

Food Label and its influence on Consumer Buying Behavior: A Review of Research Studies

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Abstract: *The present paper reviews the literature on food labeling and its influence on consumer buying behavior to inform current investigations and identify areas of future research. A structured search was undertaken of research studies on consumer use, understanding of, preference for, perception of information on label and purchasing behaviours relating to food labels. Reviewed studies also examined consumer preferences, understanding and use of different labels, as well as food label impact on purchasing behaviours. The findings indicate that understanding of health messages was relatively low, whereas consumer attitudes toward health messages on food labels were positive. However, additional research on different labelling designs' and its cause to influence consumer behavior is needed. The most significant factors influencing buying decisions were design of the label, nutritional information, health claims, accessibility and quality. The paper contributed to better understanding of consumer purchase intentions and the usefulness of food product labels.*

Keywords: Label, Consumer, Brand, Buying

1. Literature to find whether Food Label Use Affect Purchasing Behavior

A consumer is someone who can make the decision whether or not to purchase an item at the store, and someone who can be influenced by marketing and advertisements. "Consumer Behavior is the study of individuals, groups or organizations and the processes they use to select, secure, use, and dispose of products, services, experiences or ideas to satisfy needs and the impacts that these processes have on the consumer and society (Hawkins *et al.*, 1990). It is the behaviour displayed by the consumers during the acquisition, consumption and disposition of products, services, time and ideas by decision-making units (Blackwell *et al.*, 2007). "Buying Behavior is the decision processes and acts of people involved in buying and using products" (Hausman, 2000). Consumer buying behavior involves a long process where the buyer has to identify the product, study well its features, the pros and the cons and lastly deciding on whether to purchase it or not. A consumers' attitude was considered as an important concept for the business practices since it is clearly shown in behavioral studies that it played an important role in consumers' buying behavior (Peter, 1995, Hopes, 2001 and Dubois, 2000).

The aim of food labeling is to provide consumers with information, which may influence their purchasing decisions. Consumers may want to know what ingredients are in a food product, how to cook it, how it should be stored, and its best-before or use-by date, its fat content or other nutritional properties. Detailed, honest and accurate labeling is essential to inform the consumer as to the exact nature and characteristics of the food product, enabling them to make a more informed choice. Consumers' ability to choose their diets depends partly on the quantity and quality of information available through a variety of sources, including nutrition panel food labels (Caswell and Padberg, 1999).

Derby and Levy (2001) report that, in the 1990 Diet and Health Survey, one-third of consumers said they had changed their decision to buy a product because of the information on the nutrition label. The same authors report

that in another survey in 1995, almost 48% of consumers reported that they changed their purchasing behavior due to nutritional labels. Furthermore, they cite a 1996 survey where one-third of those interviewed said that they stopped buying a product that they had regularly purchased and used because they read the nutrition label, and one in four started to buy or use a product not used before based on the nutrition label, with fat being the main information that influenced their decision. Furthermore, Baltas (2001) found that nutritional information affected brand choice. In other studies, results suggest that labeling of food products, with respect to their nutritional characteristics along with an information campaign to educate consumers, can significantly affect consumer behavior (Teisl, Bockstael, and Levy, 2001; Teisl and Levy, 1997). Kreuter *et al.* (1997) conducted a survey in a clinical setting and results revealed that patients eating diets lower in fat were much more likely than patients whose diets were higher in fat, to report that nutritional labels influenced their food purchasing decisions. Overall, it appears that nutritional label use affects purchasing behavior because it influences valuations and perceptions of the product. In that context, several surveys have studied the effect that claims create on personal evaluations. Derby and Levy (2001) report that in the 1990 FMI (Food Marketing Institute) Trends Survey, 73% of the sample said that health claims influenced their purchase decisions, even though only 8% considered health claims very believable. Health claims in the front of the package also create more favorable judgments about the product (Levy and Fein, 1998) because these claims also lead to truncated information search (Roe, Levy, and Derby, 1999). When a product features a health or content claim, respondents view the product as healthier and state that they are more likely to purchase it, independent of their information search behavior (Roe, Levy, and Derby, 1999). Ippolito and Mathios (1991) found that consumers increased their fiber cereal consumption once cereals' producers were allowed to advertise the associated health benefits.

