

A STUDY ON AWARENESS OF NUTRITION LABELING IN CONSUMER GOODS (WITH SPECIAL REFERENCE TO COIMBATORE CITY)

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ABSTRACTS:

An consumer's awareness towards nutritional aspect of the food are increasing rapidly. In food products, Labels play a significant role in providing nutritional information to consumers. The aim of food labeling information has to provide consumers which may influence their decision of purchasing. Consumer should know the accurate ingredient in food product, how it stored, content of fat, expiry date and other nutrition content. Pre tested structured questionnaire was used to collect the random of 75 respondents. Percentage, weighted and Ranking analytical tools are used to collect the data. The majority of the respondents existence of food label has to know the expiry date on nutritional component on legal requirement. Finding of their study in food producers should implement the strategies by considering key result in order of food labeling as well as nutrition status of consumers.

Key words: Nutritional content, Food labeling, Consumer goods, Awareness of customer

INTRODUCTION:

Nutrition information helps to keep track of what people eat and enables to choose between different products to get the best one. The nutrition information panel (NIP) helps to compare key nutrients and serving sizes whilst some food labels will also include information on percentage daily intake and promote nutrition or health claims too. It can be found in nutrition labeling nutrition claims, which include both nutrient content claims and health claims; and the ingredient list. It does not refer to all information on the label, such as labeling related to allergens, food biotechnology, organic certification, irradiation processes or the "best before". The Nutrition Facts table is designed for to easy read and looks the same on most products. The same nutrients are always listed in same order. A predictable look is easy to find and use. Almost all prepackaged food products must display the Facts on nutrition. The Nutrition Facts table has information to expanded list of nutrients and calories on consumers and health professionals consider important to health—the core nutrient list.

SCOPE OF THE STUDY:

The scope of this survey is to understand the peoples knowledge in interpreting the nutritional label facts and they are applying the same during making purchases .The scope also includes educating the participants in interpreting the nutritional information from the labels considering mainly its significance. Without healthy eating, body's engine will not perform properly .Basics of healthy eating include foods that are low in fat, high in fiber and include vitamins, minerals and anti-oxidants .Hence the study lays importance to the preference of the middle class people in nutritional label and the overall impact of its awareness with all its consequences.

STATEMENT OF THE PROBLEM:

The core focus of this study is to find out how many of the middle class people who have the knowledge of nutrition really follow and exercises their knowledge during making purchases. A nutritional label awareness had only very few subjects who had knowledge to the nutritional labeling and most of them were from the elite class. Now middle class has better spending power are exposed to lot of TV channels dedicated to food cooking and nutritional subject being discussed a lot.

OBJECTIVES OF THE STUDY:

- To analyze how many numbers of people are noticing, reading the nutritional label.
- To assess how many number of people have the knowledge about the nutrition label content and its effects.
- To analyses if there is a perception that higher the cost better the nutritional content.
- To identify on which description on the nutrition label people give importance.
- To ascertain the information of current labeling to informed purchasing is sufficient.

RESEARCH METHODOLOGY:

My research methodology is a part of research paper that describes about awareness of nutrition labeling with consumer goods in detail. It's about how a researcher can designs a study to ensure reliable and valid results that address the objectives and research aims.

DATA COLLECTION:

Primary Data

The major source of data used to carry out the analysis was the primary data. Field survey has conducted to collect the primary data from 75 respondents through well-structured questionnaire. The questionnaire has designed to elicit through the application of scientific method to the knowable to enable them to express their knowledge status freely and frankly.

Secondary Data

The secondary data required for the study have been collected from the books and websites. The secondary data namely literature relating to the study was gathered from the national and international journals, newspapers, magazines, articles, internet and various other records.

Area of study:

The study refers to the respondents who are to be surveyed. It may be Geographical, construction unit , Social unit or it may be an individual. The size of the study comprises of the Individual consumers in the city of Coimbatore. The population with various dimensions such as religion, caste, customs , tradition , language , literacy , education , income , occupation etc.

Sample technique and procedure:

Sampling technique is the choice of a subset of people from among a huge population to estimate characteristics of the 75 respondents. The simple technique has used for this study. The type of sampling procedure is chosen by random sampling. An unbiased random 75 selection of individuals is important to represent the population. The researchers have taken 75 samples randomly from the total population.

