

A Study on Awareness and Utilization of Food Labels among Consumers and Its Influence on Food Choices

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Abstract - Background: Food labels provide essential nutritional information that enables consumers to make informed food choices and adopt healthier dietary practices. **Objectives:** To assess the awareness and utilization of food labels among consumers and to evaluate their influence on food purchasing decisions. **Methods:** A descriptive cross-sectional study was conducted among 100 urban adult consumers (18–40 years) in Kamareddy, Telangana, selected through convenience sampling. Data on socio-demographic characteristics, purchasing patterns, awareness and knowledge of food labels, attitudes, awareness of labelling regulations, barriers to label use, and influence on purchasing decisions were collected using a structured questionnaire and analyzed using descriptive statistics and the Chi-square test ($p < 0.05$ significant). **Results:** Eighty-three percent of respondents were aware of food labels, although only 20% always read them before purchasing, while 62% read them sometimes. Expiry date (52%), ingredients (46%), and price (46%) were the most frequently checked components, and only 9% completely understood the nutritional information provided. Food labels influenced purchasing decisions for 58% of respondents sometimes and 25% always, and 84% had avoided purchasing a product after reading its label. The main barriers to label use were small font size (36%), difficult terminology (30%), and lack of time (26%). Chi-square analysis showed significant associations between food label awareness and purchasing decisions ($p = 0.0054$), awareness of nutritional terms and understanding of nutritional information ($p = 0.0032$), reading of food labels and purchasing decisions ($p = 0.0168$), and educational qualification and awareness of nutritional terms ($p = 0.0003$); no significant association was found between barriers to reading labels and perceived ease of understanding ($p = 0.1698$). **Conclusion:** Although awareness of food labels among urban consumers is high, regular utilization and comprehension of nutritional information remain limited. Strengthening nutrition education and simplifying label design may improve informed food purchasing and promote healthier dietary behaviour.

Keywords - Food labels; Consumer awareness; Nutrition information; Purchasing decisions; Nutrition literacy

I. INTRODUCTION

Globalization, urbanization, changing lifestyles, and advances in food processing have led to a marked rise in the consumption of packaged and processed foods, making the selection of healthy products increasingly challenging for consumers. Food labels have therefore become one of the most reliable sources of information available to consumers, providing standardized details on nutritional composition,

ingredients, manufacturing and expiry dates, allergens, and health claims that support informed purchasing decisions. [1]

The rising burden of non-communicable diseases such as obesity, diabetes, hypertension, and cardiovascular disease has heightened the public health relevance of nutrition labelling, since unhealthy diets remain a leading modifiable risk factor for chronic disease. [2] In India, the Food Safety and Standards Authority of India (FSSAI) mandates the declaration of nutritional information, ingredients, allergens, vegetarian/non-vegetarian status, and manufacturing and expiry dates on packaged foods, and has also proposed front-of-pack labelling to simplify nutrition communication. [3] However, awareness alone does not guarantee effective utilization; consumer understanding is shaped by educational status, nutrition knowledge, income, age, gender, and label design, and is frequently limited by barriers such as small font size, complex terminology, and lack of time while shopping. [4]

Despite the increasing availability of food labels, awareness and effective utilization remain inadequate in many developing countries, including India. This study was therefore undertaken to assess the awareness and utilization of food labels among adult consumers and to examine their influence on food purchasing decisions, with a view to informing nutrition education efforts and food labelling policy.

II. HODS

A descriptive, non-experimental cross-sectional study was conducted among adult consumers aged 18–40 years residing in Kamareddy, Telangana. A total of 100 participants were selected using a convenience sampling technique. Consumers aged 18–40 years who were willing to participate were included; individuals below 18 or above 40 years of age and those unwilling to participate were excluded.

Data were collected using a structured, self-administered questionnaire covering socio-demographic characteristics, purchasing and consumption patterns, awareness and knowledge of food labels, attitudes towards food labels, awareness of food labelling regulations and symbols, barriers to food label use, and the influence of food labels on purchasing

decisions. Institutional guidance and informed participant consent were obtained prior to data collection.

Statistics: Data were compiled and analyzed by calculating frequencies and percentages. Associations between selected variables were assessed using the Chi-square test, conducted in Microsoft Excel, with a p-value of less than 0.05 considered statistically significant.

III. RESULTS

Of the 100 respondents, 67% were aged 26–32 years, 23% were aged 18–25 years, and 10% were aged 33–40 years; 62% were female and 38% male. Most respondents had completed secondary (37%) or higher secondary (27%) education, 59% were employed, and 59% belonged to the middle-income group (₹25,001–₹50,000). All respondents were from urban areas.