Fullmer *et al.* (1991) conducted a study on consumers' knowledge, understanding and attitudes towards health claims on food labels as purpose of this study was to assess consumers' knowledge of current fiber recommendations and

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their attitudes, understanding, and awareness of health claims on labels. He had found that the consumers with higher education levels had a better understanding of diet-disease-related messages and exhibited more positive attitude toward health messages on food labels. Knowledge of fiber was significantly correlated with positive attitudes toward health messages and understanding of health messages. Overall, attitudes toward placing diet-disease-related messages on food labels were positive. Consumer knowledge of fiber was low. Consumers were more familiar with the role fiber may play in the prevention or treatment of certain diseases or conditions than with sources, classifications, and recommended intakes of fiber. Understanding of health messages was relatively low (45%) whereas consumer attitudes toward health messages on food labels were positive. Less-educated consumers did not appear to understand the messages well. According to Hans (1996) the brand switching of consumer was based on variety seeking behaviour, motivations, curiosity and price motive. Rodolfo (1999) examined the factors that influence consumers' perceptions or beliefs about food labels, which indicated that health, and diet related attitudes, special diet status, perceived importance of product attributes like nutrition and ease of preparation, race, gender, income, and body mass index were important factors affecting consumers' perceptions and beliefs about label use. Understanding the type of consumers who had these perceptions and beliefs as well as the factors that influence these beliefs and perceptions was crucial for designing effective marketing and nutrition education campaigns. A study conducted by Yang *et al.* (2000) indicated that literate consumers were more likely to check labels than their illiterate counterparts.

An attempt was made by Prathiraja and Ariyawardana (2003) to understand the impact of nutritional labeling on consumer buying behavior with a view of identifying the market for nutritional labeling and the factors that influence the consumer willingness-to-pay for nutritional labeling by performing a logistic method of analysis to identify the factors. Results showed that greater proportion of individuals in the age category of 36 to 50 years, individuals with tertiary education, individuals with special dietary status and households with less than four members were willing to pay more for the nutritional labels. Gender, level of education and special dietary status had a significant positive effect and the household size had a significant negative effect on the willingness to pay for nutrition information. A study conducted by Kumar (2004) showed that the consumers, irrespective of income groups, were mainly influenced to purchase by the opinions of their family members. Consumers are influenced by the dealers' recommendation, followed by advertisement. According to Nagaraja (2004) consumers buying behaviour was very much influenced by their own experiences, experiences of neighbour consumers and their own family. The involvements of consumers own family members were exerting maximum influence on their purchases. Above all, the quality of the product and its easy availability were the primary and the vital determinants of consumers buying behaviour. Kubendran and Vanniarajan (2005) elicited that the change in consumers' food consumption pattern was due to changes in food habits. When income and urbanization

increase among consumers, the percentage of income spent on consumption increased. The urban consumers' preferred mostly branded products compared to rural consumers. The most significant factors influencing buying decisions were accessibility, quality, regular supply, door delivery and the mode of payment.

Drichoutis and Lazaridis (2005) studied the relation between nutrition knowledge and consumer use of nutritional food labels. The aim of the study was to know the factors affecting nutritional food label use. According to the findings of the study nutrition knowledge had a strong effect on general label use, degree of use, and on use of nutrient content concerning fat, ingredients and vitamins, minerals, thus confirming the hypothesized link between consumers nutrition knowledge and behaviour. Socio-demographic effects were also evident in all models. Vincent (2006) had carried out a research to know whether the quality was an important factor that draws consumers towards branded products. His study revealed that Branded products were accepted as good quality products although unbranded products sometimes gave same satisfaction as branded products, customers preferred to purchase a branded product. Souza *et al.* (2006) attempted to empirically investigate how consumers differ in terms of environmentalism respond to labels. He had found that there were consumers who bought green products even if they were lower in quality in comparison to alternative products, but would look for environmental information on labels. The research offered some important information on different green consumer segments that would alert managers on how best to position environmental labels. The research suggested that businesses need to provide a clear, accurate and easily legible label design to encourage satisfaction with the accuracy of content and the communication aspects of a label. The paper contributed to better understanding of green customers purchase intentions and the usefulness of ecological product labels.

Loureiro *et al.* (2006) had conducted a study to find out consumers value for nutritional labels at Texas where, most of the respondents viewed mandatory nutritional labeling positively and factors affecting consumer preferences for nutritional labeling were clearly related to the health status of the individuals, information use and socio-demographics. The study also revealed that consumers who usually read nutritional food labels while shopping were more willing to pay for a product with a nutritional label. National Institute of Nutrition (2006) studied on the perceptions and practices of the Indian households related to food safety revealed that 60 per cent of the households buy packed food and other 20 per cent of households checks the food labels. Mahgoub *et al.* (2007) made an attempt to evaluate the level of knowledge and use of nutrition information on food packages among consumers in Maseru. The study found that level of knowledge and use of nutrition knowledge when purchasing foods increased with age, education level and family income. An online consumer opinion survey was conducted on Indians by Murali and Baisya (2007). The results showed that only 41 per cent of Indians check nutritional labels when purchasing a product for the first time, though consumers were concerned with the nutritional information on food labels when buying food products for

their children. A review of European research on consumer response to nutrition information on food labels by Grunert and Wills (2007) indicated that there was a widespread consumer interest in nutrition information on food packages, though this interest varies across situations and products. It concluded that the consumers like the idea of simplified front of pack information but differ in their liking for the various formats. There was no insight into how labeling information was, or would be, used in a real-world shopping situation, and how it would affect consumers' dietary patterns. Rao and Rao (2009) conducted a study on south Indian women which revealed that women see the labels on packed foods for date of manufacturing and 'best before date' and many of them were not found to be not aware of quality symbols like ISI, AGMARK and FPO.

