Assessment of Consumer Awareness on Food Labels and the Effect of the Level of Awareness on Buying Behaviour of Consumers in Jaffna District

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Abstract— Food labels present a set of vital information such as date of expiry, nutritional data to the consumers which influence their purchasing. The present study was conducted to assess the awareness on food labels and the effect of the level of awareness on the buying behaviour of consumers in Jaffna district. A questionnaire was used to collect information from a random sample of 260 consumers purchasing pre-packaged foods at super markets and retail shops in Jaffna district. The data were analysed using SPSS Package to determine associations between various socio-demographic factors and the use of food label information. It was found that 92% of the Jaffna consumers are aware of the information provided on the food labels.89.5% of participants considered the dates of expiry and manufacture were the most important information. The percent participants considered , list of Ingredients, nutritional information, instructions for use, health warnings and health claims were 60.3%, 59%, 51.9%, 49.4% and 46.9%respectively. It is noteworthy that the consumers assigned less importance to the country of origin, special food characteristics and serving size (47.7%, 39.3% and 35.6%, respectively). Awareness and use of food label information were significantly associated with level of income, age, occupation and level of education of respondents. The respondents with high monthly income, professionals, of old age (>65 age) and postgraduates identified nutritional information, health claims and health warnings as the most important labelling parameters. Consumers placed high importance for price (53.5%) and brand (43.1%) of the products. Brand is highly preferred by 15-25 years age groups and by graduates and postgraduate students. Low income group paid more attention to price of the product. The outcomes of the study are helpful for food companies in deciding which type of information placed on the food labels influence the consumers most in making rational food choice.

I. INTRODUCTION

Consumers are increasingly concerned about their health and general well-being with the improvement of living standards. Labels on food packages provide important information such as date label, nutritional information, health warnings and net weight (Heroux *et al.*, 1988). Data on the level of awareness on food label information among the consumers of Jaffna district and as to how the labelling information influences their buying behaviour is scanty. This study was carried out to determine the level of awareness on information provided on the labels of packaged foods and to determine the factors affecting the purchasing decision among consumers in Jaffna district.

II. METHODOLOGY

A survey was conducted using a structured questionnaire across the Jaffna district taking a random sample of 260 consumers. Data was analyzed using SPSS (Statistical Package for Social Sciences) version 16.0. Mann- Whitney U Test and Kruskal- Wallis H Test were used to analyze ranked data. Ranking was done in ascending order for importance giving to food label information (1-Most important, 2- Somewhat important, 3- Less important, 4- Not important).

III. RESULTS AND DISCUSSION

A. Socio-Demographic characteristics of the respondents

Table 1 shows socio-demographic characteristics of the sample covered in the survey. Females constituted 141 (54.2%) of all respondents. Most of the respondents 100 (38.5%) are in the age group of 26-35 years, 94 (36.2%) earning monthly income 20,001-30,000 SLR, graduates 113 (43.5%) and government servants 85 (32.7%).

Table 1: Socio-demographic characteristics of the sample surveyed

Socio demographic characteristic		Frequency	Percentage
Gender	Male	119	45.8
	Female	141	54.2
Age Groups	15-25	55	21.2
	26-35	100	38.5
	36-45	35	13.5
	46-55	28	10.8
	55-65	27	10.4
	>65	15	5.8
Monthly Income (SLR)	Less than 10,000	26	10
	10,000-20,000	74	28.5
	20,001 -30,000	94	36.2
	30,001 – 40,000	37	14.2
	More than 40,000	29	11.2
Level of Education	Up to O/L	56	21.5
	Up to A/L	67	25.8
	Graduate	113	43.5
	Post graduate	24	9.2
Occupation	Student	42	16.2
	Professional	32	12.3
	Govt. Servants	85	32.7
	Private Sector	25	9.6
	Self Employed	35	13.5
	Unemployed	41	15.8

B. Level of importance assigned to the facts found in food label

Result indicated that 92% (n=239 out of 260) of the respondents read the food label information. Table 2 shows that Information on the date of expiry and manufacture were considered very important by 89.5% of the respondents. It showed that consumers were more interested in date of manufacture and expiry than any other information on food label. This result is similar to the finding of Tessier *et al*. (2000) who reported that the date of manufacture and expiry were the most commonly sought information on the food labels on the wide range of food products amongst Scottish consumers Sabbe *et al., (*2009) also reported that expiry date was commonly used by consumers as an indication of freshness, shelf life and food safety across a range of foods.

