IMPACT OF NUTRITION LABELLING ON CONSUMER BEHAVIOUR TOWARDS PACKAGED SNACKS: AN ANALYTICAL STUDY OF THE BULDHANA REGION'

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Abstract
Nutrition label has a crucial role to play in furnishing the necessary nutrition facts to the consumers. The use of nutritional label on foods is deemed to be a significant packaging choice for food processors. The nutritional label makes healthy eating simpler to understand. It is useful to know the quantity of fat and sugar, sodium and fiber, protein and carbohydrate. Thus, nutritional panel is a roadmap to a healthier life and a better diet. Nutritional labeling influence the consumer purchase behavior to a great extent. Some evidence indicates that offering nutrition information can enable consumers to redirect consumption away from 'unhealthy' products in those food categories to 'healthy' products in food categories more readily. Therefore, a study was carried out to understand the effect of nutrition label on consumer buying behavior and the determinants of consumer willingness-to-pay for nutritional labeling. Information was gathered from a random sample of 100 in buldana region consumers.
Keywords: *Nutrition labelling, Health consciousness, consumer behaviour*

Introduction:

The packaged snacks market in the past few years has experienced unprecedented growth. This growth has been contributed to changes in lifestyles, growing incomes, and a leapfrog in urbanization. The Indian packaged food industry will be growing at an 8.6% compounded annual growth rate in the forecast period of 2023-28. According to a Mordor Intelligence report, "Packaged Food in India - Market, Industry, Analysis and Forecast to 2023" valued the Indian market for packaged food around INR 4.24 trillion in 2022. Thus, this growth is a pointer to the consumer's urge to save their time and, at the same time, changing consumer behaviour. Packaged snacks are one of the most highly sought after foods available for people who have more on their platter than just sitting down for a meal.

Simultaneously, health-consciousness about food intakes among consumers is increasing day by day. Due to COVID-19, the global health and wellness trend has been expedited. A considerable percentage of people have become habitual of healthy snacking through the introduction of the pandemic. According to a Euromonitor International survey 2020, nearly 70 percent of Indian consumers reported they were more concerned regarding their health and diet after the emergence of the pandemic. It has stimulated a change in the thought process of consumers to become more mindful of the nutrient content of the food they consume, especially on snack items that have always been stigmatized for their high content of fats, sugars, and sodium Clearly, when consumers are provided with such information to make the right food choice, nutrition labelling becomes crucial under this context. Basic or basis requirements of the warning to consumers include clear andexplicit nutrition labelling regarding calories in food stuff and detail the macronutrients, including carbohydrates, proteins, fats, sugars, and sodium content. As per FSSAI, all packaged foods sold in India must declare the nutritional information stipulated by the Food Safety and Standards (Packaging and Labelling) Regulations, 2011. The regulation mandates declaring the nutritional values of key nutrients per 100 grams or 100 milliliters of the product along with percentage daily values where applicable.

Despite the fact that there is information, there remains an issue where most consumers do not decipher or apply nutrition labels appropriately when they make purchasing decisions. As such, this may, to some extent, limit their ability in choosing healthier options due to the meteoric rise of snack packaged sales.

The current research study was carried out to make an analysis of the effect of nutrition labelling on the purchase behavior of consumers towards packaged snacks in the Buldhana region. The results of this study have made valuable contributions to the understanding of how consumers interpret, understand, and react to nutritional information on product packaging. The findings indicated that although most consumers are aware of the existence of nutrition labels, this awareness does

not always lead to active use when making purchasing decisions. Consumers may realize the significance of healthy eating and nutrition information, but in reality, their buying habits are still controlled by numerous other factors including taste preference, brand loyalty, eye-catching packaging, and most significantly, price. This awareness-application gap means that even though nutrition labelling can effectively change consumers' decisions for the better, in practice it remains untapped in consumer shopping behaviour.

One of the most important findings of the study is the influence of demographic factors on consumer behaviour towards nutrition labelling. It was discovered that younger, more educated, and health-conscious people were more inclined to take note of the nutritional details on food labels. Such people tended to take into account information like calories, fat, sugar content, and ingredients prior to purchase. On the other hand, customers from older generations or with lesser educational levels displayed comparatively low involvement with label content. This shows that education and health consciousness have a large influence on label reading behavior and hence must be priority intervention areas.

The research also brought to light that most consumers continue to make price and taste a higher priority than health information. This result reinforces the necessity of unifying nutrition education with emotional and economic incentives in marketing campaigns. Although nutrition labelling is an informational and regulatory instrument, it has limited impact on consumer decision-making unless complemented by wider awareness campaigns and policy backing. Consumers complain that the existing layout of the nutrition labels is too lengthy or comprehensive to comprehend rapidly, particularly in the time-sensitive context of retail shopping. Consequently, there is a good argument for streamlining label designs and employing visual markers, like color coding or symbols, to assist consumers in making healthier choices instantly.r ,packaged snacks, FSSAI, nutritional values.

