IMPACT OF NUTRITIONAL LABELLING ON CONSUMER BUYING BEHAVIOUR- A STUDY WITH SPECIAL REFERENCE TO KOTTAYAM TOWN

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ABSTRACT

Nutritional labelling includes any written, printed or graphic matter that is present on the label, accompanies the food, or is displayed near the food, including that for the purpose of promoting its sale or disposal. The main aim of nutrition labelling is to provide the information one needs to make healthy choices about the foods one eat. Nutritional labelling is found to affect the consumer buying behaviour significantly. The provision of nutrition information may allow consumers to switch consumption from unhealthy products in food categories to healthy products more easily. The significance of study is rapidly increasing due to fact that Indian consumers are in the process of changing consumption buying behaviour especially regarding food items. Consumers' ability to select their diet depends partly on the quantity and quality information available through a variety of sources including nutritional food labels. The study is designed to explore impact of nutritional labelling on consumer buying behaviour.

Keywords: Nutritional Labelling, Consumer Buying Behaviour.

INTRODUCTION

India, one of the fastest developing economies, is witnessing huge growth in the consumption of processed food. However witnessing recent records, dietary intake in India is showing a trend towards higher fat and carbohydrate content which is a cause of great concern. Health care professionals believe that proper awareness and use of food labels can help consumers adopt a balanced diet. Nutritional labels can simplify the whole concept of healthy eating. Nutritional labelling includes "any written, printed or graphic matter that is present on the label, accompanies the food, or is displayed near the food, including that for the purpose of promoting its sale or disposal".

STATEMENT OF PROBLEM

Non-communicable and lifestyle diseases are spreading and causing death in Kerala due to lack of healthy food habits. So it is really important to know about the nutritional labelling, in order to keep a balanced diet. It is also an important advertising tool which helps the producers to make their product stand out among competitors. The project is designed and conducted to study the impact of nutritional labelling on consumer buying behaviour with special reference to Kottayam Town.

OBJECTIVES

The primary objective of the project is to study the impact of nutritional labelling on consumer buying behaviour. This main objective is studied and analysed with the help of following secondary objectives

•   To identify consumers level of information and usage of information given on labels.

•   To analyse the factors that influence consumer willingness to pay for nutritional labelling.

•   To study the product attributes which takes precedence while selecting the product and purchase intentions of consumers.

HYPOTHESES OF THE STUDY

H1: There is no significant difference in the level of information of consumers on nutritional label based on their a) gender, b) education level

H2: There is no significant difference in the usage of information of consumers on nutritional label based on a) gender b) education level

H3: There is no significant difference in the product attributes that take precedence for purchase decision of consumer based on specific health concerns they have.

RESEARCH METHODOLOGY

The research design adopted for the study is descriptive, analytical and exploratory. The first stage of study includes collecting the secondary data from magazines, newspapers, websites etc. Second stage is of data collection through primary source. Out of the population consisting of consumers of food products, a sample of 125 consumers from Kottayam Town was selected. The primary data is collected through Google form document. Primary data collected is analysed using Percentage Analysis, ANOVA and Independent sample t test.

LITERATURE REVIEW

Lisa M Soederberg Miller (2015), found out that whether consumer nutrition knowledge is important for communication of nutrition information through labels on packaged foods. A cognitive processing model posits that consumers with prior knowledge are more likely to use label information effectively. Consistent with this model, it was found that nutrition knowledge provides support for food label use.

Abdul Latiff (2015), conducted a study which validates the impact of food labels among Malaysian consumers using an extended theory of planned behaviour model (TPB). This study contributes to and extends the understanding of food labelling and purchasing behaviour, identifying the rationales for purchasing of food products with labels that contains information such as logo, ingredients, and nutritive value.

Priyadarshini (2014), conducted a study which found that consumers in India possess satisfactory level of awareness about different types of information on the food labels displayed on packaged food products, however, usage of such information as one of the criteria while purchasing packaged food product was relatively low.

Osei Mensah J., Lawer Dede Rose and Aidoo, R. (2012), conducted a study which showed a positive relationship was observed between male, youthful (31-45) consumers and consumer who were never been married and their use and understanding of food label information.

Gwantwa Samson (2012), conducted a study of Awareness and use of pre-packaged food labelling information was found to be low among consumers in Ilala municipality. Findings showed that circumstances in which consumers purchase pre-packaged food without consulting the respective labels include time constraint and purchase of routine food products.

