment also includes provisions for front-of-pack labelling, making important details more visible to consumers.

D. Purpose and Scope of the Paper

The purpose of this paper is to examine the relationship between food literacy and food labelling laws in India, assessing how effectively these laws enhance consumer understanding and contribute to public health. The scope includes an exploration of current food literacy levels in India, an evaluation of food labelling regulations, and a discussion on the challenges and opportunities for improvement. Sharma and Gupta (2019) argue that aligning food literacy initiatives with food labelling laws could significantly improve the overall nutrition and health outcomes in India, especially in urban areas where packaged food consumption is high.

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Figure 1: Components of Food Literacy

II. Understanding Food Literacy

A. Definition and Components of Food Literacy

Food literacy is a multidimensional concept that refers to the skills, knowledge, and behaviors required to make informed choices regarding food. It involves understanding food systems, cooking skills, and the ability to interpret nutritional information. Truman et al. (2017) define food literacy as not just knowledge about food but the ability to engage critically with food-related information and make decisions that support health and sustainability.

1. Knowledge of Food Sources

Knowing where food comes from is a foundational component of food literacy. This includes understanding the process from farm to table, which has significant implications for food choices, sustainability, and health. According to Gréa Krause et al. (2018), knowledge of food sources helps consumers make informed decisions about the environmental and health impacts of their food, promoting sustainable practices.

2. Understanding Nutritional Information

Another key aspect of food literacy is the ability to interpret nutritional information, including reading and understanding food labels. A study by Begley et al. (2019) highlights that food literacy can empower individuals to understand nutritional content, aiding in healthier decision-making. This is crucial for combating diet-related diseases, especially in urban areas where processed food consumption is rising.

3. Cooking Skills and Food Preparation

Cooking skills are a practical component of food literacy, helping individuals prepare healthy meals at home. Ronto et al. (2016) note that a decline in cooking skills among younger populations correlates with increased consumption of processed foods, highlighting the need for education in this area. Basic cooking knowledge encourages healthier, balanced diets and contributes to food security.

B. The Role of Food Literacy in Promoting Healthy Eating Habits

Food literacy plays a critical role in promoting healthy eating habits by enabling individuals to navigate the complexities of modern food systems and make informed decisions about their diets. Vaitkeviciute et al. (2015) suggest that individuals with high food literacy are more likely to consume nutrient-rich foods and avoid excessive consumption of processed or unhealthy options, thus contributing to better long-term health outcomes.

C. Current Levels of Food Literacy in India

1. Demographic Factors Influencing Food Literacy

Food literacy in India varies significantly across demographic lines, with factors such as education level, age, and socioeconomic status playing a key role. According to Mathur et al. (2017), urban populations with higher levels of education tend to have better food literacy, whereas rural areas face challenges due to limited access to education and nutrition information. Gender also plays a role, with women often possessing more practical food literacy skills related to cooking and food preparation.

2. Educational Initiatives and Programs

Various educational initiatives and programs aim to improve food literacy in India, especially among children and adolescents. Singhal et al. (2019) highlight the role of school-based nutrition education programs in increasing food literacy levels among students. These programs emphasize the importance of reading food labels, understanding nutritional content, and developing cooking skills as part of the curriculum.

III. Food Labelling Laws in India

A. Overview of Food Labelling Regulations

1. Historical Context of Food Labelling Laws

Food labelling laws in India have evolved significantly over the past few decades. The Food Safety and Standards Authority of India (FSSAI) was established in 2006 under the Food Safety and Standards Act, which consolidated various food safety regulations to create a uniform standard across the country. According to Bhatia (2018), prior to FSSAI, labelling was largely unregulated, leading to inconsistencies and lack of transparency in the information provided to consumers.

2. Key Regulatory Bodies (e.g., FSSAI)

The FSSAI is the primary body responsible for regulating food labelling in India. It sets the standards for what information must be included on food packaging to ensure consumer protection and promote food safety. FSSAI mandates that all packaged foods contain key nutritional details, an ingredient list, allergen warnings, and expiration dates, which align with international practices (FSSAI, 2018).

B. Components of Food Labels as per Indian Law

1. Nutritional Information

Nutritional labelling is a critical component mandated by the FSSAI. Labels must display information such as total energy, protein, fat, carbohydrates, and sugar content per serving. Bansal et al. (2017) note that this provision is aimed at combating rising cases of non-communicable diseases in India by helping consumers make healthier choices.