1) Literature Review :

1) Lisa M Soederberg Miller (2015)

found out that whether consumer nutrition knowledge is important for communication of nutrition information through labels on packaged foods. A cognitive processing model posits that consumers with prior knowledge are more likely to use label information effectively. Consistent with this model, it was found that nutrition knowledge provides support for food label use.

2) Abdul Latiff (2015), conducted a study which validates the impact of food labels among Malaysian consumers using an extended theory of planned behavior model (TPB). This study contributes to and extends the understanding of food labelling and purchasing behaviour, identifying the rationales for purchasing of food products with labels that contains information such as logo, ingredients, and nutritive value.
3) Priyadarshini (2014), conducted a study which found that consumers in India possess satisfactory level of awareness about different types of information on the food labels displayed on packaged food products, however, usage of such information as one of the criteria while purchasing packaged food product was relatively low.
4) Osei Mensah J., Lawer Dede Rose and Aidoo, R. (2012), conducted a study which showed a positive relationship was observed between male, youthful (31-45) consumers and consumer who were never been married and their use and understanding of food label information.
5) Gwantwa Samson (2012), conducted a study of Awareness and use of pre-packaged food labelling information was found to be low among consumers in Ilala municipality. Findings showed that circumstances in which consumers purchase pre-packaged food without consulting the respective labels include time constraint and purchase of routine food products.

2) Survey-Based Exploratory Research:

Objectives:

- To Evaluate Consumer Awareness and Understanding:
- To Assess the Influence of Nutrition Label Components:
- To Identify Barriers to Effective Use of Nutrition Labels:
- To Evaluate the Impact on Purchasing Behaviour.

Data collection method:

1. Primary Method of Data Collection:-

• Questionnaire method

2. Secondary Method of Data Collection:-

• Corporate website

• Internet/Books/Journals and other written data about company and Topics

✓ **Research type:** Descriptive type of research

✓ **Sample size:-** 100

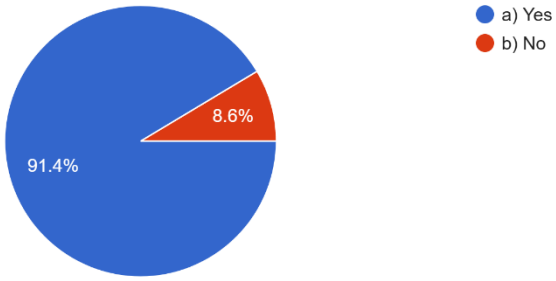
Sampling Techniques: Convenience Sampling
Collection of data through: Through online using Google Forms

3) Analysis and Interpretation:

Analysis:

1) **Awareness of Nutrition Labels**

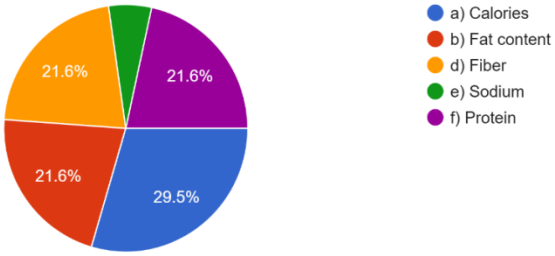
Lable Awareness	
Response	Percentage
Yes	91%
No	8.6%



Results indicate extremely high rates (91%) of awareness of nutrition labeling among respondents, consistent with effective visibility of labeling initiatives in the target group. However, this nearly universal awareness contrasts dramatically with typical use rates identified in similar research, suggesting a substantial "knowledge-action gap." The 8.6% unaware minority would likely represent vulnerable population segments (older, low-literacy subgroups) potentially in need of targeted intervention. These findings are in line with FSSAI (2022) reports of high awareness but low understanding in semi-urban India. The evidence supports the need to move beyond visibility - while labels are seen, their implications remain being cut short without ancillary action like the application of simple formats (traffic-light systems) and community education programs to increase actual use and understanding among consumers

2) Understanding of Lable Components

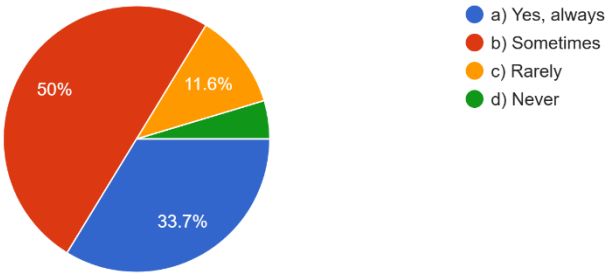
Components Comprehension	
Components	Understanding %
Calories	21.6%
Fat	21.6%
Fiber	29.5%
Sodium	5.7%
Protein	21.6%