Consumers perception, understanding and use of labeling information on food packaging, with particular reference to front-of-pack food labels was studied by (Riches, 2009) to assess whether the front of pack voluntary nutritional labeling schemes were having an impact on consumer understanding of nutrition information and healthy food choice. The study revealed that knowledge and understanding of food label varied across participant groups and within individuals. Consumers were generally confused and distrusting the variety of different front of pack nutrition labeling systems currently in use. Individuals who had more of an interest in food labels and a belief in the ability of the information to aid food choice were more likely to use front of pack labeling. The study found that front of pack labeling improved general awareness of food and food choice.

Food Safety Authority of Ireland (2009) conducted a study to find out consumers' attitudes towards food labeling. The objective of the study was to establish whether consumers in Ireland understand the various forms of labeling currently presented on foodstuffs, and whether labels help consumers to make informed purchasing choices. Labeling influenced consumers' purchasing decisions, with at least two thirds saying they would be inclined to buy a food bearing a nutritional claim. The results showed that labeling was important to consumers, as the majority of consumers said they wanted labeling on all foods, including loose and pre-packaged foods and over one half of consumers never, rarely or only sometimes read food labels. The proportion of consumers who always consult food labels, however, had risen to 25 per cent from 8 per cent in 2004. The main reasons for consulting food label among consumers were to obtain information on the nutritional content, or to look for specific ingredients. The study had shown that some aspects of food labeling were confusing for consumers. Jeddi and Zaiem (2010) conducted a study to understand the impact of label perception on the consumer's purchase intention. The main objective of the research was to study the consumer's perception of labels and signals of quality, and to bring in a reflection on the consumer's tendency to acquire labeled products and to analyze the effects of such a relation on some moderating variables, namely the product's implication, the perceived risk and the socio-demographic variables. Through an empirical study involving a sample of 212 consumers, the researchers were able to determine the degree of importance consumers give for labels, and to define the impact of these quality signals on the consumer's purchase intention. The results proved that the higher the

perceived risk and the product implication were, the stronger the impact of the label perception on the consumers purchase intention and also labeling remains a solution of reassurance for the consumer and helps him take a decision. The results also revealed that perception of labels and its impact on the intention to buy vary significantly according to gender, age, and the educational level of the consumer. The label perception and its impact on consumers purchase intention was much more present in women, who were considered to be the first buyers of foodstuffs and in adults with a high educational level (secondary or higher). The latter seem to be better informed on signals of quality and labels, and therefore, they reacted more than younger and less educated persons.

Singla (2010) had studied on usage and understanding of food and nutritional labels among Indian consumers through a structured questionnaire where she has found that Food labels were read by the consumers for brand comparisons and not for consulting nutritional information. Jacobs *et al.* (2010) identified the difficulties associated while reading food labels among the adult consumers the font size of the print, lack of education and nutritional knowledge. Scores from the labelling tasks showed that the respondents did not always understand how to use the information on food labels in order to make informed food choices. The study suggested the improvements on current food labels in South Africa and Guidelines for consumer education regarding the use of food labels. Magstris *et al.* (2010) aimed at testing a theoretical model explaining why people follow healthy eating habits and in particular to identify how the nutritional labels use influences this behavioral pattern. The results indicated that the individuals who utilized more often the nutritional labels follow healthier eating habits, such as avoiding snacking between meals, a lower intake of salt and avoiding the fat intake. According to the factors explaining the label use, the health knowledge, the bad health status and being aware of the diet-health relation were found significant. Age and household size were the socio-demographic variables, which affected the nutritional label use and eating habits among consumers. Hong *et al.* (2011) understood the prevalence rates of knowledge, attitudes and use of the nutrition labeling on pre packaged foods and related influential factors in consumers was not satisfactory and improvement on the readability and the authority of nutrition labeling and the development of the national nutrition knowledge and health education programs were found to be in urgent needs.

2. Conclusion

From in depth literature survey, it can be concluded that research was focused on understanding the influence of labels on consumer buying behavior, but influence of different label features such as font size, placement of label, clarity of language, visibility of essential information and font colour were not explored. Food labels were read by the consumers for brand comparisons and but not for consulting nutritional information. It is also evident from a few studies that suggest that nutritional labeling positively influences purchasing behavior and that it can promote healthier consumption. Survey results are more specific when it comes to the use of nutritional information. In general, label

use has been found to affect diet and increased use of food labels has been associated with healthier patterns of dietary behavior as well as food choice motivations. Consumers with higher education levels had a better understanding of diet-disease-related messages and exhibited more positive attitude toward health messages on food labels Yang *et al.* (2000) and the expiry date was the most important information on a food label used by consumers. The study suggested the need to educate consumers on different aspects of food labeling to enable them to make more informed purchasing decisions and better understood consumer purchase intentions and the usefulness of food product labels.

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