AWARENESS OF CONSUMERS ABOUT INDIAN PRE-PACKAGED FOOD LABELLING- A STUDY OF NORTHERN INDIA

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Abstract- **Indian food industry has played an indispensable part in Indian economy. With the advent of transportation, this sector has shown drastic development. Its scope is not limited to the country alone but has crossed the borders. So a number of regulations were framed to match Indian food labelling standards with international standards. With time various laws were introduced in the number of states to keep a check on the anti social elements. Purity, freshness and health seem to be compromised and adulteration of food stuffs became widespread. For the onslaught of food adulteration, a dire need for the Central legislation was felt which could bring with itself an era of hope and relief to the consumers [(1)]. This hope was sustained by the bill that was passed in 1954 which replaced all local food adulteration laws and introduced The Prevention of Food Adulteration Act, 1954. The preamble of PFA emphasised only on prevention of food adulteration. Slowly its paradigm shifted to a more comprehensive approach by enlarging its parameters, thereby, including in its preview the countless Government ministries issuing separate orders at different points of time. It remained into place for almost five decades. On finding it overlapping and inconsistent, the new Act "Food Safety and Standards Act, 2006" was introduced that replaced PFA to meet the changing environment and rapid changing lifestyle of the people. It was designed with a purpose to eradicate duplication of orders and establishing single reference point feasible for all matters. FSSA is prevalent even today and working in the direction it was designed to work. Thus history of Indian pre-packaged food labelling has crossed a number of stages and an effort has been made to depict those stages through this study.**

Key Words- **FSSA, FSSAI, Food labels, Allergic, Pre-packaged, Adulteration.**

1. INTRODUCTION

With the advent of liberalization and globalisation, Indian industry sector has taken a huge leap and has a huge potential for further growth and development to play a noteworthy position in the Indian economy. This holds true for especially the food processing industry which is often quoted as a 'sunrise industry' because of its huge scope of contributing towards the country's resources. India is holding the position of the second-largest producer of food, and has a potential to hold the better position in the global scenario of food and agriculture according to a survey by Corporate Catalyst India (**Halde, P., et al, 2012**). If we try to peep back in history, there was a world where even rapid transportation was missing leaving no option for the consumers but to depend upon the food that was made from fresh ingredients which were locally produced, purchased, and locally consumed. Government inspection service or labelling was never relied upon for ensuring the quality of the food they consumed. Rather the quality of the food was judged by looking at it, feeling it, smelling it, and poking at it. Thanks to the advent of the railroad and steamship which led to rapid transportation facility which when combined with refrigeration allowed food to reach and be sold in the markets far away from the source of production (**Wakeland, W., et al, 2012**). This change brought a revolution in Indian food processing industry allowing it to come out of its shell and with the advancement of time, became the most progressive industry with the potential hub for the new entrepreneurial opportunities. It attracted many foreign companies for the investment, requiring this industry to develop various regulations to check and regulate its standards to match its national and international levels. It necessitated the government to regulate this industry by enforcing several laws which cover various aspects like packaging, labelling, standardisation, grading, licensing, etc, which are normally required to start up and run a food business.

With the passage of time, certain laws were introduced in the number of states to keep a check on the anti social elements but purity, freshness and health still seemed to be compromised and adulteration of food stuffs became widespread, consistent and rampant. For the onslaught of food adulteration, the new Act "Food Safety and Standards Act, 2006" was introduced that replaced PFA to meet the changing environment and rapid changing lifestyle of the people. This Act integrated and replaced 8 other food related laws which were applicable prior to enforcement of FSSA (**Sarma, K. 2017**). The Food Safety and Standards Act (FSSA) is a comprehensive enactment, derived out of the desperate need for a consolidated food law for implementing and enforcing food regulations with an aim to ensure consumer's health, well being and safety. The Food Safety and Standards Authority of India (FSSAI) was shaped under this Act to handle all the food related issues of improvising scientific standards for the manufacture,

sale, distribution, import and export of food articles (**Mann,G. 2018**). Being an apex food regulator, FSSAI brought about a major transformation in the food regulatory scenario of India by harmonising its food standards with the international regulations. So, to meet the international challenges and to keep a check on the various malpractices, FSSAI comprises of strict norms in the direction of packaging and labelling known as "Food Safety and Standards (Packaging and Labelling) Regulations, 2011" (**FSSAI, 2019**).

On a first glance, when a buyer looks at a product in the store, the element on which he focuses is its label**.** Labelling basically introduces a product to its consumer by providing comprehensive information and acting as a connecting link between the two. It is also a great way of advocating the product by emphasising its benefits and creating its image in the minds of its consumers. Food labelling has been characterized as the most influential factor during the consumer's purchasing process as it provides all the information the consumer seeks for at the time of decision making (**Peters, A., et al, 2014**). Food labels may serve the purpose of public health tool as it assists in promoting balanced diet thereby enhancing the consumer's ability to better comprehend the nutritional values of food, enabling them in making healthy informed food choices, thus impacting public health in a positive manner (**Madhvapaty, H & Gupta, A. D 2015**). Wrongly labeled food product makes it impossible for the consumers to assess its quality and safety. In case, the labels do not cater the regulations, thereby omitting to offer complete information or is available for sale with false, misleading or deceptive labels, the product falls under the category of misbranded food which may attract penalty (**Priya, K. 2019**). With the opening up of markets, the consumers are being deceived by the food labels. Due to lack of time, interest and awareness consumers often skip to read the labelling completely or do not spend sufficient time reading and understanding the disclosed information (**Goyal, R & Deshmukh, N. 2018**). In such cases their buying behaviour is either driven by emotions or peer spending behaviour. Their buying behaviour may be driven by a reason or an emotion. This further necessitates the need of detailed and informative food labelling so as to deliver clear and informative nutritional information on all packaged food products.