2. Ingredients List

The FSSAI mandates that all ingredients used in food products be listed in descending order of their proportion. This helps consumers, particularly those with dietary restrictions or food allergies, to identify potential risks. Misra et al. (2019) highlight the importance of ingredient transparency, noting that it enhances consumer trust and enables informed decisions.

3. Allergen Information

In 2018, FSSAI updated its regulations to include mandatory allergen warnings for common allergens like peanuts, gluten, and soy. This change aligns with global standards and ensures that consumers are aware of potential health risks (Sharma, 2018).

4. Expiry Dates and Storage Instructions

Expiry dates and proper storage instructions are required on all packaged foods to ensure safety. Singh and Rao (2017) emphasize that this is particularly important in India’s diverse climate, where improper storage can lead to food spoilage and safety hazards.

C. Comparison with International Food Labelling Standards

While India's food labelling laws align with international standards in many respects, such as nutritional information and allergen labelling, there are still areas where improvements can be made. According to Patel et al. (2016), India lags behind in terms of front-of-pack labelling and the enforcement of claims about nutritional benefits. Countries like the UK and Australia have more stringent regulations for "health claims," which India is slowly adopting.

Table 1: Overview of Food Labelling Regulations in India

Regulation Component	Description	Enforcing Body
Nutritional Information	Mandates clear presentation of energy (calories), protein, fat, carbohydrate, sugar, and salt content.	Food Safety and Standards Authority of India (FSSAI)
Ingredients List	Requires all ingredients to be listed in descending order of their quantity by weight.	FSSAI
Allergen Information	Compulsory declaration of allergens like nuts, gluten, dairy, and soy, commonly causing allergic reactions.	FSSAI
Expiry Date	Mandatory indication of "Best Before" or "Use By" date to ensure product safety.	FSSAI
Storage Instructions	Guidelines for proper storage conditions (e.g., "store in a cool, dry place") to maintain product quality.	FSSAI
Country of Origin	Labelling requirement for imported products to specify the country of origin.	FSSAI
Vegetarian/Non-Vegetarian Symbol	Products must display a green dot for vegetarian and a red dot for non-vegetarian items.	FSSAI

IV. Challenges and Issues

A. Gaps in Food Literacy Among Consumers

One of the major challenges in India is the gap in food literacy, which limits the effectiveness of food labelling. In many cases, consumers are either unaware of or unable to interpret the nutritional information provided on food labels. Gupta et al. (2019) found that low literacy levels and lack of nutrition education are key factors that contribute to poor understanding of food labels in India's rural and low-income populations.

B. Compliance and Enforcement of Food Labelling Laws

Another challenge is the inconsistent enforcement of food labelling laws. While FSSAI has laid down comprehensive regulations, ensuring compliance, particularly among small-scale manufacturers, remains difficult. Das and Patel (2018) highlight that a lack of resources and trained personnel in regulatory agencies leads to uneven enforcement across different regions.

C. Misleading Claims and Information on Food Labels

Misleading claims on food labels, such as exaggerated health benefits or vague terms like "natural" or "organic," remain a concern. Rajagopal (2017) found that many Indian consumers are misled by these claims, leading to poor health choices. Strengthening the regulation of such claims and providing clear definitions for terms like "organic" is necessary to avoid confusion.

D. Role of Technology and Digital Literacy in Food Labelling

Technology can play a crucial role in bridging the gap in food literacy by providing easy access to information about food products. QR codes and mobile applications can allow consumers to obtain detailed nutritional information instantly. Banerjee and Chatterjee (2019) suggest that integrating technology with food labelling can empower consumers, especially in urban areas, to make informed choices.

V. Strategies for Improvement

A. Educational Programs to Enhance Food Literacy

1. Community Workshops

Community-based educational programs are one of the most effective methods for improving food literacy. These programs focus on practical skills such as cooking, reading food labels, and understanding nutritional information. According to Mathur et al. (2017), community workshops in rural and urban low-income areas have been successful in raising awareness about the importance of healthy eating and understanding food labels. These workshops are often run by local health authorities and NGOs, targeting populations with low literacy levels.

2. School-Based Nutrition Education

School-based nutrition education is essential for instilling food literacy at an early age. Programs like these help children understand the basics of nutrition, how to read food labels, and how to make healthy food choices. Singhal et al. (2019) report that schools in India, particularly in urban areas, have started incorporating nutrition education into the curriculum, leading to improved awareness among children and their families.