Tools used for Data Analysis:

- Percentage analysis.
- Weighted and Ranking analysis
- Chi square Test.

LIMITATIONS OF STUDY:

- The study was limited to Coimbatore City. So the results and findings are confined to a limited area.
- Respondents lack of time to give information and casual attitudes. The respondents opinion may be biased.

REVIEW OF LITERATURE

I. **Andrews, J. Craig, Jordan Lin, Alan S. Levy, and Serena Lo. (2014)** made a study in the topic “Consumer Research Needs from the Food and Drug Administration on Front-of-Package Nutritional Labeling” in which it was found that busy lifestyles and desire quick and nutritious food choices. To provide consumers with at-a-glance nutrition information, many food manufacturers have introduced front-of-package (FOP) nutritional labeling systems.

II. **Szykman, L. R., P.N. Bloom and Alan S. Levy. (1997)** did a research on the title “A Proposed Model of the Use of Package Claims and Nutrition Labels ”.The authors propose a conceptual model of the use of nutrition labels and on-package claims. In addition, diet-disease knowledge is related positively to the use of package nutrition information in the forms of both package claims and panel information

III. **Schucker, Raymond E., Alan S. Levy, Janet Tenney and Odonna Mathews. (1992)**did a research on the title “Nutrition Shelf-Labeling and Consumer Purchase Behavior”.A nutritionin formation program, consisting of brand-specific nutrition shelf-tags and a supplementary explanatory booklet. The largest market share increases occurred for products with the most flagged nutrients.

IV. **Levy, Alan S., Sara B. Fein and Raymond E. Schucker. (1991)** did a research on the title“Nutrition Labeling Formats: Performance and Preference”. Food Technology. The Nutrition Labeling and Education Act of 1990 require almost all food products to bear nutrition labeling .To obtain consumer input into any revisions in the nutrition labeling format, the Food and Drug Administration has conducted a consumer study of five possible formats. This article describes a consumer study conducted as one component of FDA's information-gathering activities on nutrition labeling format

ANALYSIS AND INTERPRETATION

SOCIO ECONOMIC PROFILE

| S NO | SOCIO ECONOMIC PROFILE | HIGHLY RESPONDENT AREA | NO OF RESPONDANTS | PERCENTAGE |
|------|--|--|-------------------|------------|
| 1 | Age | 18 - 25 | 57 | 76% |
| 2 | Gender | Male | 45 | 60% |
| 3 | Marital status | Unmarried | 61 | 81.4% |
| 4 | Occupation | Student | 50 | 66.7% |
| 5 | Monthly Income | 10001 - 20000 | 31 | 41.3% |
| 6 | Type of Family | Nuclear | 44 | 58.7% |
| 7 | Frequency on purchasing Nutritional food | Once a week | 42 | 56% |
| 8 | Nutritional content in food pack | Protein | 52 | 69.3% |
| 9 | Influenced about nutritional packages | Friends & Family | 40 | 53.3% |
| 10 | Consumer while consult labels for shopping | Sometimes | 22 | 29.3% |
| 11 | Symptoms faces on taking nutrition food. | Skin rash | 19 | 34.5% |
| 12 | Customer preference on reading content | Key nutrient on front and other detailed on back | 29 | 38.7% |
| 13 | Brand you Prefer | Nature made | 45 | 60% |
| 14 | Nutrition claims in your food pack | Fat Free | 31 | 41.3% |
| 15 | Main source of food label | Quality & Quantity | 36 | 48% |

INTERPRETATION

From the above table analysed that the majority 76% of the response belonging at the age between 18 – 25. 60% of the respondents are given by male gender. student has the highest majority of 66.7% and unmarried response has highest majority of 81.4%.Family income has majority of 41.3% .58.7% Of people lived in nuclear family.56% of people purchasing nutrition food once in a week.69.3% of people prefer

protein content in their food.53.3% of respondents influenced on nutritional by Friends & Family.29.3% of people consult food labels by sometimes.34.5% of people faced skin rash problem while taking nutrition food. Most of them prefer key nutrition on front and other detailed on back by 38.7%. 60% of people prefer nature made in nutritional labeling.41.3% of people choose fat free.48% of people prefer Quality & Quantity on food pack.

HYPOTHESIS

Chi - square test of age and nutrition content in food pack.

H₀ : There is no significant relationship between age and nutrition content preferred in food pack.