2.   LITERATURE REVIEW

Sejal Jain, R Gomathi & Sitanshu Sekhar Kar (June 2018) conducted a cross sectional survey from 153 respondents from 3 super markets of Puducherry. The compliance of these products with the general requirements of the food labels were studied and found out that 100% compliance in respect of date of manufacture, expiry, or best before use was observed with branded products faring better than non branded products in all aspects except veg/non-veg declaration. However nutritional information compliance was not satisfactory. **Gorski Findling MT, et al (April 2018)** tried to explore 1247 consumers on the basis of six conditions of single traffic light; multiple traffic light; no label control; Facts Up Front; NuVal; and 0–3 star ranking. All labels assisted the consumers in evaluating the nutritional components in food as compared to no label, but NuVal and multiple traffic light labels gave better results in comparing the products in terms of health. **Fahri Karakaya, et al (2018)** conducted a survey of 300 respondents of USA to test their involvement in comprehension of nutritional information. It was assumed that even though nutrition, size and colour information on food labels are displayed as per the standardised instructions laid down by FDA, still consumers find some food labels more confusing. This study suggested on floating of public policies for government and the food manufacturers which may help in motivating the consumers in making an appropriate use of nutritional information. **Gaia Claudia Viviana Viola, et al (Dec 2016)** have tried to find an answer to the chronic health problems existing in today's era due to unhealthy eating habits not only in the western countries but also the developing countries growing economically. They felt the importance of the food labels in moulding their unhealthy food habits into wholesome dietary patterns. To achieve this goal it was important to have an idea of the consumers' knowledge and awareness. This study on the basis of the research suggested for inducing the customers on using nutritional information on food labels in making healthier choices. **Lisa M. Soederberg Miller & Diana L. Cassady (2015)** have tried to examine 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. **Caroline Winter (Nov 2015)** has made an attempt in his research to understand the importance of labelling in helping the consumers in making ethical food choices. He concluded that food labelling does not fulfil ethical standards and consumers could hardly understand what these ethical spheres mean. His study clearly indicated that food labelling does not empower shoppers to make 'ethical food choices'. **Dr. Archana Singh & Nivi Srivastava (July 2015)** have tried to analyse the understanding of food labels among consumers and to explore the reasons behind usage / non-usage of food labels, a structured schedule based survey was used for the purpose of the study. By the help of this research, manufacturer can give more emphasis on label; he can make it more customers friendly and attractive so it will also help it to draft consumer friendly labels for effective usage. **Emily Smith (Feb 2015)** in her paper has tried to focus on the fact that the element on which the buyer focuses at first, and the most, when looking at a product image, is its label. So, for ecommerce businesses, the correct labelling of products is even more important than in the case of offline businesses. **Sudershan R Vemula, et al (August 2013)** have worked on to study consumer knowledge and use of food labels. A positive association was found between education level and checking various aspects of food labels. Since a majority of people found it difficult to comprehend nutrition information, there is a need to take up educational activities and/or introduce new forms of labelling. **Banerjee, Saikat (May 2013)** have found that consumers attach significant importance to packaging and consumers pay a lot more attention to labels than is generally thought of and this attention to details seem to arise out of a combination of the evaluative importance and the cognitive importance attached to labels. **Manisha Singla (2010)** has concluded that consumers read food label information only for comparing brand rather than for checking nutritional information. Nutritional labels are not popular among the consumers because of small font size, difficult terminology and difficult to comprehend those terms. Television, magazines and friends form the convincing source of assessing nutritional information. **S.Storcksdieck, et al (2004)** had tried to understand the significance of nutrition food labelling in making healthy dietary choices by the consumers and their shopping behaviour. **Alan S. Levy & Sara B. Fein (1998)** analysed that 78% of the consumers were able to accurately compare

two products, 58% could evaluate nutrient claims, 45% balanced the nutrients in their daily diet, and 20% could calculate the contribution of a single food in the daily diet. **Alan S. Levy, Sara B. Fein and Raymond E. Schucker (1992) focussed their research on** five nutrition label formats and concluded that some formats were preferred for its easy comprehension by some consumers disliked by others for its inadequate information. Age, education, and race had significant impact on the performance measures while gender impacted preference. **Mary Bender and Brenda M. Derby(1992)** explored that there was hardly any increase in the consumers using ingredient list between1982 to 1986 but there has been significant increase in the users of the nutrition label. **Christine Moorman (Feb 1990)** on the basis of MANOVA & MANCOVA tests concluded that presence of both types of characteristics actually improves the quality of decision taken. Moreover, in spite of the consumer differences stimulus characteristics continue to facilitate the process of information utilization and decision making.

3. PURPOSE OF THE STUDY

In India, food labelling standards are still in the stage of infancy. In terms of product quality, safety and food values suppliers provide very limited information. Indian standards are much less stringent and detailed as compared to developed western world. However, with growing liberalisation and awareness, people are demanding disclosure compared to developed countries. People having health problems require them to intake certain amount of nutrients while others are allergic refraining them from certain food ingredients. Some foods have specific storage conditions while others have specific preparation instructions, etc. But the issue that arises is whether our regulations cater to their requirements and are the Indian consumers enlightened on how to use information on food labels.

4. RESEARCH GAP

Many studies have been undertaken by the researchers on the labelling of pre packaged food and perception of the consumers towards food labels. But Literature review suggests that whatever research has been done, it has been conducted mainly in European and American countries and almost negligible research is available in India. Further, studies are confined mainly to other parts of the country and no research on perception of consumers is available in Northern India. So, the present study relates to the perception of consumers of Northern India to understand their awareness level and behaviour towards food labels.

5. OBJECTIVES

This study aims at exploring, assessing and analysing the various aspects of labelling pre-packaged food:
1.   To study consumer awareness through the sources of Nutritional Information used by the consumers.
2.   To analyse consumer awareness by the importance placed by them to the Various Aspects of Labelling
3.

6. RESEARCH METHODOLOGY AND DESIGN

Data Collection- Since the nature of the present study is descriptive and analytical; data has been collected from primary as well as secondary sources. Structured questionnaire has been framed to extract information from the various consumers.

Study Location- This study covers three states of Northern India i.e. Punjab, Haryana and Himachal Pradesh.

Sample Size- In all a sample of 300 participants has been studied. The consumers chosen have different demographics in terms of gender, age, education, occupation, income, marital status, etc.

Sampling Technique- Multistage stratified sampling technique has been applied to draw the representative sample.

Research Design- Descriptive and Analytical research design has been used in this study.

Data Analysis Techniques- Descriptive analysis will be based on several demographics. Mean, standard deviation, Chi-Square, T-Test, ANOVA and Post hoc tests have been applied for the analysis of the data to help achieve the above stated goals of this study.

7. ANALYSIS & FINDINGS

In this section descriptive analysis of the respondents has been done in order to understand the background of the consumers under study and also to understand their profile, being the non-allergic respondents. For this a structured questionnaire is framed and in all, 300 consumers are studied to arrive at the conclusion. The questionnaire includes a section which extracts the information about the consumer's profile and the demographic variables which explain their details like their age, gender, educational qualification and annual income. It also highlights their shopping pattern keeping in mind their awareness level.