Table 2. Level of importance assigned to the facts found in food label (n=239)

Label Facts	Most important	Some what important	Less important	Not important
List of ingredients or contents of the food	144 (60.3)	69 (28.9)	17 (7.1)	9 (3.8)
Nutritional information	141 (59)	65 (27.2)	26 (10.9)	7 (2.9)
Expiry Date/ Date of manufacture (Date label)	214 (89.5)	21 (8.8)	4 (1.7)	0 (0)
Information about serving size	46 (19.2)	68 (28.5)	85 (35.6)	40 (16.7)
Health claims	12 (46.9)	74 (31.0)	38 (15.9)	15 (6.3)
Net Weight/ package Size	82 (34.3)	120 (50.2)	27 (11.3)	10 (4.2)
Health warnings	118 (49.4)	64 (26.8)	24 (10.0)	33 (13.8)
Short phrases about the food special characteristics	26 (10.9)	76 (31.8)	94 (39.3)	43 (18.0)
Country of origin	39 (16.3)	60 (25.1)	114 (47.7)	26 (10.9)
Instructions for use	124 (51.9)	75 (31.4)	30 (12.6)	10 (4.2)

Note: Figure in parenthesis denote percentage

60.3% of respondents gave most important for Information about 'ingredients' contained in packaged foods, followed by 59% for Nutritional information, 51.9% for Instruction for use, 49.4% for health warnings and 46.9% for Health Claims, respectively. Mahgoub *et al.* (2007) reported nutrition information was the major factor that motivated consumers to purchase the specific types of foods. Fifty percent of respondents gave

somewhat importance to the package size/Net weight. Less important was given for the information about 'Country of Origin' by 47.7%, 'Short Phrases' about special food characteristics by 39.3% and 'Serving size' by 35.6%. The results indicate Jaffna consumers gave very high importance to information about Date of Expiry and manufacture, food ingredients and nutritional information. Instruction for use, health warnings and Health Claims are other information mostly sought by consumers. Information about 'Country of Origin', 'Short Phrases' about special food characteristics and Serving size' has low priority among these consumers.

C. The effect of consumers'socio-demographic parameters and food label information
i. Association between Socio-demographic characteristic of respondents and List of Ingredients: Results indicate that male and female respondents and Respondents with different age groups did not differ significantly (P >0.05) in terms of important assigned to list of ingredients. Consumers with different income levels shows significant relationship with list of ingredients (P<0.05).Consumers who earning above 40,000 SLR, 30,001-40,000 SLR, and 20,001-30,000 SLR income gave most important to list of ingredients (Mean Rank 112, 112, 113 respectively). Level of education and Occupation showed significant relationship with list of ingredients (P<0.05). Respondents who have postgraduate educational qualification and Professionals gave most important to list of ingredients (Mean rank 81, 99 respectively).

ii. Association between Socio-demographic characteristic of respondents and Nutritional information: Results indicated that male and female respondents did not differ significantly (P >0.05) with nutritional information.
Different income groups showed significant relationship with nutritional information (P<0.05). Respondents with a monthly income of Rs. 30,001-40,000 considered the nutritional information is the most important information (Mean rank 98). Respondents with different age groups, Level of education and occupation showed significant relationship with nutritional information (P<0.05). Respondents have more than 65 years age and 26-35 age groups considered nutritional information is

the most important information (Mean rank 104,107 respectively). Level of education shows positive relationship with nutritional information. Professionals gave most important to nutritional information (mean rank 89)

iii. Association between Socio-demographic characteristic of respondents and Date of manufacture and Expiry: Results indicate that male and female respondents and Respondents with different age groups did not differ significantly (P >0.05) in terms of important assigned to date of manufacture and expiry. Level of education and occupation and different income groups showed significant relationship with date of manufacture and expiry (P<0.05). Level of education shows positive relationship with date of manufacture and expiry. Professionals and respondents who worked in private sector gave most important to date of manufacture and expiry date. (Mean rank 107,107). Respondents who earned monthly income more than 40,000 SLR and 30,001-40,000 SLR considered the date of manufacture and expiry is the most important information (Mean rank 107,107).

iv. Association between Socio-demographic characteristic of respondents and information about serving size: Gender and age significantly with serving size (P>0.05).didn't differ .Importance attached to serving size on food label varies significantly across different income groups of respondents. Respondents who earned income SLR 30,001-40,000 gave most important to serving size (Mean rank 101). Level of education and occupation have significant relationship with serving size (P<0.05). Level of education shows positive relationship with serving size. Post graduates highly gave most important to serving size (Mean rank 93). Government servants and Professionals gave most important to serving size (mean rank 105,115).

v. Association between Socio-demographic characteristic of respondents and Health claims: Results indicated that male and female did not differ significantly (P >0.05) in terms of important assigned to health claims. Importance attached to health claims on food label varies significantly across different income groups of respondents (P<0.05). Respondents with earning monthly income more than 40,000 SLR gave most important to health

claims (Mean rank 96). Respondents with different age groups, Level of education and occupation showed significant relationship with health claims (P<0.05). Respondents with more than 65 age highly gave most important to health claims (mean rank 86). Level of education shows positive relationship with health claims. Post graduates highly gave most important to health claims (Mean rank 96). Professionals gave most important to health claims (mean rank 83).

vi. Association between Socio -demographic characteristic of respondents and Net weight/package size: Net weight/ package size did not significantly differ with Gender, age, income level, Educational level and Occupation (P>0.05).

