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Consumer Understanding and Usage of Nutritional Labels: A Study of Selected FMCG Products in Ludhiana City

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Abstract

The present study aims to study the understanding and usage of nutritional labels by consumers while purchasing them and its affect on their buying decision. The primary data was collected from 200 consumers on convenience basis from major departmental and general stores in Ludhiana city. Under Fast Moving Consumer Goods (FMCG) category, juices, jams and sauces were selected. The study revealed that consumers use the label information of juice more than jam and sauce. The study found low use and understanding of nutritional labels among consumers in Ludhiana city. The consumers were not familiar with the numeracy, terminology and language on current nutritional panel. Consumers appreciated the idea of simplified label information. They preferred graphic and colored labels instead of quantitative labels.

Key words: Nutritional Label, Fast Moving Consumer Goods, usage, understanding.

JEL Classification: M31, M37

Introduction

Nutrition is defined as the process by which an animal or plant takes in and utilizes food substances. Essential nutrients include proteins, carbohydrates, fats, vitamins, minerals and electrolytes. Normally, 85 percent of daily energy use is from fat and carbohydrates and 15 percent from protein. In humans, nutrition is mainly achieved through the process of putting foods into our mouths, chewing and swallowing it. The required amounts of the essential nutrients differ by age and the state of the body, for example: physical activity, diseases present (e.g. prostate cancer, breast cancer or weakened bones – known as osteoporosis), medications, pregnancy and lactation.

Nutritional labels describe the nutrient content of a food and are intended to guide the consumer in food selection. At the same time, labeling regulations should provide incentives to manufacturers to develop products that promote public health and assist consumers in following dietary recommendations. Nutrition information on food labels can support consumers in making informed food choices. It can be found in nutrition labeling (to be provided on labels of prepackaged foods, under the title "Nutrition Facts"); nutrition claims, which include both nutrient content claims and health claims; and the ingredient list. Wardel *et al* (2000) proved that respondents in the highest quintile for knowledge were almost 25 times more likely to meet current recommendations for fruit, vegetable and fat intake than those in the lowest quintile. Nutrition knowledge was shown to be a partial mediator of the socio-demographic variation in intake, especially for fruit and vegetables. This demonstrates the value of using more sophisticated statistical techniques to investigate associations between knowledge and food intake and indicates that knowledge is an important factor in explaining variations in food choice. The results support the likely value of including nutrition knowledge as a target for health education campaigns aimed at promoting healthy eating. According to Cowburn and Stockley (2005) improvements in nutrition labeling could make a small but important contribution towards making the existing point-of-purchase environment more conducive to the selection of healthy choices. In particular, interpretational aids can help consumers assess the nutrient contribution of

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specific foods to the overall diet, where in drichoutis *et al* (2005) suggested that nutrition knowledge has 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 hypothesis link between consumers' nutrition knowledge and behaviors. Socio-demographic effects are also evident in all models.

The research paper intends to study the usage of nutritional labels and the level of understanding of nutritional labels in selected FMCG products by consumers in Ludhiana city.

Table 1. Demographic Profile of Respondents

Age (in years)	No. of respondents	Percentage share
20-30	92	46
30-40	19	9.5
40-50	54	27
>50	35	17.5
Gender		
Male	112	56
Female	88	44
Occupation		
Business	34	17
Professional	20	10
Service	38	19
Retired persons	35	17.5
Housewife	23	11.5
Student	50	25
Marital Status		
Unmarried	69	34.5
Married	96	48
Divorced/Widowed	35	17.5
Education		
10+2	58	29
Diploma holder	31	15.5
Graduate	58	29
Post Graduate	53	26.5
Size of Family		
<3 members	34	17
3-5 members	77	38.5
>5members	89	44.5
No. of children in family		
No child	58	29
1 child	57	28.5
2 children	50	25
>2 children	35	17.5
Monthly income (Rs/month)		
<20000	54	27.5
20001-40000	23	11.5
40001-60000	19	9.5
60001-80000	39	19.5
>80000	65	32.5

Data Sources and Methodology

The study was conducted with a broad view to study the usage and understanding of consumers of Ludhiana city towards nutritional labels of juices, jams and sauces. Nutrition information is given on the label of the products but it is up to the customer that how they will utilize this information to regulate their nutrient intakes. Only providing them the nutritional value of food products does not mean that they will look at that information.