7.1 DEMOGRAPHIC PROFILE

The demographics of the respondents have been studied through the questionnaire which describes the details of the population. The questionnaire includes a section which extracts the respondent's demographic status by studying the following variables like age, gender, education level, occupation, marital status, income, etc. The information extracted has been summarised and presented in the table 7.1.1 below

Table 7.1.1: Demographic Analysis of Respondents

Gender		
Demographic Predictors	**Frequency(N)**	**Percentage**
Male	116	38.7
Female	184	61.3
Total	**300**	**100**

Age Profile		
Below 25 years	75	25.0
26-40 years	151	50.3
Above 40 years	74	24.7
Total	**300**	**100**
Educational Profile		
No Formal Education	3	1.0
Matric	9	3.0
Under Graduate	49	16.3
Graduate	68	22.7
Post Graduate	171	57.0
Total	**300**	**100.0**
Average Annual Income		
Below ₹ 2,50,000	91	32.3
Between ₹2, 50,000 – ₹ 5, 00,000	87	27.0
Between ₹5,00,000 -₹ 10,00,000	74	24.7
Between ₹10,00,000 - ₹20,00,000	33	11.0
Above₹ 20,00,000	15	5.0
Total	**300**	**100.0**

From the above table it is clear that out of the total sample size of 300 consumers, 38.7 percent are the male respondents and 61.3 percent are the female respondents. These consumers belonged to the Northern India, where it is assumed that normally females are the deciding factors in purchasing household groceries. Even in this survey, females outnumbered the males.

Above table also highlights that out of 300 respondents, majority of the consumers belong to the age group of 26-40 years with 50.3 percent of the respondents, then next 25 percent of the respondents belong to age group Below 25 years and finally 24.7 percent of the respondents belong to the age group Above 40 years.

Education, being considered as one of the important aspects affecting the awareness level of consumers, has been given due weightage. This aspect is studied by dividing the respondents in five categories depending upon their educational qualification. Above table clearly indicates that majority of the consumers have been found to be highly educated, possessing the post graduate degree with 57 percent of the total. Graduate consumers are found to be 22.7 percent; under graduate consumers are 16.3 percent. Consumers with only matric qualification are few in number with 3% data and without any formal qualification are even less with 3 in number, making just 1 percent of the total data.

The shopping behaviour of the consumers largely depends upon the availability of resources with him. Annual average income very much reflects the resources available with the consumer and so is one of the factors to be determined in this study. Majority have been found to belong to the category of Below ₹2,50,000 annual income with 32.3 percent of the total. 27 percent are falling in the category of ₹2,50,000 – ₹ 5,00,000, 24.7 percent in between ₹5,00,000 -₹ 10,00,000 category, 11 percent in between ₹10,00,000 - ₹20,00,000 category annual income and just 15 respondents with 5 percent of the total enjoyed the annual income above₹ 20,00,000.

7.2. STUDY OF THE AWARENESS LEVEL OF THE RESPONDENTS

Today's consumer is considered to be the king of the market and is assumed to be intelligent and calculative while making the purchases. He is expected to have an insight into the minute details and thus depict a mature and rational behaviour while making the decisions about what to purchase and what not to. He not only gathers the information about the product, its manufacturer, its retailer, the substitutes available and the prices prevailing in the market but also uses this information in his decision making. Although this perception about the modern consumer is the strength of the market today but a need was felt to actually analyse the true picture of the awareness level of the consumers. So, through this study an effort has been made to analyse the degree of consumers' awareness on the basis of data collected from the respondent.

To study consumer awareness about pre packaged food labelling information the following aspects are studied:

1.   **Source of Nutritional Information used by the consumers**- Association between demographics **(Gender, Age, Education Level, and Income)** and the sources of nutritional information is studied by applying **Cross tabs and Chi Square.**

2.   **Importance of Various Aspects of Labelling to the Respondents**- Association between the means of demographics and the importance of various aspects of food labelling is studied by applying **T- Test, ANOVA and Post Hoc test**

7.2.1 Source of Nutritional Information Used By the Consumers

The below given table 7.2.1.1 assumes sources of nutritional information of the respondents as an important determinant to decide about his level of awareness.

Table 7.2.1.1: Sources of Nutritional Information

Source	Yes		No	
	N	%	N	%
Television/ Radio	148	49.3	152	50.7
Books, Magazines and Newspapers	105	35	195	65.0
Social Media/ Internet	176	58.7	124	41.3
Nutritionist/dietician/ Doctor	47	15.7	253	84.3
Family and Friends	154	51.3	146	48.7
Leaflets and Hoardings	16	5.3	284	94.7
Others	2	.7	298	99.3

Nutritional diet has been on the cards these days as too much emphasis is being laid by the government and other agencies on having a balanced diet. But to create awareness among the consumers, different modes have been used. Even consumers give different priorities to the different sources of information. Some are considered to be more reliable than others by the consumers. So this information has been made the part of the study to have an idea of which source of information is considered best and most reliable by the consumers. So, on the basis of above table, it has been found that only 49.3 percent rely on television and radio as their source of information. 35 percent rely on books, magazines and newspaper, 58.7 percent use social media as their source of information, 15.7 percent depend on doctors and nutritionist, 51.3 percent find friends and relatives more reliable, only 5.3 percent use leaflets and hoardings as their source of information and there are only 2 respondents making .7 percent of the total who rely on some other source of information to decide what to buy and what to avoid.

The effort has also been made to understand association between the Gender of the consumers and the sources of nutritional information preferred by them by applying Chi-Square test. The following hypothesis has been formulated to study the association between these two variables.

H_01: **"There is no significant association between the gender of the respondents and their source of nutritional information."**

The table 7.2.1.2 below shows the chi values to study the association between these two variables.

Table 7.2.1.2: Chi- Square: Gender and Sources of Nutritional information

Sources	Assumptions Violated	Pearson Chi Square Test		Likelihood Ratio		Relationship of Strength	
		Value	P	Value	P	PHI/ Cramer (φ)	P
Television/ Radio	No	.177	.674	-	-	.024	.674
Books, Magazines and Newspapers	No	.356	.551	-	-	.034	.551
Social Media/ Internet	No	.540	.462	-	-	.042	.462
Nutritionist/dietician/ Doctor	No	.146	.702	-	-	.022	.702
Family and Friends	No	.339	.561	-	-	.034	.561
Leaflets & Hoardings	No	1.331	.249	-	-	.067	.249

Above table 7.2.1.3 clearly shows that sig. value of none of the six sources i.e. Television/ Radio, books, Magazines & Newspapers, Social Media/ Internet, Nutritionist/dietician/ Doctor, Family & Friends and Leaflets & Hoardings have values above .05 and thus are found not to be significantly associated with the gender of the consumers. Their respective sig. values are .674, .551, .462, .702, .561 and .249 and so alternate hypothesis is rejected for these sources of nutritional information and null

hypothesis is accepted for these sources assuming no significant relation between gender and these sources of nutritional information.

Further, phi symmetrical measure is applied. It tests the relationship of strength between the gender of the respondent and the various sources of Nutritional Information. The above table shows that either phi coefficient is negative or less than .067 showing either no association between the gender and the sources of their Nutritional information.