H₁ : There is a significant relationship between age and nutritional content preferred in food pack.

Chi – square test of monthly income and purchasing of food label.

H₀ : There is no significant relationship between income and preference for purchasing nutritional food.

H₁ : There is a significant relationship between income and preference for purchasing nutrition food.

Chi – square test of monthly income and brand we prefer.

H₀ : There is no significant relationship between income and preference of nutrition supplement brand.

H₁ : There is significant relationship between income and preference of nutrition supplement brand.

Chi – square Test of age and nutrition content in food pack.

| AGE | Carbohydrate | Fat | Protein | Sodium | Grand total |
|-------------|--------------|--------|---------|--------|-------------|
| 18 - 25 | 0.5757 | 0.0098 | 0.4035 | 0.6864 | 1.6754 |
| 25 - 30 | 0.0128 | 0.56 | 0.2074 | 0.24 | 1.0202 |
| above 30 | 0.0859 | 1.0519 | 0.1905 | 0.16 | 1.4883 |
| Below 18 | 3.2038 | 0.0304 | 2.7735 | 7.4711 | 13.4788 |
| Grand total | | | | | 17.6627 |

Level of significance : 0.05

Degree of freedom : 9

p value : 16.9

Since the calculated significant value is higher than the p – value the null hypothesis is being rejected and alternate hypothesis is accepted. Therefore there is significant relationship between age and nutritional content preferred in food pack

Chi – square test of monthly income and purchasing of food label.

| MONTHLY SALARY | A DAY | A WEEK | ONCE A WEEK | TWICE A WEEK | GRAND TOTAL |
|----------------|--------|--------|-------------|--------------|-------------|
| 10001 - 20000 | 0.5505 | 0.1348 | 0.0528 | 0.2180 | 0.9561 |
| 20001 - 30000 | 0.6095 | 1.2589 | 2.0879 | 0.6914 | 4.6477 |
| above 30000 | 0.05 | 1.0876 | 0.0295 | 0.6075 | 1.7746 |
| below 10,000 | 0.0666 | 0.0784 | 0.8130 | 2.25 | 3.208 |
| Grand total | | | | | 10.5864 |

Level of significance : 0.05

Degree of freedom : 9

p value : 16.9

Since the p – value is greater than significant value , it has failed to reject null hypothesis. So income and preference for purchasing nutritional food are independent and has no significant relationship.

Chi – square test of monthly income and brand we prefer.

| MONTHLY INCOME | Garden of life | Kirkland Signature | Nature made | Nerdic nature | Grand Total |
|----------------|----------------|--------------------|-------------|---------------|-------------|
| 10001 - 20000 | 0.0259 | 0.3107 | 0.0846 | 0.0210 | 0.4422 |
| 20001 - 30000 | 0.1078 | 0.8166 | 0.5488 | 1.1266 | 2.5998 |
| above 30000 | 0.0045 | 0.1484 | 0.0762 | 0.0775 | 0.3066 |
| below 10,000 | 0.1025 | 0.1333 | 0.0077 | 0.3333 | 0.5768 |
| Grand total | | | | | 3.9254 |

Level of significance : 0.05

Degree of freedom : 9

p value : 16.9

Since the p – value is greater than significant value , it has failed to reject null hypothesis. So income and preference for purchasing nutritional food are independent and has no significant relationship.

WEIGHTED AVERAGE ANALYSIS

This formula is used to calculate the average value of a particular set of numbers with different levels of relevance. The relevance of each number is called its weight .It should be represented as a percentage of the total relevancy. All weights should equal to 100%, or 1.

Weighted Avg_x = w₁ x₁ + w₂ + w₂ + x₂.....w_n x_n

w = relative average (%)

x = value

RESPONDENTS OPINION ABOUT NUTRITION LABEL WITH OTHER FACTORS

TABLE 1.1

| S NO | PARTICULARS | STRONGLY AGREE | AGREE | MODERATE | DISAGREE | STRONGLY DISAGREE | TOTAL |
|------|--------------------------|----------------|-------|----------|----------|-------------------|-------|
| 1 | Food safety | 28 | 40 | 5 | 0 | 2 | 75 |
| 2 | Animal Welfare | 29 | 28 | 12 | 4 | 2 | 75 |
| 3 | Fair trade | 23 | 20 | 28 | 3 | 1 | 75 |
| 4 | Organic food | 29 | 24 | 17 | 3 | 2 | 75 |
| 5 | Brand Reputation | 20 | 28 | 21 | 4 | 2 | 75 |
| 6 | Environmental protection | 28 | 26 | 17 | 3 | 1 | 75 |

