

A Study on Consumer Awareness towards Nutritional Labeling on Branded Food Products With Special Reference to Coimbatore City

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Abstract - Food product packaging and labeling have numerous important roles to play in the emerging market environment. Food labels perform important third-party roles in the food marketing system through their impact on product design, advertising, consumer confidence in food quality and consumer education on diet and health. The trends towards healthier eating have increased the consumer demand for detailed, accurate and accessible information on food safety and quality covering nutritional content, ingredients and health claims. Consumers also demand product information, such as production and expiry dates, storage and cooking instructions. Food label is one of several information channels available to the consumers, including mass media, books, advertising, education programs and medical advice. This paper focuses on the awareness of nutritional labeling on the branded packaged food products. The researcher used convenience sampling method. The researcher used primary and secondary data to collect the details from the respondents. The sample size of this study consists of 136 consumers. Tools used are Percentage Method, Friedman Rank analysis and Chi-Square Test. It is found that association between demographic variables and reading of nutritional label, out of six demographics viz. gender, education, occupation, monthly family income, food habit and reason for special diet statistical significance is achieved only between food habit and reading of nutritional label to reject the hypothesis, whereas, there no association between the demographics such as gender, education, occupation, monthly income and reason for special diet towards reading of nutritional label to support null hypothesis.

Keywords: Labeling, Packaging, Food products, nutritional labeling, awareness

I. INTRODUCTION

Indian consumers are in the process of changing their consumption/buying behavior, especially with respect to food items. The present study attempts to explore the consumers' level of awareness of information given on food product labels on the branded packaged food products with special reference to Coimbatore City. Several empirical studies indicate that the label is an effective instrument that reduces the asymmetric information problem between producers and consumers. This implies that the food label is an important medium to fill the information gap between the producers and the consumers. The trends towards healthier eating have increased the consumer demand for detailed, accurate and accessible information on food safety and quality covering nutritional content, ingredients and health claims. Consumers also demand product information, such as production and expiry dates, storage and cooking instructions. Food label is one of several information channels available to the consumers,

including mass media, books, advertising, education programmes and medical advice.

The regulatory scenario for food processing industries in India is fast changing with the introduction of the Food Safety and Standards Act (FSSA). During the last 5 years, India has been through many dilemmas in relation to the reform process of the country's food safety administration because of multiplicity in food legislations, duplication in regulations, lack of coherence and cost-ineffectiveness (FICCI, 2007). Food labelling regulations in India are at a transitory phase where the old – the Prevention of Food Adulteration Act, 1954 – and new – the Food and Safety Standards Act, 2006 – regulations exist simultaneously. The current state of food labelling regulations is passing through conflicting viewpoints regarding the information to be revealed on the food labels. Conflicts arise because of poor integration in labeling objectives of various stakeholders such as manufacturers, consumers, and regulators and enforcers; non-consideration of the consumers' views; and multiplicity of regulations. At present, there are more than

15 laws that deal with food products and safety standards, and most of these laws overlap and lack synergies (Patnaik, 2005; Deininger and Sur, 2007). Multiplicity of laws, unclear guidelines and overlapping of regulations create confusion in the minds of consumers, traders, manufacturers and investors. While food processors use labelling primarily as a marketing and product promotional tool, the government intervention in food labelling is often undertaken with the aim of achieving social goals such as improving human health and safety, mitigating environmental hazards, averting international trade disputes, or supporting domestic agricultural and food manufacturing industries (Golan *et al.*, 2001). Considering India as an emerging processed and packaged food market, the analysis of consumers' preferences on labelling attributes becomes important.

II. LITERATURE REVIEW

Many studies in the context of industrialized nations indicate significant demographic and socio-economic differences with regard to consumer awareness and the use of information provided on food labels.

A study by **Chandon and Wansink (2010)** found that messages and themes on product packaging reach more consumers than advertising and can differentiate a brand from its competitors. They also discovered that different types of packaging affect how consumers perceive products (Chandon & Wansink, 2010). These authors conducted a literature review in marketing, nutrition, psychology, economics, and related disciplines to investigate the relationship between marketing activity, food intake, and obesity, with particular emphasis on the effects on overeating. Their results found that packaging is one motivation for food consumption (Chandon & Wansink, 2010). In other words, the packaging can actually whet a person's appetite and cause a person to overeat, therefore leading to obesity.

Jyoti & Dibyojyoti (2010) Deems that customer of backward areas see packaging as value addition. Majority of people considered that packaging is a fundamental element of the product and in addition is important to boost the sale after all it is a cost element. It can be assumed that in a remote urban area where products acquire a long time to reach the market, people are aware of the significance of the packaging. They desire that it should be differentiable and hygienic from fake and counterfeit products and that the packages should be utilized for additional use. Labeling is also assumed to be a principal legal document because it conveys the durability and reliability of the product.

