#### Original Research Article

## Assessment of knowledge and awareness regarding food labels Garvita Gehlot<sup>1</sup> & Richa Soni<sup>2</sup>

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## Abstract

In order to help consumers make better decisions about their diet and health, food labels have very important role. Although access to the packaged foods has increased tremendously yet there is still a lack of understanding of their labels. In order to assess the levels of knowledge and awareness, as well as perception and practice trends regarding food labels among Western Indian citizens, a study involving 211 subjects was conducted. This study also tested and identified any relationships or dependencies between knowledge and awareness. Additionally, the impact of gender was examined. Out of the total responders, 54.9% were female, while 45.0% were male. Out of the total respondents, 47.8% fell within the age group of 10 to 25 years. Graduates responded more (44%) than others. The majority of respondents (60.1%) were unmarried. A selfadministered questionnaire was created containing 5 knowledge-based, 2 awarenessbased (one with 10 subparts), 4 practice-based, and 6 perception-based questions. After that, it was given to participants and completed questionnaires were then gathered. The study population's average knowledge score was 3±1.29. Good, acceptable, and poor were the ratings for respondents' knowledge of food labels for 40.2%, 45.0%, and 31% respectively. Western Indians scored adequately (60%) when it came to knowing food labels. Their average awareness score was 20.84±5.42, which indicates Good or Acceptable awareness of food labels. Only 3.7% of respondents had poor knowledge of food labels, compared to 42.1% who had adequate knowledge and 54% who had good knowledge. The study population's awareness score was above average (69.4%). The knowledge and awareness of people about food labeling was unaffected by gender. This study found that even though the majority of Western

Indians are knowledgeable and aware of food labels, there is still a sizable gap that needs to be closed. The population also believes that the government and other organizations need to make more efforts to spread information and awareness.

#### **Keywords**

Nutrition, labels, knowledge, awareness, perception, practice, survey

#### Introduction

The Food and Agriculture Organization of the United Nations defines Food Labelling as "A food label, the information presented on food product, is one of the most important and direct means of communicating information to the consumer. The internationally accepted definition of a food label is any tag, brand, mark, pictorial or other descriptive matter, written, printed, stencilled, marked, embossed or impressed on, or attached to, a container of food or food product. This information, which includes items such as ingredients, quality and nutritional value, can accompany the food or be displayed near the food to promote its sale."

Food labels are essential in supplying consumers with crucial details about the items they buy and eat, enabling them to make better decisions about their diet and health.

Together with WHO, FAO provides scientific and policy advice on food labeling to the Codex Alimentarius Commission. The Codex General Standard for Labeling of Prepackaged Foods (CXS 1-1985) is the primary Codex instrument for providing information about food to consumers and the Codex Committee on Food Labeling (CCFL) is the Codex subsidiary body responsible for setting standards and guidelines on labeling that are applicable to all foods.

"The Food Safety and Standards Authority of India (FSSAI) under the administration of Ministry of Health and Family Welfare has been designated as the nodal point for liaison with the Codex, known as "National Codex Contact Point of India (NCCP)"

## Definition of some common terms related to food labelling as given in the Food Safety and Standards (Packaging and Labelling) Regulations, 2011:

- "Best before" means the date which signifies the end of the period under any stated storage conditions during which the food shall remain fully marketable and shall retain any specific qualities for which it claims and beyond that date, the food may still be perfectly safe to consume, though its quality may have diminished. However, the food shall not be sold if at any stage the product becomes unsafe
- "Date of manufacture" means the date on which the food becomes the product
- "Date of packaging" means the date on which the food is placed in the container in which it will be ultimately sold
- "Lot number" or "code number" or "batch number" means the number either in numbers or alphabets or in combination by which the food can be traced in manufacture and identified in distribution
- "Non-Vegetarian Food" means an article of food which contains whole or part of any animal including birds, fresh water or marine animals or eggs or products of any animal origin, but excluding milk or milk products, as an ingredient
- "Pre-packaged" or "Pre-packed food", means food, which is placed in a package of any nature, in such a manner that the contents cannot be changed without tampering it and which is ready for sale to the consumer
- "Principal Display Panel" means that part of the container/package which is intended or likely to be displayed or presented or shown or examined by the customer under normal and customary conditions of display, sale or purchase of the commodity contained therein
- "Use-by date" or "Recommended last consumption date" or "Expiry date" means the date which signifies the end of the estimated period under any stated storage conditions, after which the food probably will not have the quality and safety attributes normally expected by the consumers and the food shall not be sold