The association between the age of the respondents and the sources of nutritional information preferred by them has also been studied by applying Chi-Square test. The following hypothesis has been formulated to study the association between these two variables.

H₀2: "There is no significant association between the age of the respondents and their source of nutritional information."

The table 7.2.1.3 below shows the chi values to study the association between these two variables.

Table 7.2.1.3: Chi- Square: Age and Sources of Nutritional information

Sources	Assumptions Violated	Pearson Chi Square Test		Likelihood Ratio		Relationship of Strength	
		Value	P	Value	P	PHI/ Cramer (ϕ)	P
Television/ Radio	No	.932	.627	-	-	.056	.627
Books, Magazines and Newspapers	No	12.433	.002	-	-	.204	.002
Social Media/ Internet	No	2.093	.351	-	-	.084	.351
Nutritionist/dietician/ Doctor	No	1.456	.483	-	-	.070	.483
Family and Friends	No	4.839	.089	-	-	.127	.089
Leaflets & Hoardings	Yes	-	-	2.631	.270	.093	.270

Above table clearly shows that sig. value of only one source i.e., Books, Magazines & Newspapers (χ2=12.433, p=.002) which is below .05 is significantly associated with the age of the respondent. So, null hypothesis is rejected for this sources of nutritional information and alternate hypothesis is accepted while the remaining five sources i.e. Television/ Radio (χ2=.932, p=.627), Social Media/ Internet (χ2=2.093, p=.351), Nutritionist/dietician/ Doctor (χ2=1.456, p=.483), Family & Friends (χ2=4.839, p=.089) and Leaflets & Hoardings (χ2=2.631, p=.270) have values above .05 and thus are found not to be significantly associated with their age and so null hypothesis is accepted for these sources.

Further, phi symmetrical measure shows that only Books, Magazines & Newspapers are associated but that too showing low association as phi coefficient is .204.

To study the relationship between education level of the respondents and their source of nutritional information, chi square test has also been applied. The following hypothesis has been formulated to study the association between the two variables.

H₀3: "There is no significant association between education level of the respondents and their source of nutritional information."

The table 7.2.1.4 below shows the chi values to study the association between these two variables.

Table 7.2.1.4: Chi- Square: Education and Sources of Nutritional information

Sources	Assumptions Violated	Pearson Chi Square Test		Likelihood Ratio		Relationship of Strength	
		Value	P	Value	P	PHI/ Cramer (ϕ)	P
Television/ Radio	No	.627	.731	-	-	.046	.731
Books, Magazines and Newspapers	No	15.603	.000	-	-	.228	.000
Social Media/ Internet	No	3.966	.138	-	-	.115	.138
Nutritionist/dietician/ Doctor	No	7.266	.026	-	-	.156	.026
Family and Friends	No	5.752	.056	-	-	.138	.056
Leaflets & Hoardings	Yes	-	-	6.416	.040	.150	.035

Above table clearly shows that books, Magazines & Newspapers ($\chi2$=15.603, p=.000), Nutritionist/dietician/ Doctor ($\chi2$=7.266, p=.026) and Leaflets & Hoardings ($\chi2$=6.416, p=.040) have values below .05 and thus are found to be significantly associated with education and so alternate hypothesis is accepted for these three sources of nutritional information. While the other three sources of Television/ Radio ($\chi2$=.627, p=.731), Social Media/ Internet ($\chi2$=3.966, p=.138) and Family & Friends ($\chi2$=5.752, p=.056) have sig. values higher than .05 and thus null hypothesis is accepted for these sources assuming no significant relation between education and these three sources of nutritional information.

Further, as per the phi symmetrical measure which tests the relationship of strength between the education level of the respondent and the various sources of Nutritional Information, the results indicate that only three associated sources i.e., Books, Magazines & Newspapers, Nutritionist/dietician/ Doctor and Leaflets & Hoardings have low association as phi coefficient is less than .228.

To study the relationship between income of the respondents and their source of nutritional information, chi square test has also been applied. The following hypothesis has been formulated to study the association between the two variables.

$H_0$4: "There is no significant association between income of the respondents and their source of nutritional information."

The table 7.2.1.5 below shows the chi values to study the association between these two variables.

Table 7.2.1.5: Chi- Square: Income and Sources of Nutritional information

Sources	Assumptions Violated	Pearson Chi Square Test		Likelihood Ratio		Relationship of Strength	
		Value	P	Value	P	PHI/ Cramer (ϕ)	P
Television/ Radio	No	2.739	.602	-	-	.096	.602
Books, Magazines and Newspapers	No	19.438	.001	-	-	.255	.001
Social Media/ Internet	No	3.301	.509	-	-	.105	.509
Nutritionist/dietician/ Doctor	No	10.898	.028	-	-	.191	.028
Family and Friends	No	3.749	.441	-	-	.112	.441
Leaflets & Hoardings	Yes	-	-	11.125	.025	.161	.100

Above table clearly shows that sig. value of Books, Magazines & Newspapers ($\chi2$=19.438, p=.001), Nutritionist/dietician/ Doctor ($\chi2$=10.898, p=.028) and Leaflets & Hoardings ($\chi2$=11.125, p=.025) have values below .05 and thus are found to be significantly associated with income so alternate hypothesis is accepted for these two sources of nutritional information. While the other sources of Television/ Radio ($\chi2$= 2.739, p= .602), Social Media/ Internet ($\chi2$=3.301, p=.509) and Family & Friends ($\chi2$=3.749, p=.441) have sig. values higher than .05 and thus null hypothesis is accepted for these sources.

Further, phi symmetrical measure is applied. It tests the relationship of strength between the income of the respondent and the various sources of Nutritional Information. The above table clearly indicates that only Books, Magazines & Newspapers and Nutritionist/dietician/ Doctor are associated but that too showing low association as phi coefficient are .255 and .191 respectively.

7.2.2 Importance of Various Aspects of Labelling To the Respondents

This study also focussed on judging the awareness level of the respondents on the basis of importance placed by them to the various aspects of food labels. These aspects like MRP, List of ingredients, Manufacturing date, Expiry date etc, have been assumed as the major determinants influencing the purchasing decisions of the consumers and so an effort has been made to evaluate the importance these aspects play in influencing the decisions of the respondents which will further help in knowing about their awareness level.

For analysing the association between the means of gender of the respondents and the importance of various aspects of food labelling for them, T- Test has been applied and the table 7.2.2.1has been prepared. The following hypothesis has been formulated to study the differences in mean between these two variables.

$H_0$5: "There is no significant difference between the means of gender of the respondents and the importance of various aspects of food labelling for them."