A sample of 200 consumers was surveyed through convenience sampling in various departmental and general stores in Ludhiana city. To meet the objectives of the study, primary data was collected through well-designed, structured and non-disguised questionnaire. Those consumers who bought any of three selected products i.e. juices, jams and sauces were contacted to study their usage and understanding of nutritional label. Literature was studied before developing a questionnaire. Various studies were reviewed to have a thorough understanding about various parameters to be included in the questionnaire and accordingly a self-administered and structured questionnaire was designed to collect information from the respondents. Respondents were asked close-ended questions along with scale-based and rating based questions. For scale based questions, respondents were asked to provide the responses on a five-point Likert scale and also they were asked to mention their priorities by rating system. The data collected through questionnaire were converted to a master table which facilitated tabulation of data in the desired form. The collected data were then grouped into tables and analyzed using various statistical tools like percentage, mean score, standard deviation and one sample t- test. The study was conducted in 2019.

Results and Discussions

This section aims at focusing on the usage and understanding of consumers towards nutritional labels. The data collected for the study have been classified, tabulated and analysed in the light of the objectives of the study.

Perusal of Table 1 shows that majority of respondents were in their twenties (20-30 years), which is 92 out of 200 (46 %), and 54 respondents were between age group 40-50 years which is 27 per cent of total respondents. Total old aged respondents were 35 (17.5 %), and least number of respondents were from age group 30-40 years i.e. 19 (9.5 %). 56 per cent of respondents were males and 44 percent were females. 25 per cent of respondents were students, followed by service men (19 %) and 17 per cent were businessmen. 48 per cent consumers were married and 69 (34.5 %) were unmarried. 10+2 and Graduation had same number of respondents i.e. 58 (29 %) followed by Post Graduation which had 53 (26.5%) respondents. 44.5 per cent of respondents had large family size with more than 5 members followed by 77 (38.5 per cent) respondents which have family of 3-5 members and 34 (17 %) respondents have small family with less 3 members. 29 per cent of respondents had no child followed by 57 (28.5 %) respondents which had 1 child and 50 (25 %) respondents had 2 children. Majority of respondents had monthly income of more than 80000 rupees which were 65 (32.5 %) followed by 54 (27.5 %) respondents which had monthly income less than 20000 rupees and 39 (19.5 %) respondents had monthly income between 60001-80000 rupees.

Frequency of purchase and reading labels of selected FMCG products

The consumers were enquired about the frequency of purchase as well as their label reading habit of selected FMCG products. The responses were recorded in 5 point likert scale.

The data in Table 2 depicts that consumer buys Juice more often than other selected FMCG products followed by Jam and Sauces. It was further found that consumers read the label of Juices more often than followed by jam and sauces which have same mean score 1.75.

Table 2. Purchase frequency of selected FMCG products

Selected product	Purchase Frequency Mean (S.D.)	Reading labels Frequency Mean (S.D.)
Juices	2.89 (0.79)	3.38 (0.65)
Jam	1.94 (0.68)	1.75 (0.64)
Sauces	1.67 (0.67)	1.75 (0.64)

Information received from the label

Consumers were asked about what type of information they read from labels. The responses were

Table 3. Information received from labels of selected FMCG products

Statements	Mean (S.D.)	t value	p value
Expiry date	4.57 (0.49)	44.94	0.001*
Company name	4.42 (0.49)	40.58	0.001*
Date of manufacturing	4.08 (0.80)	18.99	0.002*
Price	3.87 (0.83)	14.74	0.002*
Nutritional content	3.01 (0.86)	0.16	0.871
Weight	2.86 (0.85)	-2.23	0.027*
Instruction to use	2.84 (0.84)	-2.59	0.010
Serving size	2.82 (0.849)	-2.99	0.003*
Ingredients	2.63 (0.482)	-10.69	0.002*
Certification (FSSAI/FPO)	2.36 (0.48)	-18.60	0.001*

**indicates $p < 0.05$*

recorded in 5 point likert scale. One sample t test was applied to understand what type of information they read from the label.