• "Vegetarian Food" means any article of Food other than Non- Vegetarian Food as defined in regulation (El-Kader et al., 2022)

# General requirements for labelling as given in the Food Safety and Standards (Packaging and Labelling) Regulations, 2011:

- Every pre-packaged food shall carry a label containing information as required here under unless otherwise provided
- The particulars of declaration required under these Regulations to be specified on the label shall be in English or Hindi in Devnagri script
- Pre-packaged food shall not be described on any label that is false, misleading or deceptive or is likely to create an erroneous impression regarding its character in any respect
- Label in pre-packaged foods shall be applied in such a manner that they will not become separated from the container
- Contents on the label shall be clear, prominent, indelible and readily legible by the consumer under normal conditions of purchase and use
- Where the container is covered by a wrapper, the wrapper shall carry the necessary information or the label on the container shall be readily legible through the outer wrapper
- Every packaged food should have following information on it's label
  - The Name of Food
  - List of Ingredients (in descending order of their composition by weight or volume accompany
  - Nutritional Information
  - $_{\odot}$  Declaration regarding Veg or Non-veg by using specific symbols as shown







Non-veg

- Declaration regarding Food Additives
- The Name and Complete Address of the Manufacturer
- Net Quantity (by weight or volume or number)
- Lot/Code/Batch Identification
- Date of Manufacturing or Packing
- Best Before and Use By Date
- Country of Origin for imported
- Instructions for Use

#### Importance of Knowledge and Awareness regarding Food Labels:

Role of nutrition has been emphasized by a number of researches (Carr & Descheemaeker, 2008). Simultaneously, there has been an overall increase in daily calories consumption in form of sugar-sweetened beverages, processed and packaged foods due to their convenience (Ronquest-Ross et al., 2015). The rate of consumption of unhealthy foods (soft drinks and processed foods that are high in salt, fat, and sugar, as well as tobacco and alcohol) is higher in low- and middle-income countries (Stuckler et al., 2012). The knowledge and awareness of food labels is crucial in the maintaining a nation healthy.

## Importance of assessing people's knowledge and awareness regarding food labels:

Access to packaged foods is improving, but knowledge about the labels on packaged food are still low (Nuban et al., 2022). There is an alarming need to bridge this gap to enable people to make better choices. The findings of this study may be useful in drawing attention of concerned authorities in the government and non-government organization so as to raise awareness regarding food labels.

## Aim of the study

The aim of this study is to assess the knowledge and awareness of the citizens of Western India regarding food labels.

## Objective

The primary objective of this study is to evaluate the knowledge, awareness and practices of people regarding food labels and also to find out a correlation between knowledge and awareness of the citizens of Western India. The study also explores peoples' perspectives on certain aspects of food labelling. It also tests the influence of gender on knowledge and awareness.

## **Research Methodology**

#### **Research Design**

A Quantitative and Empirical Research Design along with Descriptive and Inferential Statistics was used to evaluate the knowledge and awareness levels and the perception and practice trends regarding food labels among the citizens of Western India. A Hypothesis-Testing Research was deployed as well; so as to test and identify any relationship or dependency of the two most important attributes namely, knowledge and awareness. A Correlation Coefficient Analysis was used to test influence of gender.

#### **Study Population**

The study population comprised of a total of 211 randomly selected individuals aged between 10-75 years. Females were 54.9% while 45.0% were male. Virtually all the data was from the three states of Gujarat (56.8%), Rajasthan (28.4%) and Maharashtra (10.4%).