The table 7.2.2.1below shows the T values to study the difference in means of these two variables.

Table 7.2.2.1: T-Test: Gender of the Respondents Vs Importance of Different Aspects of Labelling

Attributes of Label	T	Sig.	Mean	
			Male	Female
MRP	-2.890	.000	4.32	4.61
List of ingredients	-6.323	.002	2.98	3.99
Net contents	-.878	.383	3.26	3.40
Name of the manufacturer	-6.422	.000	3.36	4.22

Brand Name	3.417	.000	3.98	3.43
Country of origin	.099	.251	2.30	2.29
Batch /lot identification	-4.814	.000	3.11	3.84
Manufacture date	-1.132	.134	4.56	4.67
Expiry date	-.733	.165	4.69	4.76
Storage condition	-6.483	.002	3.03	4.04
Nutrition information	-6.037	.001	2.85	3.84
Instructions for use	-5.495	.000	3.10	3.96
Additives	-4.988	.001	2.81	3.68
Nutrition/health claims	-6.019	.111	2.73	3.71
Veg/ Non-Veg	.253	.671	4.33	4.29
Gender Vs Aspects of Nutritional Labelling				
Total Energy (Total Calories)	-26.739	.000	1.75	4.55
Carbohydrate	-18.558	.000	2.19	4.22
Protein	9.632	.001	4.09	2.82
Fats	-29.839	.027	1.57	4.64
Vitamins and minerals	2.591	.476	3.70	3.28
Cholesterol	-1.245	.052	3.49	3.68
Fibre	2.706	.000	2.90	2.51
Saturated Fats	1.844	.926	3.64	3.40
Sugars	-15.234	.001	2.28	4.12
Sodium/salt	1.672	.461	3.59	3.37

Above table clearly shows that sig. value of (Maximum Retail Price) MRP (T=-2.890, p=.000) is below .05 and thus has significant difference in means of the gender of the respondents and the importance placed by them to this aspect of food label. Also from the mean values it is evident that female respondents are keener towards looking at MRP as compared to male respondents. Thus, null hypothesis is rejected for MRP.

Sig. value for List of Ingredients (T=-6.323, p=.002), Name of manufacturer (T=-6.422, p=.000), Brand Name (T=3.417, p=.000), Batch/ lot identification (T=-4.814, p=.000), Storage condition (T=-6.483, p=.002), Nutritional information (T=-6.037, p=.001), Instructions for use (T=-5.495, p=.000) and Additives (T=-4.988, p=.001) too have significant difference in means of the gender of the respondents and the importance placed by them to this aspect of food label.

All the other aspects i.e., Net Contents (T=-.878, p=.383), Country of Origin (T=.099, p=.251), Manufacturing Date (T=-1.132, p=.134), Expire Date (T=-.733, p=.165), Nutritional/ Health Claims (T=-6.019, p=.111) and Veg- Non Veg (T=.253, p=.671) have sig. values higher than .05 showing no significant difference in means of gender and these aspects of food labelling. Thus, null hypothesis is accepted for these aspects.

If we go through the response received for nutritional labelling, we will observe that Total Energy (Total Calories) (T=-26.739, p=.000), Carbohydrates (T=-18.558, p=.000), Protein (T=9.632, p=.001), Sig. value for Fats (T=-29.839, p=.027), Fibre (T=2.706, p=.000) and Sugars (T=-15.234, p=.001) have significant difference in means of the gender of the respondents and the importance placed by them to this aspect of food label.

All the other aspects i.e., Vitamins & Minerals (T=2.591, p=.476), Cholesterol (T=-1.245, p=.052), Saturated Fats (T=1.844, p=.926) and Sodium/Salt (T=1.672, p=.461) have sig. values higher than .05 showing no significant difference in means of gender and these aspects of food labelling. Thus, null hypothesis is accepted for these aspects.

For analysing the differences between the means of the age of the respondents and the importance of various aspects of food labelling for them, analysis of variance table 7.2.2.2 has been prepared. Further results have also been analysed using Post Hoc table presented in table 7.2.2.3 The following hypothesis has been formulated to study the differences in mean between these two variables.

H_06: "There is no significant difference between the mean of age of the respondents and the importance of various aspects of food labelling for them."

The table 7.2.2.2 below shows the ANOVA values to study the difference in means of these two variables.

Table 7.2.2.2: ANOVA: Age of the Respondents Vs Importance of Different Aspects of Labelling

Attributes of Label	F	Sig.
MRP	.417	.659
List of ingredients	9.423	.000
Net contents	1.508	.223

Name of the manufacturer	.657	.519
Brand Name	3.037	.049
Country of origin	2.721	.067
Batch /lot identification	10.462	.000
Manufacture date	.126	.882
Expiry date	.325	.723
Storage condition	13.350	.000
Nutrition information	10.940	.000
Instructions for use	9.301	.000
Additives	22.274	.000
Nutrition/health claims	14.239	.000
Veg/ Non-Veg	14.265	.000
Age Vs Aspects of Nutritional Labelling		
Total Energy (Total Calories)	1.697	.185
Carbohydrate	2.475	.086
Protein	7.710	.001
Fats	6.423	.002
Vitamins and minerals	11.083	.000
Cholesterol	19.651	.000
Fibre	.229	.796
Saturated Fats	.266	.766
Sugars	.559	.572
Sodium/salt	6.019	.003

Table 7.2.2.3: Post Hoc: Age of the Respondents Vs Importance of Different Aspects of Labelling

Multiple Comparisons (Tukey HSD)			
Dependent Variable	Age (I)	Age (J)	Mean Difference (I-J)
List of ingredients	Between 26-40	Below 25	.841*
Brand Name	Below 25	Between 26-40	.456*
Batch /lot identification	Between 26-40	Below 25	.821*
	Between 26-40	Below 25	.980*
Storage condition	Above 40	Below 25	.595*
	Between 26-40	Below 25	.935*
Nutrition information	Above 40	Below 25	.606*
		Below 25	.794*
Instructions for use	Between 26-40	Above 40	.454*
		Below 25	1.355*
	Between 26-40	Above 40	.497*
Additives	Above 40	Below 25	.857*
Nutrition/health claims (like sugar free; less fat)	Between 26-40	Below 25	1.035*
	Above 40	Below 25	.577*
	Between 26-40	Below 25	.810*
Veg/ Non-Veg	Above 40	Below 25	.672*
Aspects Of Nutritional Labelling			
Protein	Between 26-40	Below 25	.690*
Fats	Below 25	Between 26-40	.861*
	Between 26-40	Below 25	.862*
Vitamins and minerals	Above 40	Below 25	.741*
Cholesterol	Between 26-40	Below 25	1.060*

		Above 40	.440[*]
	Above 40	Below 25	.621[*]
		Below 25	.502[*]
Sodium/salt	Between 26-40	Above 40	.378[*]
*. The mean difference is significant at the 0.05 level			

Above table clearly shows that sig. value of variables List of Ingredients (p=.000), Brand Name (p=.049), Batch/ lot identification (p=.000), Storage condition (p=.000), Nutritional information (p=.000), Veg/Non-Veg (p=.000), Instructions for use (p=.000), Additives and Nutrition/health claims (p=.000) is less than .05 showing that there is significance difference between different ages of the respondents. All the other aspects i.e., MRP (p=.659), Net Contents (p=.223), Name of the Manufacturer (p=.519), Country of Origin (p=.067), Manufacturing Date (p=.882), Expire Date (p=.723) have sig. values higher than .05, showing no significant difference in means of different ages and these aspects of food labelling. Thus, null hypothesis is accepted for these aspects.