Spink et al. (2011) examined whether consumers can assimilate and correctly understand the information on a product container. They pointed out, for example, that a warning of DANGER on the label may change consumer behavior and cause a person not to purchase the product. They found that packaging influences buying decisions, may possibly lead to information being interpreted

incorrectly, and could have an impact on sales (Spink et al., 2011).

(**Bonsmann, Celemin & Grunert, 2010**). Nutrition labels were innovated to help consumers make healthier food choices. The nutrition labeling on food packages was initiated in the 1970s by the Food and Drug Administration (FDA). It was first used in part due to worries about nutrient deficiencies. In addition, applying nutrition labels on food products was optional except if they added a specific nutrient in a food, or they made any nutrition claim (Taylor & Wilkening, 2008).

(**Anderson, Young & Perryman, 2010**). The Organic Foods Production Act and the National Organic Program (NOP) make sure that the organic food products are produced and certified to meet national organic standards. Food products that contain the term "organic" must meet specific guidelines. To consider a food product "100 percent organic", the food must contain only organic ingredients, except for water and salt. Food products that are labeled as "organic" must have at least 95% organic ingredients, except for water and salt ("Organic standards," 2013). Products that have at least 70% organically produced ingredients consider as "made with organic ingredients" and must list the three organic elements on the principal display panel ("Organic standards," 2013).

III. STATEMENT OF THE PROBLEM

Labelling plays significant role in deciding consumers buying behavior and there are multiple factors influencing consumers when buying food products that may have significant inverse effect if not followed properly. Though, brand image, packaging, quality and price play significant role, the major attraction of consumers to immediately select a food product is its contents on label. Therefore, it is important to find how far consumers are of nutritional content on the food products in Coimbatore? In this context, following objective framed:

IV. OBJECTIVES OF THE STUDY

1. To study the socio-economic profile of the respondents
2. To study the respondents awareness towards nutrition label on the branded packaged food products.

V. METHODOLOGY

This research deals with describing the characteristics of a particular individual or of groups. Descriptive research describes the state of affairs as it exist at present. Descriptive research includes surveys and fact finding inquiries of different kind. In this article the researcher analyzes to find the awareness towards nutritional labeling among consumers of food products in Coimbatore city. The sample size of this study consists of 136 consumers. The researcher used convenience sampling method. The researcher used primary and secondary data to collect the details from the respondents. The primary data was collected through a structured questionnaire. The secondary data are from Journals, Magazine and other relevant records

Tools used are Percentage Method, Friedman rank analysis and Chi-Square Test.

VI. ANALYSIS AND FINDINGS

ANALYSIS OF RESULTS

Percentage analysis

Table 1: Demographics of the consumers

Demographics		Frequency (136 Nos.)	Percent
Gender	Male	39	28.7
	Female	97	71.3
	Total	136	100.0
Educational Qualification	School	36	26.5
	UG	51	37.5
	PG	33	24.3
	Professional	12	8.8
	Others	4	2.9
	Total	136	100.0
Occupation	Employed	32	23.5
	Business	24	17.6
	Home Maker	56	41.2
	Professional	13	9.6
	Student	11	8.1
	Total	136	100.0
Monthly income	Below Rs.25000	26	19.1
	Rs.25000 – Rs.35000	33	24.3
	Rs.35001 – Rs.45000	14	10.3
	Above Rs. 45000	63	46.3
	Total	136	100.0
Food Habit	Vegetarian	27	19.9
	Non- vegetarian	109	80.1
	Total	136	100.0
Reason for special diet	Beauty conscious	9	6.6
	Health conscious	82	60.3
	Doctor's advice	10	7.4
	Family practice	35	25.7
	Total	136	100.0

Out of one hundred and thirty six consumers, Majority (71.3%) consumers are female and 28.7% are male respondents. Maximum (37.5%) consumer are under graduates, 26.5% studied upto school level (SSLC / H.Sc.), 32.6%, 24.3% are post graduates, 8.8% are professionals and the remaining 2.9% are having other qualification. Majority (41.2%) respondents are home makers, 23.5 are employed, 17.6% are business men, 9.6% are professionals and the remaining 8.1% are students. Family income shows highest number of sixty three (46.3%) consumers indicated above Rs 45000, 24.3% between Rs.25000 and 35000, 19.1% mentioned below Rs.25000, 10.3% stated as Rs.30001 to Rs.45000 as monthly family income. 80.1 % of the respondents are Non- vegetarian and 19.9% are Vegetarian. 60.3% are Health conscious, 25.7% follow special diet due to family practice, 7.4% of the respondents follow special diet as per doctor's advice and 6.6% of the respondents follow special diet because they are Beauty conscious.