Packaged foods were purchased weekly by 55% of respondents and daily by 28%, mainly from supermarkets (38%) and local grocery stores (36%); household items (41%) and snacks (30%) were the categories purchased most often.

Awareness of food labels was reported by 83% of respondents, although only 20% always read labels before purchasing, while 62% read them only sometimes. The expiry date (52%), ingredients list (46%), and price (46%) were the most frequently checked components, followed by nutritional information (40%). While 48% of respondents were partially aware and 38% fully aware of nutritional terms such as calories, fats, sugars, and sodium, only 9% reported fully understanding the nutritional information on labels, and 61% did not understand it. Among specific label components, ingredients (53%), allergen information (51%), and health claims (49%) were the most recognized, while food additives (8%) were the least recognized.

Food label information influenced purchasing decisions sometimes for 58% of respondents and always for 25%; the expiry date (53%) was the factor most influencing food choice. Eighty-four percent of respondents had avoided purchasing a product after reading its label, and 72% agreed or strongly agreed that food labels help them choose healthier options. Most respondents held positive attitudes towards food labels: 81% agreed or strongly agreed that reading labels is important for health, 68% found labels easy to understand, and 75% trusted the information provided. Awareness of FSSAI regulations was reported by 84% of respondents, and 88% recognized the FSSAI logo.

The main barriers to reading food labels were small font size (36%), difficult terminology (30%), and lack of time (26%); respondents most commonly suggested simple language (35%), colour coding (31%), and larger font size (27%) to improve label usefulness.

Chi-square analysis showed statistically significant associations between awareness of food labels and influence on purchasing decisions ($p=0.0054$), awareness of nutritional terms and understanding of nutritional information ($p=0.0032$), reading of food labels and influence on purchasing decisions ($p=0.0168$), and educational qualification and awareness of nutritional terms ($p=0.0003$). No significant association was

found between barriers preventing label reading and perceived ease of understanding food labels ($p=0.1698$) (Table I).

TABLE I. ASSOCIATION BETWEEN KEY STUDY VARIABLES AND FOOD LABEL AWARENESS/UTILIZATION (CHI-SQUARE TEST)

Variable	p-value	Association
Awareness of food labels & influence on purchasing decision	0.0054	Significant
Awareness of nutritional terms & understanding of nutritional information	0.0032	Significant
Reading of food labels & influence on purchasing decision	0.0168	Significant
Food labels easy to understand & barriers preventing label reading	0.1698	Not significant
Educational qualification & awareness of nutritional terms	0.0003	Significant

Level of significance: $p < 0.05$

IV. DISCUSSION

Although awareness of food labels was high among this urban consumer sample, regular utilization and comprehension of nutritional information remained limited, indicating a gap between awareness and effective use that is consistent with findings from other consumer studies. [5] Respondents predominantly attended to expiry dates and ingredients rather than detailed nutritional information, suggesting that concerns about product safety and freshness continue to outweigh nutritional considerations during purchasing.

The significant association between awareness of nutritional terms and understanding of nutritional information reinforces the established link between nutrition literacy and consumers' ability to interpret food labels correctly. [6] Similarly, the significant association between educational qualification and awareness of nutritional terms supports prior evidence that higher education improves comprehension of technical label content. [4, 6] The lack of association between barriers to label reading and perceived ease of understanding suggests that practical obstacles such as small font size and limited shopping time primarily discourage label use rather than impair comprehension once labels are read.

These findings align with previous Indian studies reporting high recognition of the FSSAI logo and expiry dates but comparatively low understanding of detailed nutrition information among consumers. [7] Taken together, the results suggest that simplifying label design, through larger fonts, plain language, and colour coding, together with sustained nutrition education, could help translate the existing high level of awareness into more consistent and effective label utilization.

Limitations: The study was limited to 100 urban consumers selected by convenience sampling from a single location, which may limit generalizability. The cross-sectional design precludes assessment of change over time, and self-reported label-reading behaviour may be subject to recall or social-desirability bias.

V. CONCLUSION

Awareness of food labels among urban adult consumers in Kamareddy, Telangana, was high, but regular utilization and comprehension of nutritional information remained limited. Educational qualification and nutrition knowledge were significantly associated with better awareness and understanding, while small font size, difficult terminology, and lack of time were the principal barriers to label use. Strengthening nutrition education and adopting simpler, more consumer-friendly label formats may improve informed purchasing decisions and encourage healthier dietary behaviour among consumers.

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