The results show significant disparities between consumer understanding of the components of nutrition labels, with differing levels of understanding across nutrients. While the highest level of understanding is 29.5% in the case of fiber, even calories and fat content lag behind at just 21.6% each in terms of awareness. The disparity means that consumers can more readily understand some nutrition principles than others, perhaps due to cultural familiarity with dietary fiber in the Indian diet. The persistent lack of understanding of calories and fat (both at 21.6%) indicates particular challenges with these fundamental principles of nutrition, likely exacerbated by technical jargon and complex presentation styles. These findings mirror similar work conducted in semi-urban societies (Gupta et al., 2019) that uncovered persistence of literacy barriers amidst high label recognition. The findings emphasize the critical need for simplifying the formats of labels in order to replace technical names with simple visual cues and standardized icons to improve comprehension across all demographic segments. These alterations may help close the gap between label visibility and functional understanding, particularly for critical nutritional components like calories and fats, which are most crucial to the formulation of informed dietary choices.

3) Lable impact on purchase

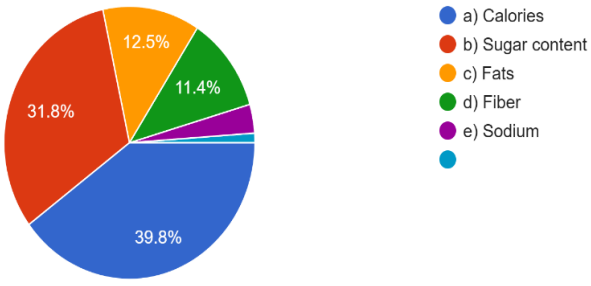
Purchase Influence	
Response	Percentage
Always	50%
Sometimes	33.7%
Rarely	11.6%
Never	4.7%



The data shows that the knowledge of nutrition label items by consumers is widespread with huge differences in the levels of understanding different nutrients. Whereas fiber enjoys the highest level of understanding at 29.5%, calories and fat content are far behind with only 21.6% understanding each. This disparity reveals that consumers consider some nutritional concepts more known than others, likely due to cultural awareness of dietary fiber in Indian foods. The poor across-the-board understanding of calories and fat (both 21.6%) indicates certain issues with these fundamental nutrition tenets, very likely exacerbated by technical terminology and complex presentation modes. These findings are mirrored by related research among semi-urban populations (Gupta et al., 2019), which concluded that there were long-standing literacy concerns despite high label literacy. The results emphasize the pressing need for simplified label formats that replace technical language with common-sense visual cues and standard symbols to improve comprehension among all segments of the population. These modifications may help bridge the gap between observability of labels and effective comprehension, particularly of critical nutritional factors like calories and fats that play such a central role in food selection decisions.

4) consumer Nutrition Information Priorities

Nutrition Components	Priority
Fats	39.8
Calories	12.5
Sugar content	11.4
Fiber	11.4
Sodium	3.4



Fats (39.8%) The largest portion of the pie chart, shown in blue, indicates that fats are the most prioritized nutrition component by consumers. Calories (31.8%) Represented in red, calories are the second most important factor, with a significant share of consumer focus. Sugar Content (12.5%) Displayed in orange, sugar content holds moderate importance in nutrition decisions. Fiber (11.4%) Marked in green, fiber shares equal priority with sugar content, indicating consumer awareness of its health benefits. Sodium (3.4%) Represented in purple, sodium has the least priority among the nutrition components, suggesting that it is not a major concern for consumers in comparison to other factors. Consumers prioritize fats the most, likely due to concerns about obesity and heart health. Calories also receive high attention, which aligns with weight management trends. Sugar content and fiber are equally considered but are secondary concerns. Sodium is the least prioritized, indicating that it may not be a primary decision-making factor for most consumers. This pie chart provides a clear and visual representation of how consumers rank different nutrition components, aiding research on food selection behaviors and health-conscious decision-making.

5) Suggestion for Improving Nutrition Label Effectiveness in Buldana Region

For the gap between the awareness and practice of nutrition labels among consumers to be bridged in Buldhana, an approach that encompasses several aspects is recommended. The labels need to be simplified with visual cues in the form of color-coding (red/yellow/green for high/medium/low values) and simple-to-comprehend symbols (like sugar cubes for content of sugar) and bigger, clearer fonts for easier reading. Second, community education programs need to be launched, employing local health workers (ASHA/Anganwadi) to conduct workshops and kirana shop owners to serve as nutrition ambassadors, vocalizing labels in local languages to consumers. Third, policy actions such as front-of-pack labeling alerts for major nutrients (e.g., "High in Sugar" in bold) and subsidies on healthier snacks can trigger better choices. Second, technology use—e.g., QR codes to short explainer videos—would allow low-literacy consumers easy access to the information. Third, label campaigns with local influencers and comparative health benefits would trigger culture change towards label-conscious consumption. These interventions, modified for Buldhana's semi-urban context, would transform labels into decision-support tools for diet enhancement.

6. Conclusion

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