The data presented in Table 3 depicts that information received from the labels of selected FMCG product is mostly expiry date as it have the mean value of 4.57 which is then followed by company/brand name, manufacturing date, price of the product, nutritional content, weight of product, instruction to use, serving size and ingredient. The part that consumer read least on label of selected FMCG products is its certification by FSSAI/FPO with mean score of 2.36. All the results are significant at 5 percent level of significance except nutritional content which is found to be not significant.

Understanding of consumers regarding Nutritional labeling of food products

Consumers were asked about different perceptions related to the label of food product. The responses were recorded in 5 point likert scale. One sample t test was applied.

According to table 4 consumers agreed that they will not buy the product if there is no label on the product; they were also found to attach trustworthiness to the information provided on the label completely. Consumers believed that nutritional labels help them in buying the food product though the information on label of food product is difficult to understand and confusing at times majority of consumers calculated the food intake on food label every time and opted for filing a complaint in consumer court if no label or information was displayed on the products. The consumers' disagreed to buy the product if label is missing with least mean score of 1.11. All the result were significant at 5 percent level of significance except letting the retailer know if label is missing which was found to be not significant.

Conclusion and Policy Implications

The study was conducted with a broad view to study the usage and understanding of consumer of Ludhiana city towards nutritional label of juices, jams and sauces.

Table 4. Understanding of consumers regarding Nutritional labeling of food products

Statements	Mean (S.D.)	t value	p value
If there is no label on food product I am not going to buy the product	4.88 (0.31)	83.35	0.001*
The information provided on the label of food product can be trusted completely	3.71 (0.45)	22.07	0.002*
Nutritional labels are very helpful in buying FMCG products	3.54 (0.49)	15.28	0.002*
If there is no label on food product I will let the retailer know about this	2.91 (0.78)	-1.53	0.126
The information provided on the label of FMCG food products are very hard to understand	2.54 (0.49)	-13.22	0.002*
The information provided on food labels are very confusing	2.54 (0.49)	-13.22	0.002*
I calculate my food intake on the basis of food label every time	2.44 (0.49)	-15.91	0.002*
If there is no label on food product I will file a complaint in consumer court	2.38 (0.48)	-17.82	0.003*
If there is no label on food product I am still going to purchase it	1.11 (0.31)	-83.35	0.002*

**indicates $p < 0.05$*

Out of the three selected products consumer buy juice more than Jam and Sauce. The fact that this study was conducted in summer season may have some impact on more usage of juice than other products. The second most consumed product is jam as it is used in breakfast with Bread. Consumer seems to show more interest in nutritional value of juice than other products. Most of the respondents were health conscious and buy only juice from the selected products. Consumers often considered the label of product to know the expiry date, price and brand of the product. They considered these three parts of label more important than the other parts of the label. Consumers had the tendency to read the labels of juice product more carefully than other two products. They read nutritional part of juice to know whether there is any artificial colour or preservative in the product or not. They also checked the Nutritional value of the product. Out of selected three products nutritional value of juice affects their buying decision the most. The study found low use and understanding of nutritional labels among consumers in Ludhiana city. Consumers were not familiar with the numeracy, terminology and language on current nutritional panel. This study points toward the need for basic nutrition education and user friendly label format. As far as formats are concerned, consumer likes the idea of simplified front of pack information. They prefer labels to be graphic and colored rather than the currently used quantitatively oriented labels.

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