vii. Association between Socio-demographic characteristic of respondents and Health Warnings: Results indicate that male and female did not differ significantly (P >0.05) in terms of important assigned to health warnings. Importance attached to health warnings on food label varies significantly across different income groups, age groups, education level and Occupation of respondents (P<0.05). Respondents with earning monthly income more than 40,000 SLR gave most important to Health warnings (Mean rank 90).Respondents with more than 65 age highly gave most important to health warnings (mean rank 102). Level of education shows positive relationship with health warnings. Post graduates highly gave most important to health warnings (Mean rank 78). Professionals gave most important to health warning (mean rank 68).

viii. Association between Socio-demographic characteristic of respondents and Short phrases about food special characters: Results indicate that male and female respondents and Respondents with different age groups did not differ significantly (P >0.05) in terms of important assigned to short phrases about food special characters. Importance attached to short phrases about food special characters on food label varies significantly across different income groups, Level of education and occupation of respondents (P<0.05). Respondents with earning monthly income more than 40,000 SLR gave most important to short phrase about food characters (Mean rank 96). Level of education shows positive relationship with short phrases

about food special characters. Professionals gave most important to short phrases about food special characters (mean rank 84).

ix. Association between Socio- demographic characteristic of respondents and Country of Origin: Gender and age didn't differ significantly with Country of Origin (P>0.05). Income level, Level of education and occupation have significant relationship with country of origin (P<0.05). Respondents with earning income 30,001-40,000 SLR gave most important to country of origin (Mean rank 106). Level of education shows positive relationship with country of origin. Post graduates highly gave most important to that (Mean rank 94).Government servants gave most important to country of origin (Mean rank 99).

x. Association between Socio- demographic characteristic of respondents and Instruction for Use: Instruction for use did not significantly differ with Gender, age group and Educational level (P>0.05). Respondents with 20,001-30,000 SLR monthly income level (Mean rank 100) and Government servants and professionals (Mean rank 104,106) gave most important to instruction for use.

D. Factors that influence consumers' decision to purchase a food products
The results indicate that Price (53.5%) and Brand (43.1%) of the food products are the major factors that influence most consumers' decision to purchase of food products. Similar finding was reported by Sunshil Kumar et al. (2011), that brand of the food product plays important role with 42% of respondents.
Age groups, Educational level and Occupation showed significant relationship with brand (P<0.05).

Respondents of 15-25 years age group paid significantly more attention to brand of the food product (Mean rank 108).Consumers with graduate and postgraduate degrees considered the brand is the most important factor to purchase the food product (Mean rank 110,112). Unemployed and self employed people paid least attention to the brand of the food product (Mean rank 162,169).

Significant relationship between income of the respondents and the attention they pay to the price

of the food product indicates that as the income levels rise people start paying less attention to the price of the food product. People who earning less than 10,000 and 10,001-20,000 SLR monthly income level paid most important to the price of the food product (Mean rank 112,118) than who earning more than 40,000 SLR income level (Mean rank 166). "For the lowest income group, food price was the major determining factor of the types of foods they buy" (Mahgoub et al., 2007).

Iv. CONCLUSION

Ninety two percent of the Jaffna consumers are aware of the information provided on the food labels. They assign very high importance to information about date of expiry and manufacture, 'ingredients' contained in packaged foods, nutritional information, instruction for use, health warnings and health claims. The results provide a clear indication that label information is generally gender insensitive. Though, it shows significant with age, level of education, income level and occupation of the respondents. They also have strong preference for price and brand of the product. Brand of the product is highly preferred by 15-25 years age groups, who have graduate and postgraduate students. Low income group highly consider the price of the product during purchasing. These outcomes are helpful for food companies in designing which type of information on the food labels mentions most to aware consumers in making rational food choice.

v. REFERENCES

Heroux, L., Laroche, M. and McGown, K. L. (1988) Consumer Product Label Information Processing: An Experiment Involving Time Pressure and Distraction, *Journal of Economic Psychology*, 4: 263-272.

Mahgoub S. E., Lesoli, P. P., and Gobotswang, K. (2007) Awareness and Use of Nutrition Information on Food Packages among Consumers in Maseru (Lesotho), *African Journal Of Food, Agriculture, Nutrition and Development*, 7(6): 1-16.

Sabbe, S., Verbeke, W. and Van, D. (2009) Perceived Motives, Barriers and Role of Labelling Information on Tropical Fruit Consumption: Exploratory Findings, *Journal of Food Products Marketing*, 15(2): 119-138.

Sushil Kumar., and Jabir Ali. (2011) Assessing Consumer Awareness and Usage of Food Labels and Influences on Food Buying Behavior.21st Annual IFAMA Forum and Symposium, 10.

Tessier S, Edwards, C.A., Morris, S.E. (2000) Use and knowledge of food labels of shoppers in a city a high proportion of heart disease, Consumer Studies & Home Economics, 24(1): 35–40.