CHI-SQUARE TEST: DEMOGRAPHICS AND READING OF NUTRITIONAL LABEL

Table 2: Association between Demographic variables and Reading of nutritional label

Factors		Do you read nutritional label?				Total		χ^2 (df)	Table value	Sig
		Yes		No		No.	%			
		No.	%	No.	%					
Gender	Male	20	51.3	19	48.7	39	100	.824	3.841	NS
	Female	58	59.8	39	40.2					
Total		78	57.3	58	42.6	136	100			
Education level	School	21	58.3%	15	41.7%	36	100	5.269	9.488	NS
	UG	28	54.9%	23	45.1%	51	100			
	PG	18	54.5%	15	45.5%	33	100			
	Professional	10	83.3%	2	16.7%	12	100			
	Others	1	25.0%	3	75.0%	4	100			
Total		78	57.3	58	42.6	136	100			
Occupation	Employed	20	62.5%	12	37.5%	32	100	1.664	9.488	NS
	Business	12	50.0%	12	50.0%	24	100			
	Home Maker	33	58.9%	23	41.1%	56	100			
	Professional	8	61.5%	5	38.5%	13	100			
	Student	5	45.5%	6	54.5%	11	100			
Total		78	57.3	58	42.6	136	100			
Monthly Family Income	Below Rs.25000	15	57.7%	11	42.3%	26	100	.227	7.815	NS
	Rs.25000 – Rs.35000	20	60.6%	13	39.4%	33	100			
	Rs.35001 – Rs.45000	8	57.1%	6	42.9%	14	100			
	Total	43	55.4%	34	44.6%	77	100			

	Above Rs. 45000	35	55.6%	28	44.4%	63	100			
	Total	78	57.3	58	42.6	136	100			
Food habit	Vegetarian	9	33.3%	18	66.7%	27	100	7.946	3.841	*
	Non- vegetarian	69	63.3%	40	36.7%	109	100			
	Total	78	57.3	58	42.6	136	100			
State the reason for special dietary needs	Beauty conscious	6	66.7%	3	33.3%	9	100	3.953	7.815	NS
	Health conscious	50	61.0%	32	39.0%	82	100			
	Doctor's advice	3	30.0%	7	70.0%	10	100			
	Family practice	19	54.3%	16	45.7%	35	100			
	Total	78	57.3	58	42.6	136	100			

NS – Not Significant

*- Significant at 5% level

Null Hypothesis H₀(1):

There is no significant association between demographic variables and reading of nutritional label.

There is no significant association between demographic variables such as gender, Educational level, occupation, Monthly Family Income and special dietary with regard to reading of nutritional label as the calculated chi- square value is less than the table value at 5% significant level therefore null hypothesis is accepted.

There is significant association between food habit and reading of nutritional labels as the calculated chi- square value is more than the table value at 5% significant level therefore null hypothesis is rejected with regard to food habit alone.

Table 3: INFORMATION LIKELY TO VIEW AT A NUTRITION LABEL

RANKS	
	Mean Rank
Total Energy (total calories)	4.49
Carbohydrate	5.18
Protein	4.48
Fat	4.99
Vitamins and minerals	5.06
Cholesterol	5.47
Fibre	5.97
Saturated Fats	6.35
Sugar	6.21
Sodium/salt	6.82

It is seen from the table that Protein has got the highest importance with lowest mean rank of 4.48. Total Energy (total calories) has got the next highest important factor with a mean rank of 4.49. fat with the mean rank of 4.99 followed by Vitamins and minerals, Carbohydrate, Cholesterol, Fibre and Saturated Fats. Sodium/salt has got lowest importance with mean rank of 6.82.

VII. FINDINGS OF THE STUDY

- Out of one hundred and thirty six respondents majority (71.3%) consumers are female.
- Maximum (34.8%) consumer studied upto school level (SSLC / H.Sc.), 32.6% are under graduates.
- Majority (34.1%) respondents are occupied in private sector companies.

- Family income shows highest number of fifty one (37.8%) consumers indicated between Rs.15000 and 25000.
- 80.1 % of the respondents are Non- vegetarian.
- 60.3% of the respondents follow special diet because they are health conscious.
- There is significant association between food habit and reading of nutritional labels.
- Protein has got the highest importance with lowest mean rank of 4.48. Total Energy (total calories) has got the next highest important factor with a mean rank of 4.49.

VIII. CONCLUSION

Nutritional label plays significant role in buying behavior among food habit of the consumers and all other variables did not statistically associated which means very marginal influence among consumers based on their gender, education, occupation and income. Attraction in Protein has got the highest importance with lowest mean rank followed by the total Energy (total calories) which has got the next highest important factor with regard to information likely to view at a nutrition label. Though, brand image, packaging, quality and price play significant role, the major attraction of consumers to immediately select a food product is its contents on label. It is concluded that there is significant association between food habit and reading of nutritional labels.

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