TABLE SHOWS THE AVERAGE MEAN VALUE 1.2

| S NO | FACTORS | WEIGHTED MEAN VALUE | WEIGHTED AVERAGE | RANK |
|------|--------------------------|---------------------|------------------|------|
| 1 | Food safety | 317 | 63.4 | 1 |
| 2 | Animal Welfare | 303 | 60.6 | 2 |
| 3 | Fair trade | 287 | 57.4 | 5 |
| 4 | Organic food | 300 | 60 | 4 |
| 5 | Brand Reputation | 285 | 57 | 6 |
| 6 | Environmental protection | 302 | 60.4 | 3 |

INTERPRETATION

The table reveals that out of the total respondents’ Food safety have better nutritional value and also recognize that Animals welfare products have more nutritional value while the respondents’ are also aware that Brand reputation has a negative impact on nutritional value.

RANKING ANALYSIS

In statistics, the rank test is a hypothesis test to compare the survival distributions of two samples .The ranking system is a non–quantitative method of comparing different alternatives. A ranking list is developed showing the better variants for a specific problem. The percent is converted into scores.

RESPONDENTS’ RANKING ABOUT NUTRITION LABEL WITH OTHER FACTORS.

SATISFACTION LEVEL

| RANKINGS | | | | | | | |
|----------------------------------|----|----|----|----|---|----|-------|
| FACTORS | 6 | 5 | 4 | 3 | 2 | 1 | TOTAL |
| Name of food | 46 | 13 | 8 | 0 | 4 | 4 | 75 |
| Date of Minimum Durability | 23 | 32 | 10 | 1 | 5 | 4 | 75 |
| List of ingredients | 23 | 12 | 24 | 8 | 4 | 4 | 75 |
| Alcoholic strength of beverage | 27 | 17 | 12 | 2 | 7 | 10 | 75 |
| Net quality | 22 | 16 | 12 | 11 | 5 | 9 | 75 |
| Contacts details of manufacturer | 20 | 23 | 12 | 4 | 4 | 12 | 75 |

RANKING TABLE

| FACTORS | MEAN VALUE | RANK |
|----------------------------------|------------|------|
| Name of food | 385 | 1 |
| Date of Minimum Durability | 355 | 2 |
| List of ingredients | 330 | 3 |
| Alcoholic strength of beverage | 325 | 4 |
| Net quality | 312 | 6 |
| Contacts details of manufacturer | 315 | 5 |

INTERPRETATION

The table reveals that out of the total respondents’ they prefer the Name of the product and Date of minimum durability is important and they give importance to List of the ingredients of the product even though the net quantity or Alcoholic beverage is more.

FINDINGS

The major findings of the study are

- ✓ The majority of the customer satisfied in preferring protein content in nutrition food and most of them influenced about friends & family about nutritional content.
- ✓ The customer think that Key nutrient on front and other detailed on back while reading nutrition content on food pack.
- ✓ In nutrition food, some of they faces body symptoms like skin rash while taking food. And major source of customer prefer Quality and Quantity of content.
- ✓ Most of the customer prefer Nature made on nutritional content.
- ✓ Overall now customers are well aware about nutritional content on food labeling.

SUGGESTION

- Instead of simply giving nutritional value of chemicals in milligrams or percentages, it may be considered to indicate where exactly two nutrients work. E.g. for healthy eyes, cholesterol inhibitors, blood thinners, memory enhancers, etc.
- The study expects that food manufacturers/ producers will take into account the findings of the study and enhance the label design to make a broader spectrum of the population to benefit from reading their nutrition label.
- Manufacturers may consider including contra indicators.
 - a) Side effects
 - b) Dosage
 - c) Timing
 - d) Age

CONCLUSION

The study was made on the awareness of nutrition label facts in the Coimbatore district giving importance to the consumer belonging to middle class who are willing to pay for nutrition value labeling having an awareness knowing the consequences of malnutrition. The objective was to know about the awareness of the people noticing, reading the nutrition label and the study reveals that people are ready to pay for higher priced products and organic foods. And if the producer’s consider the suggestion given it will help both the producers and the consumers.

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