From the Post Hoc table it can be concluded that respondents between 26 – 40 years of age see the list of ingredients aspect more than the respondents with below 25 years age; below 25 years of age are more particular about the Brand name than between 26 - 40 years respondents as the younger generation is more conscious with the brands; middle aged respondents i.e., between 26 – 40 years of age see Batch/ lot identification, Storage condition, Nutritional information, Veg/Non-Veg, Instructions for use, Additives and Nutrition/health claims more than respondents below 25 years;

Response for Nutritional aspects of food labelling shows that Proteins (p=.001), Sodium/Salt (p=.003), Vitamins & Minerals (p=.000), Cholesterol (p=.000) and Fat (p=.002) aspects have significant difference in means of different ages as their Sig. value less than .05. So, null hypothesis is rejected for these aspects of food labels. All the other aspects i.e., Total Energy (Total Calories) (p=.185), Carbohydrates (p=.086), Fibre (p=.796), Saturated Fats (p=.766) and Sugars (p=.572) have sig. values higher than .05 showing no significant difference in means of different ages and these aspects of food labelling.

Post Hoc table indicate that respondents between 26 – 40 years of age look into Sodium/Salt aspect of food label more than respondents who are below 25 or above 40 years of age and protein aspect more than the ones below 25 years age; above 26 years of age show more concern towards Vitamins & Minerals and Cholesterol than those below 25 years of age and respondents below 25 years of age are more particular about the Fats aspect than between 26 -40 years respondents as the younger generation is more into following diet control and are so more conscious about Fats present in the food they consume.

For analysing the differences between the means of the education level of the respondents and the importance of various aspects of food labelling for them, analysis of variance table 7.2.2.4 has been prepared. Further results have also been analysed using Post Hoc table presented in table 7.2.2.5.The following hypothesis has been formulated to study the differences in mean between these two variables.

H₀7: "There is no significant difference between the mean of education of the respondents and the importance of various aspects of food labelling for them."

The table 7.2.2.4 below shows the ANOVA values to study the difference in means of these two variables.

Table 7.2.2.4: ANOVA: Education of the Respondents Vs Importance of Different Aspects of Labelling

Attributes of Label	F	Sig.
MRP	2.138	.120
List of ingredients	16.256	.000
Net contents	1.120	.328
Name of the manufacturer	3.685	.026
Brand Name	3.755	.025
Country of origin	4.016	.019
Batch /lot identification	7.223	.001
Manufacture date	1.134	.323
Expiry date	.144	.866
Storage condition	13.405	.000
Nutrition information	13.806	.000
Instructions for use	6.366	.002
Additives	20.608	.000
Nutrition/health claims	11.530	.000
Veg/ Non-Veg	5.437	.005
Education Vs Aspects of Nutritional Labelling		
Total Energy (Total Calories)	9.495	.000
Carbohydrate	5.233	.006

Protein	4.673	.010
Fats	5.731	.004
Vitamins and minerals	8.409	.000
Cholesterol	24.849	.000
Fibre	1.712	.182
Saturated Fats	.846	.430
Sugars	2.785	.063
Sodium/salt	.666	.514

Table 7.2.2.5: Post Hoc: Education of the Respondents Vs Importance of Different Aspects of Labelling

Multiple Comparisons (Tukey HSD)			
Dependent Variable	Education (I)	Education (J)	Mean Difference (I-J)
		Under Graduate	.896*
List of ingredients	Post Graduate	Graduate	.921*
Name of the manufacturer	Post Graduate	Graduate	.438*
Brand Name	Under Graduate	Post Graduate	.489*
Country of origin	Under Graduate	Graduate	.574*
		Under Graduate	.664*
Batch /lot identification	Post Graduate	Graduate	.457*
		Under Graduate	.885*
Storage condition	Post Graduate	Graduate	.735*
		Under Graduate	.999*
Nutrition information	Post Graduate	Graduate	.686*
		Under Graduate	.609*
Instructions for use	Post Graduate	Graduate	.518*
		Under Graduate	1.271*
Additives	Post Graduate	Graduate	.839*
Nutrition/health claims (like sugar free; less fat)		Under Graduate	.965*
	Post Graduate	Graduate	.490*
	Graduate	Under Graduate	.512*
Veg/ Non-Veg	Post Graduate	Under Graduate	.536*
Aspects Of Nutritional Labelling			
	Under Graduate	Graduate	.904*
Total Energy (total calories)	Post Graduate	Graduate	.966*
Carbohydrate	Post Graduate	Graduate	.617*
Protein	Graduate	Under Graduate	.670*
	Under Graduate	Graduate	.818*
Fats	Post Graduate	Graduate	.787*
	Graduate	Under Graduate	.953*
Vitamins and minerals	Post Graduate	Under Graduate	.600*
	Graduate	Under Graduate	.854*
Cholesterol	Post Graduate	Under Graduate	1.242*
*. The mean difference is significant at the 0.05 level			

Above table clearly shows that sig. value of List of Ingredients (p=.000), Name of the manufacturer (p=.026), Brand Name (p=.025), Country of Origin (p=.019), Batch/ lot identification (p=.001), Storage condition (p=.000), Nutritional information (p=.000), Additives (p=.000), Nutrition/health claims (p=.000), Instructions for use (p=.002) and Veg/Non-Veg (p=.005) is less than .05 showing significant difference in means of the various levels of education of respondents and the importance placed by them to these aspects of food labels. Null hypothesis is rejected for this aspect of food labelling. All the other aspects i.e., MRP

(p=.120), Net Contents (p=..328), Manufacturing Date (p=.323) and Expire Date (p=.866) have sig. values higher than .05 showing no significant difference in means of education and these aspects of food labelling.

