

# The Awareness of Traffic Light Labeling System and Nutrition Information on Packed Food Labels Among Young Generation in Sri Lanka.

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**Abstract** - A Traffic-light labeling system is a labeling system that uses a color code in front-of-package to immediately express the nutritional quality of the food to the consumer. Nutrient levels and the proportion of products are classified in main three colors “Red” (High), “Amber” (Medium), and “Green” (Low) to indicate sugar, salt, and fat content in food. In Sri Lanka, this labeling system was initiated on the 1<sup>st</sup> of June 2019. This survey-based study was focused on the consumer knowledge of nutritional food label information among the young generation (Age in between 15 – 29 years) in Sri Lanka. A questionnaire with 12 questions was used to collect information (including Kano model questions) from 230 consumers. The obtained data were computed and statistically analyzed using STATA 14.2 software to determine relationships and associations between various factors and the effectiveness of the Traffic-light labeling system. Findings showed that amongst 230 respondents 74.8% are aware of the color light labeling system and 25.2% are not aware. Awareness and use of pre-packaged food labeling information were significantly associated with the age and education level of the respondents and there is good knowledge about the labeling system among the young generation and can conclude that this has been successfully communicating the information to the young generation.

**Keywords:** Consumers, Traffic-light Food Labeling, Respondents

## I. INTRODUCTION

Many consumers struggle to resist unhealthy food temptations. A nutritious and balanced diet is mandatory for the existence of human daily life and the prevention of many diseases. However, 39% of adults in the world population are overweight or obese and therefore more at risk for developing cardiovascular diseases, diabetes, and certain types of cancer [1]. With the intention of avoiding non-communicable diseases in Sri Lanka, the Ministry of Health had introduced a traffic light labeling system and nutrition information on packaged food labels. The traffic light labeling system indicates, whether a food has high, medium or low amounts of fat, saturated fat, sugars and salt. It also represents the number of calories and kilojoules in that particular product. Red, Amber and Green colors are used to give an illustration of the meaning: the red color indicates the higher level of nutrition,

amber color indicates the medium level and green signifies the low level of nutrition [2]. Investigating whether the traffic light labeling system affects the food choice of the young generation was one of the objectives in this research. In addition, another objective was to examine if young people are aware of the ingredients on food labels. Moreover, finding out how that awareness varies according to their gender, age group, and educational level and realizing what are the reasons that people tend to read food labels are the expected outcomes of this research.

## II. MATERIALS AND METHODS

The survey for “The Awareness of Traffic Light Labeling System and Nutrition Information on Packed Food Labels among Young Generation in Sri Lanka” was conducted among the population of young generation in Sri Lanka by designing the questionnaire to gather the necessary data. Primary data was collected by a set of questionnaire. There were 230 respondents both male and female included in this survey who were in 15- 29 years aged and certain levels of education. Secondary data was gathered by using several sources such as published journal articles and books. Stata 14.2 software was used to statistically analyze the data and a quantitative comparison of data was done using Microsoft Excel. In order to identify if there is any relationship between the awareness and these independent variables (gender, age group, education level and academic discipline), Pearson’s Chi-square Test for Independence was conducted.

## III. RESULTS AND DISCUSSION

From the survey it was found that amongst 230 respondents 44% are male and 55% are female. There were 7.8% respondents in age group of 25-29, 18.7% respondents in age group of 15-19 and 73.5% respondents in age group of 20-24. The highest number of respondents was in the age group of 20-24. Moreover, results illustrated that, amongst 230 respondents 20.9% were school students and 70% were undergraduates. There were few numbers of respondents at certificate/diploma level,

technical/vocational level and graduated level. It was found that 57.4% respondents represent health, food or nutrition related discipline and 42.6% are representing other disciplines. According to the results, 70% of the respondents buy packed food items 1-3 times per week, 15.2% of the respondents buy packed food items 4-6 times per week and 10% of the respondents buy packed food items more times per week. It was found that amongst 230 respondents 74.8% were aware of the color light labeling system and 25.2% were not aware of the color light labeling system.

Table 1 represent the percentages of respondents ranked (1-5) how important is it or would it be of the label information such as price, manufacture date, quantity, ingredients, expiry date, country and brand when they buy packaged foods. The highest percentage of respondents (65.36%) agreed that the expiry date on the label is the most important. Furthermore, the highest percentage of respondents feels that country is the least important. That percentage is 18.18%.

Table 1. Summary of the chart, ranked 1-5 according to the importance of various factors from the responses received

	Price	Quantity	Mfd Date	Exp Date	Ingredients	Country	Brand
Rank 1	4.33%	4.76%	7.36%	7.79%	7.79%	18.18%	6.92%
Rank 2	9.95%	9.95%	11.25%	1.29%	8.65%	28.57%	22.94%
Rank 3	28.57%	26.40%	19.04%	7.79%	26.83%	31.60%	29.87%
Rank 4	25.54%	32.46%	24.24%	17.74%	26.40%	13.41%	27.27%
Rank 5	31.60%	26.40%	38.09%	65.36%	30.30%	8.22%	12.98%

Most of respondents, as a percentage wise 55.2% like if traffic color code is available in the label when they are buying packaged foods. But 18.7% of respondents feel the traffic color code must be there. 20.9% of respondents feel that they are neutral that the code should be or not there.

As a percentage, 27.4% of respondents feel like moderately important about effectiveness of this color code system for consumers' buying perceptions. 26.1% of respondents feel that it is extremely important and 19.1% of respondents feel it is important very much. But 13% of respondents feel that it is slightly important.

230 responses

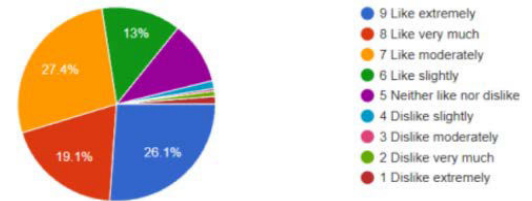


Figure 1. Summary chart to importance of effectiveness of the color code system for consumer's buying perception

According to the customer survey can be concluded that there is no statistically significant relationship between independent variables (gender, age group, education level and academic discipline) and awareness of traffic light labeling system and nutrition information on packed food labels among young generation in Sri Lanka (P value > 0.05).

#### IV. CONCLUSION

Traffic light labeling system and other information on packed food labels such as price, quantity, manufacture date, expiry date, ingredients, country and brand on packaged foods are very important because people can get a brief knowledge about the food. The survey investigated the awareness of traffic light labeling system and nutrition information on packed food labels, among young adults who are from 15 - 29 years of age in Sri Lanka. It can be concluded that there is no statistically significant relationship between independent variables (gender, age group, education level, academic discipline) and awareness of traffic light labelling system and nutrition information on packed food labels among the young generation in Sri Lanka. The highest percentages (74.8%) of respondents are aware of the color light labeling system. There is good awareness among the youth (age group between 15-29) in Sri Lanka and this system needs to be developed to the older generation as well.

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