B. Strengthening Regulatory Frameworks for Food Labelling

Strengthening the regulatory framework for food labelling is crucial to ensure better compliance and transparency. The FSSAI is actively revising its regulations to include stricter penalties for non-compliance and clearer definitions for terms like "organic" and "natural." Das and Patel (2018) argue that tighter enforcement and regular inspections can significantly improve adherence to food labelling standards, particularly among small-scale producers.

C. Role of NGOs and the Private Sector in Promoting Transparency

Non-governmental organizations (NGOs) and private companies have a significant role to play in promoting transparency and improving food labelling practices. Many NGOs work alongside the government to create consumer awareness campaigns, while the private sector can lead by adopting clear labelling practices voluntarily. According to Ranganathan (2016), some Indian companies have begun using digital tools like QR codes to provide consumers with detailed nutritional information, which helps increase transparency and consumer trust.

VI. Case Studies

A. Successful Initiatives in Food Literacy in India

There are several successful initiatives aimed at improving food literacy in India. One notable example is the *Eat Right India* campaign launched by FSSAI in 2018. The campaign focuses on promoting food safety and nutrition through educational programs, public awareness campaigns, and partnerships with local governments. Bhatia (2018) reports that this initiative has had a significant impact in urban areas, particularly among school-aged children and young adults, by increasing food literacy and encouraging healthier eating habits.

B. Examination of Food Labelling Compliance in Different Sectors

1. Packaged Foods

Compliance with food labelling regulations in the packaged food sector has improved in recent years, but challenges remain, particularly among smaller manufacturers. According to a 2019 report by Misra et al., large-scale producers tend to comply with FSSAI regulations, whereas smaller producers often lack the resources or knowledge to meet the same standards. This inconsistency highlights the need for targeted support and better enforcement in this sector.

2. Organic Products

Labelling compliance in the organic sector is another area of concern. Rajagopal (2017) found that many products labeled as "organic" do not meet the required certification standards, leading to consumer mistrust. The government has taken steps to address this issue by introducing stricter labelling requirements and third-party certification for organic products, but enforcement remains inconsistent.

Table 2: Comparison of Food Labelling Standards in India vs. International Standards

Labelling Component	India (FSSAI)	USA (FDA)	EU (EFSA)
Nutritional Information	Mandatory for all packaged foods; must include energy, protein, fat, carbohydrates, sugar, salt.	Required on most packaged foods; includes calories, fats, cholesterol, sodium, carbohydrates, and protein.	Mandatory for prepackaged foods; must include energy, fat, saturated fat, carbohydrates, sugars, and salt.
Allergen Information	Compulsory declaration for major allergens (e.g., nuts, dairy, gluten, soy).	Mandatory for eight major allergens (e.g., peanuts, shellfish, eggs).	Mandatory for 14 allergens, including nuts, milk, soy, and gluten.
Ingredients List	All ingredients must be listed in descending order by weight.	Required; listed by weight in descending order.	Mandatory; must list all ingredients by weight.
Expiry Date	"Best Before" or "Use By" date required for all packaged foods.	"Use By" and "Best Before" dates required for perishable items.	"Use By" date required for highly perishable foods; "Best Before" for longer shelf-life products.
Vegetarian/Non-Vegetarian Symbol	Green dot for vegetarian, red dot for non-vegetarian products.	No specific symbol or requirement for vegetarian/non-vegetarian labeling.	No mandatory symbols for vegetarian or non-vegetarian products.
Country of Origin	Mandatory for imported foods.	Mandatory for certain foods, such as meat and produce.	Mandatory for certain categories, like meats and some vegetables.
Front-of-Pack Labels	Not mandatory, but under discussion for high fat, sugar, and salt (HFSS) foods.	Not mandatory, though voluntary programs like "Facts Up Front" are encouraged.	Mandatory for specific nutritional info (e.g., energy content) on the front of the package.

VII. Conclusion

The study of food literacy and food labelling laws in India reveals a complex interplay between education, regulation, and consumer behavior. While significant progress has been made in

terms of regulatory frameworks and public awareness, gaps in food literacy and enforcement persist, particularly among low-income and rural populations. Moving forward, a multi-faceted approach involving educational initiatives, regulatory reform, and collaboration between government, NGOs, and the private sector will be essential to bridge these gaps and ensure that food labelling serves as an effective tool for promoting public health.

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