ANALYSIS OF DATA

TABLE 1-Level of information

Level of information	Weighted average values
Product Brand	4.144
Ingredients List	4.128
Sugar Content	3.976
Fat Content	4.008
Calories content	4.064
Manufacturer's name	4.096
Cooking Instruction	4.208
Warnings	4.32

Source: Primary data

It is clear from Table 1   that respondents mostly read information about warnings followed by cooking instructions, product brand, ingredients list, manufacturers' name, calories content, fat content.

TABLE 2-Usage of information on nutritional labels

Usage of info	Weighted average values
Decide which brands to buy	4.096
Compare types of food	4.232
Check advertising claim	3.936
Check fat contents	3.96
Check calorie contents	3.96
Determine suitability for family consumption	4.208
Help in meal planning	4.064
Determining serving size	4.032
Get storage instructions	4.04
Get cooking instructions	4.104

Source: Primary Data

From the Table it is clear that respondents use nutritional information mostly for comparing type of food followed by determining suitability of family consumption, getting cooking instruction, deciding which brands to buy.

TABLE 3-Sources of information

Sources	Frequency	Per cent
Newspaper	28	22.4
Family members	20	16.0
Television and radio	16	12.8
Health professionals	32	25.6
Internet	29	23.2
Total	**125**	**100.0**

Sources: Primary Data

It is clear from the Table, 22.4 per cent respondents use newspaper for interpretation of nutritional labelling, 16 per cent get information from family members, 12.8 per cent from television advertising and radio advertising, 25.6 per cent from health professionals/dietician/family doctor and 23.2 per cent from internet.

TABLE 4-Product attributes that take precedence while selecting the product

Product attributes	Weighted average values
List of ingredients	4.28
Nutritional value	4.256
Calories	4.072
Vegetarian	4.104
Allergy advice	4.28
Warning	4.376
Manufacturer's name	3.92
Country of origin	3.968
Best before date	4.616
Storage information	4.216
Using instruction	4.264
Information about size of serving	4.136

Source: Primary Data

It is clear from the Table 4 that product attribute that take precedence while selecting the product mostly is best before date followed by warnings, list of ingredients and allergy advice.

Table 5-Respondents' willingness to pay a premium price for a nutritional labelled product compared to a substitute

Premium price	Frequency	Per cent
Willing to pay	79	63.2
Not willing	46	36.8
Total	**125**	**100.0**

Source: Primary Data

It is clear from the table that 63.2 per cent are ready to pay premium price while 36.8 per cent responded negatively.

TABLE 6-Motives behind paying a premium price

Motives	N	Maximum	Minimum	Mean	Rank
Lose weight and calories control	79	1	7	4.16	5
Balanced diet	79	1	7	3.53	2
Concern about harmful ingredients	79	1	7	3.34	1
Understand information on food content	79	1	7	3.73	3
Risk about allergies and diseases	79	1	6	4.03	4
To find about food safety	79	1	7	4.46	6
Concerned about families health	79	1	7	4.75	7
Valid N	79				

Source: Primary Data

From Table 6, it is found that Nutritional Labelling 'helps in knowing about harmful ingredients that can be present in food' followed by 'helps in finding about a balanced diet', as the mean values are the minimum in these cases.

TABLE 7- Motives that discourage respondents to pay a premium price

Motives	N	Minimum	Maximum	Mean	Rank
Wastage of money	46	1	4	2.13	2
Don't trust in nutritional information	46	1	4	1.70	1
Not concerned about health of families	46	1	3	2.50	3
Others	46	1	4	3.67	4
Valid N	46				

Sources: Primary Data

From Table 7, it is found that respondents 'don't trust nutritional information 'and considers it as 'wastage of money', as the mean values are the minimum in these cases.

TESTING OF HYPOTHESES

H0: **There is no significant difference in the level of information of consumers on nutritional label based on their a) gender, b) education level**

TABLE 8- Gender wise analysis of level of information

	Gender	N	Mean	Std. Deviation
Level of information	Male	61	4.1066	.64825
	Female	64	4.1289	.52278

Source: Primary data

TABLE 9-Independent Sample T test

Gender	t	df	Sig. (2-tailed)
Level of information	-.213	123	.832

Source: Table 8

Since from the Table it is clear that the significance value is more than 0.05, the Null hypothesis is accepted. It indicates that among males and females there is no significant difference in level of information of consumers.