Post Hoc table also shows that post graduate respondents see list of ingredients, Name of the manufacturer, Storage condition, Batch/ lot identification, Nutritional information, Additives, Instructions for use and Nutrition/health claims aspect more than graduate and under graduate respondents; under graduates are more particular about the brand name than post graduates and country of origin than graduates; post graduates see more than graduates and under graduates but for Veg non- Veg aspect of food labelling post graduates are comparatively more particular than under graduate respondents.

For Nutritional labelling aspects, when differentiated on the basis of education, following results have been obtained. Total Energy (Total Calories) (p=.000), Fats (p=.004), Vitamins & Minerals (p=.000), Cholesterol information (p=.000), Carbohydrates (p=.006) and Proteins (p=.010) have a significant difference in the means of education and thus, null hypothesis is rejected for name of the manufacturer. All the other aspects i.e., Fibre (p=.182), Saturated Fats (p=.430), Sugars (p=.063) and Sodium/Salt (p=.514) have no significant difference in means of education and these aspects of food labelling.

According to Post Hoc table post graduate respondents and under graduate respondents show more concern towards Total Energy (Total Calories), Fats than graduates; post graduates and graduates are more particular about Vitamins & Minerals and Cholesterol information than under graduates; post graduates check carbohydrates aspect more than the graduates and graduates look more for proteins than under graduates depicting more interest of educated people in carbohydrates and proteins aspect of food label.

Income is assumed to be the major determinant in making purchase decisions. Through this study an effort has been made to analyse the relation between the income of the respondents and the importance placed by them to the various aspects of food labels. So, the differences between the means of income level of the respondents and the importance of various aspects of food labelling for them have also been analysed and the results of analysis of variance has been prepared in table 7.2.2.6. Further results have also been analysed using Post Hoc table presented in table 7.2.2.7. The following hypothesis has been formulated to study the differences in means between these two variables.

H₀8: "There is no significant difference between the means of income of the respondents and the importance of various aspects of food labelling for them."

The table 7.2.2.6 below shows the ANOVA values to study the difference in means of these two variables.

Table 7.2.2.6: ANOVA: Income of the Respondents Vs Importance of Different Aspects of Labelling

Attributes of Label	F	Sig.
MRP	1.583	.179
List of ingredients	8.591	.000
Net contents	.752	.557
Name of the manufacturer	1.393	.236
Brand Name	.541	.706
Country of origin	.256	.906
Batch /lot identification	9.805	.000
Manufacture date	1.681	.154
Expiry date	.840	.501
Storage condition	9.017	.000
Nutrition information	16.554	.000
Instructions for use	10.485	.000
Additives	21.412	.000
Nutrition/health claims	11.029	.000
Veg/ Non-Veg	7.266	.000
Income Vs Aspects of Nutritional Labelling		
Total Energy (Total Calories)	.750	.559
Carbohydrate	.601	.662
Protein	6.460	.000
Fats	1.206	.308
Vitamins and minerals	22.352	.000
Cholesterol	13.404	.000
Fibre	4.162	.003
Saturated Fats	.671	.613
Sugars	3.329	.011
Sodium/salt	1.821	.125

Table 7.2.2.7: Post Hoc: Income of the Respondents Vs Importance of Different Aspects of Labelling

Multiple Comparisons (Tukey HSD)			
Dependent Variable	Income (I)	Income (J)	Mean Difference (I-J)
List of ingredients	Between 2,50,000 – 5,00,000	Below 2,50,000	1.070*
	Between 5,00,000 - 10,00,000	Below 2,50,000	.994*
Batch /lot identification	Between 2, 50,000 – 5, 00,000	Below 2,50,000	.942*
	Between 5,00,000 - 10,00,000	Below 2,50,000	1.055*
Storage condition	Between 2, 50,000 – 5, 00,000	Below 2,50,000	.835*
	Between 5,00,000 - 10,00,000	Below 2,50,000	1.175*
Nutrition information	Between 2, 50,000 – 5, 00,000	Below 2,50,000	1.272*
	Between 5,00,000 - 10,00,000	Below 2,50,000	1.506*
		Between 10,00,000 - 20,00,000	.771*
Instructions for use	Between 2, 50,000 – 5, 00,000	Below 2,50,000	1.084*
	Between 5,00,000 - 10,00,000	Below 2,50,000	1.078*
Additives	Between 2, 50,000 – 5, 00,000	Below 2,50,000	1.565*
	Between 5,00,000 - 10,00,000	Below 2,50,000	1.693*
		Between 10,00,000 - 20,00,000	.812*
	Between 10,00,000 - 20,00,000	Below 2,50,000	.882*
Nutrition/health claims (like sugar free; less fat)	Between 2, 50,000 – 5, 00,000	Below 2,50,000	1.244*
	Between 5,00,000 - 10,00,000	Below 2,50,000	1.054*
	Between 10,00,000 - 20,00,000	Below 2,50,000	.786*
Veg/ Non-Veg	Between 2, 50,000 – 5, 00,000	Below 2,50,000	.597*
	Between 5,00,000 - 10,00,000	Below 2,50,000	.827*
	Between 10,00,000 - 20,00,000	Below 2,50,000	.741*
Aspects Of Nutritional Labelling			
Protein	Between 2, 50,000 – 5, 00,000	Below 2,50,000	.630*
	Between 5,00,000 - 10,00,000	Below 2,50,000	.902*
Vitamins and minerals	Between 2, 50,000 – 5, 00,000	Below 2,50,000	1.287*
		Between 10,00,000 - 20,00,000	1.260*
	Between 5,00,000 - 10,00,000	Below 2,50,000	1.434*
		Between 10,00,000 - 20,00,000	1.408*
Cholesterol	Between 2, 50,000 – 5, 00,000	Below 2,50,000	.932*
	Between 5,00,000 - 10,00,000	Below 2,50,000	1.228*
	Between 10,00,000 - 20,00,000	Below 2,50,000	.941*
Fibre	Above 20,00,000	Below 2,50,000	1.177*
		Between 2, 50,000 – 5, 00,000	1.017*
		Between 5,00,000 - 10,00,000	1.301*
Sugars	Between 2, 50,000 – 5, 00,000	Above 20,00,000	1.200*
	Between 5,00,000 - 10,00,000	Above 20,00,000	1.087*
*. The mean difference is significant at the 0.05 level			

Above table clearly shows that sig. value of List of Ingredients (p=.000), batch/ lot identification (p=.000), Storage condition (p=.000), Nutritional information (p=.000), Instructions for use (p=.000), Additives (p=.000), Nutrition/health claims (p=.000) and Veg/ Non-Veg (p=.000) shows significant difference in means of income of respondents and the importance placed by them to these aspects of food labels. Thus, alternate hypothesis is accepted for these aspects of food labelling. All the other aspects i.e.,

MRP (p=.179), Net Contents (p=.557), Name of the Manufacturer (p=.236), Brand Name (p=.706), Country of Origin (p=.906), Manufacturing Date (p=.154) and Expiry Date (p=.501) shows no significant difference in means of different income levels of the respondents and the importance of these aspects of food labelling.

Post Hoc table also shows that respondents with income between ₹2,50,000 – ₹ 10,00,000 check List of Ingredients, batch/ lot identification, Storage condition, Nutritional information and Instructions for use more than the respondents who belong to the strata with less than ₹2,50,000 income; with income between ₹2,50,000 – ₹ 20,00,000 go through Additives, Nutrition/health claims and Veg/ Non-Veg aspects more than the respondents with less than ₹2,50,000 income. Another fact emphasised by Post Hoc table is that the respondents having income between ₹5,00,000 – ₹ 10,00,000 are more particular in checking Additives than the respondents with income between ₹ 10,00,000 - ₹ 20,00,000.

Importance of Nutritional aspects of food label when related with Income of the respondents clearly shows that sig. value of Proteins (p=.000), Vitamins & Minerals (p=.000), Cholesterol aspect (p=.000), Fibre (p=.003) and Sugars (p=.011) has significant difference in means of income of respondents and the importance placed by them to these aspects of food labels. Thus, null hypothesis is rejected for these five aspects of food labelling. All the other aspects i.e., Total Energy (Total Calories) (p=.559), Carbohydrates (p=.662), Fats (p=.308), Saturated Fats (p=.613) and Sodium/Salt (p=.125) shows no significant difference in means of incomes of the respondent and the importance of these aspects of food labelling. Thus, null hypothesis is accepted for these aspects and alternate hypothesis is rejected.

Post Hoc table also shows that respondents with income between ₹2,50,000 – ₹ 10,00,000 check Proteins more than the respondents with less than ₹2,50,000 income; depicting less concern of this strata towards food labels but for Vitamins & Minerals respondents with income between ₹2,50,000 – ₹ 10,00,000; respondents with income between ₹5,00,000 – ₹ 20,00,000 go through Cholesterol aspect more than the respondents with less than ₹2,50,000 income are also more particular than the respondents with income between ₹10,00,000 – ₹ 20,00,000. Post Hoc table further clarifies that the respondents having income above ₹ 20,00,000 are more particular in checking Food labels for Fibre information on them than the respondents with income below ₹ 10,00,000 but respondents having income above ₹ 20,00,000 less particular in checking Sugars aspect than the respondents with income between ₹ 2,50,000 - ₹ 10,00,000.

8.   SUGGESTIONS, IMPLICATIONS & RECOMMENDATIONS

Through this study on the basis of observation and research, various problems that surfaced the Indian food labelling were noticed that needs immediate action so as to make food labelling consumer friendly. On the basis of these findings various suggestions have been recommended:

1.   **Improvement in awareness level of Consumers**- Various awareness campaigns should be undertaken by the government and food agencies to create awareness.

2.   **Social media** being the most preferred source of information can be used to create awareness.

3.   **Loose or sealed food without proper labels should be banned** as still there are consumers who purchase loose or sealed food either because they have little knowledge of its negative impact on their health or they are more bothered about their convenience.

4.   **Awareness about Nutritional Information**- Still many consumers in India have either no information or very little information of what nutritional information is and how to check it.

5.   **Improvement in awareness level of Manufacturers and Retailers**- Their awareness level should be increased as firm regulations should be introduced to curb misleading labelling practices.

6.   **Improvement in the legal laws to deal with the adulteration and the defaulters-** Government and the food agencies must strictly deal with the problem and try to improvise various standards to be maintained for the labelling to be appropriate.

9. CONCLUSION

Labelling for pre-packaged food industry has always acted as a mediator between the consumers and the manufacturers. It is a major channel of imparting information about the product to the consumers as well as a motivating factor to convince them to purchase the product. Consumers too feel that labelling serves as an important source of extracting information about the product and helps them in making purchase decision. But these benefits can only be availed if and only if the consumers are aware about the various aspects of food labelling and spare time to go through them before concluding what to purchase.

Keeping these complexities in mind, FSSAI is trying to meet the various challenges but still a lot needs to be accomplished as there is an alarming increase in nutrition-related public health issues of obesity, cardiovascular problems, high blood pressure, diabetes, etc. Nutritional diet has been in the pipeline these days as too much emphasis is being laid on having a balanced diet. To create awareness different modes of imparting information has been used by the government and the other agencies. But this study shows that social media and internet is the most preferred source of information used by the respondents, the next preferred source is friends and relatives followed by television and radio and books, magazines and newspaper. It has also been concluded that both males and females rely maximum on social media and internet for their information. This source has been found to be famous among respondents below 40 years of age but the respondents above 40 years of age rely mainly on the information provided by the family and friends. Similarly, educated people too, prefer this source while under graduate respondents rely maximum on family and friends to attain the information about the food products available in the market. On the other hand, if we understand the psyche on the basis of income it has been observed that all the respondents belonging to different income groups prefer social media and internet as their source of income except the group with income between ₹2,50,000 – ₹5,00,000.

To judge the awareness and the attitude of the consumers, this study tried to understand how the consumers rate the importance of different aspects of the food labels and it has been concluded that majority of the respondents find manufacturing date and expiry date the most important factor influencing their purchase decision followed by Maximum Retail Price but they find Country of

Origin least important aspect. While the allergic consumers find list of ingredients most important followed by expiry date and manufacturing date but they find Maximum Retail Price least important aspect. Retailers and distributors too, added their perception about the awareness level of the consumers. According to them most of the consumers find Veg/ Non-Veg aspect the most important aspect that influences their decisions followed by manufacturing date and expiry date but they find Batch /lot identification least important aspect. Similarly, majority of the respondents find Vitamins and Minerals as a most important aspect followed by Carbohydrates and Total Energy (total calories) but they find Fibre as the least important aspect.

But the only solution available is to evolve and improvise the food labelling to make it clearer, unambiguous, comprehensive and allergic friendly so as to assist every kind of consumer in making informed choices.

10. LIMITATIONS OF THE STUDY

This study has made an effort to contribute in the existing knowledge in the field of Indian pre-packaged food product labels and the perception of allergic and non- allergic consumers to make food labels consumer friendly. However, this research has its own limitations and constraints.

1.　　This research is also based on the data collected through direct and indirect interviews and so chances of biasness cannot be illuminated.
2.　　The perception and attitude of the respondents might have impacted their response.
3.　　The objective of the research might have impacted the creation of the questionnaire.
4.　　Samples were confined to only 3 states of North India i.e., Punjab, Haryana and Himachal.

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