TABLE 10-Educational qualification of respondents and level of information

Education	Mean	N	Std. Deviation
10th	3.7500	4	.72887
12th	3.7778	9	.76490
Graduate	4.1812	69	.58534
Post graduate	4.1705	33	.52181
Others	3.9625	10	.46789
Total	**4.1180**	**125**	**.58508**

Source: Primary data

TABLE 11-ANOVA TABLE

Education	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.191	4	.548	1.633	.170
Within Groups	40.256	120	.335		
Total	42.447	124			

Source: Table 10

Since from the Table it is clear that the significance value is more than 0.05, the Null hypothesis is accepted. It indicates that among respondents of different educational level there is no significant difference in level of information of consumers.

H0: There is no significant difference in the usage of information of consumers on nutritional label based on a) gender b) education level

TABLE 12-Gender wise analysis of usage of information

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Usage of information	Male	61	4.0590	.62859	.08048
	Female	64	4.0984	.65259	.08157

Source: Primary data

TABLE 13-Independent Sample T Test

Gender	t	df	Sig. (2-tailed)
Usage of information	-.344	123	.732

Source: Table 12

Since from the Table, it is clear that the significance value is more than 0.05. It indicates that among male and female there is no significant difference in usage of information of consumers.

TABLE 14-Educational qualification of respondents and analysis of usage of information

Education	Mean	N	Std. Deviation
10th	3.8000	4	.77028
12th	3.7333	9	.82916
Graduate	4.1478	69	.61515
Post graduate	4.0091	33	.62268
Others	4.2600	10	.57388
Total	**4.0792**	**125**	**.63871**

Source: Primary data

TABLE 15-ANOVA TABLE

Education	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.202	4	.551	1.366	.250
Within Groups	48.383	120	.403		
Total	50.586	124			

Source: Table 14

Since from the Table, it is clear that the significance value is more than 0.05. It indicates that among respondents of different educational level there is no significant difference in usage of information of consumers.

H0: There is no significant difference in the product attributes that take precedence for purchase decision of consumer based on specific health concerns they have.

TABLE 16-Health of respondents and product attribute that take precedence while selecting the product

Health concern	Mean	N	Std. Deviation
Body weight matter	4.0921	19	.73066
High blood pressure	4.1756	28	.53640
Diabetes	4.2140	37	.54523
None	4.3056	33	.44569
Others	4.1562	8	.77975
Total	**4.2073**	**125**	**.56307**

Source: Primary data

TABLE 17-ANOVA TABLE

Health Concerns	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.621	4	.155	.482	.749
Within Groups	38.693	120	.322		
Total	39.314	124			

Source: Table 16

Since from the Table, it is clear that the significance value is more than 0.05. It indicates that among respondents having different health concerns, there is no significant difference in product attributes that take precedence for purchase decision of consumers.

Findings

➢ Respondents mostly read information about warnings followed by cooking instructions, product brand, ingredients list, manufacturers' name, calories content, fat content.

➢ Respondents use nutritional information mostly for comparing type of food followed by determining suitability of family consumption, getting cooking instruction, deciding which brands to buy.

➢ Majority of respondents use Medias for interpretation of nutritional labelling.

➢ Study indicates that among respondents of different a) gender and b) educational level, there is no significant difference in level and usage of information of consumers by using Independent sample T test and ANOVA respectively.

➢ 63.2 per cent are ready to pay premium price while 36.8 per cent responded negatively. Nutritional Labelling 'helps in knowing about harmful ingredients that can be present in food' was reason for positive response. Respondents 'don't trust nutritional information' which is major factor leading to non payment of premium price for nutritional labelled foods compared with a substitute.

➢ Product attributes that take precedence while selecting the product mostly is best before date followed by warnings, list of ingredients and allergy advice.

➢ Study indicates that among respondents having different health concerns, there is no significant difference in product attributes that take precedence for purchase decision of consumers by using ANOVA.

CONCLUSION

From the analysis and interpretation, it can be concluded that consumers in Kottayam Town are reading nutritional labels and these labels influence their purchase decision. They examine these nutritional labels frequently and also try to interpret this information from different Medias. They use nutritional information mainly for comparing type of foods and they consider importance to best before dates, warnings, list of

ingredients etc. Majority of them are willing to pay a premium price for a nutritional labelled product compared to a substitute. Therefore it can be concluded that nutritional labelling have an impact over consumer buying behaviour because of the fact that it helps to know what is in food they eat.

SUGGESTIONS

• By using large fonts in the labels, more and more consumers will have the tendency to check the nutritional labels

• Managers of food companies may make consumers aware nutritious products offered by the organisations and should urge the professionals to disseminate information about the company's products to their clients.

• Information providing articles, magazines, newspaper advertising, television and online advertising may be encouraged.

• Standardised and applied rules may be implemented regarding nutritional labelling

• Effective educational programmes may be conducted so that consumers are taught how to use labels skilfully.

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