#### Sampling method

Sampling was done in a simple and random manner. A random target was set for the number of individuals to be considered without differentiating on any variable.

#### Development of survey tools

The questionnaire was standardized on the basis of previous researches. It consisted of two sections. Section 1 consisted of Socio demographic details and Section 2 consisted of questions regarding knowledge, awareness, perception, practice of food labels.

#### **Section 1: Demographic Characteristics**

**Gender:** Subjects were categorized into two parts according to their gender, male and female

**Age:** Subjects were categorized into 4 age ranges: 10 to 25 years; 26 to 40 years; 41 to 55 years; more than 55 years

**Education:** Subjects were placed into 5 categories with respect to their educational qualification. The categories being-upto secondary, higher secondary, graduate, post graduate and doctorate

**Occupation:** Subjects were categorized into 6 categories according to their occupation as student, academics, business, house-maker, service and others

Marital Status: Subjects were categorized as unmarried, married, divorced or widow/widower

**Number of Family Members:** Subjects were categorized into 4 ranges according to the number of their family members: <3, 3 to 6, 7 to 10, >10

**Monthly Family Income (INR):** Subjects were categorized into 6 ranges according to their monthly family income: <10000, 11000 to 25000, 26000 to 50000, 51000 to 100000, >100000 and 'Did not disclose'

## Section 2: Knowledge, Awareness, Perception and Practice based assessment Knowledge assessment

To assess the knowledge of the individuals a set of 5 questions was developed. These questions were about the understanding of food labels e.g., E-codes for additives, about the F<sup>+</sup> mark for fortification, about the order of the ingredients listed and about the nutrient content value. Each of these questions carried one mark with range of scores as 0-5. Knowledge score had three ranges of levels: 0 to 1 (poor); 2 to 3 (acceptable); 4 to 5 (good).

#### Awareness assessment

Two questions were developed to assess level of awareness for food labels.

- How frequently does one refer to food labels prior to buying a product?
  It could be answered in five options: Always, Often, Sometimes, Never and
  Depends on what I am buying.
- 2. The second question composed of 10-parts. It enquired about the awareness of the terms mentioned on food labels including 'Ingredients', 'Nutrition fact panel', 'Health claims', 'Country of origin', 'Handling and storage information', 'Food expiry date', 'Cost', 'Net weight', 'Brand name' and 'Allergen warnings'. It could be answered in four options: Always, Often, Sometimes and Never. Thus, the probable range of scores was 0-30. Awareness score also had three ranges of levels: 0 to 10 (poor); 11 to 20 (acceptable); 21 to 30 (good).

#### Perception assessment

Six questions were deployed to infer the perception of the people about food labels.

- 1. They think that they know what food labels are?
- 2. If they think labels are easy to understand?
- 3. Whether or not they think there is a need to simplify labels?
- 4. If there should be more awareness programs for food labels?

- 5. What kind of programs would have the most impact?
- 6. Do they think that the claims made on labels are always true or not?

#### Practice assessment

Four questions related to the serving size, cooking instructions, specific quantities mentioned in the instructions and buying products from specific brands; were incorporated to assess the practice of individuals regarding food labels. These also were not scored.

#### Data collection

All the data from Gujarat and Rajasthan was collected by approaching people individually and handing over printed, self-administered questionnaires. The data from rest of the cities was collected via a Google Form, distributed on WhatsApp. The data from Ahmedabad was collected from a food festival called the Sattvik Food Festival, held over a span of 4 days (23-26, Dec 2022) in Ahmedabad city. The purpose of the study was told to the respondents before the research questionnaires were handed out. People who agreed to participate in the study were given questionnaires. Participants were also informed about the study's voluntary nature. Participants who agreed to take part were given assurances of confidentiality and required to give either verbal or written agreement. People who did not feel comfortable participating in the study had the option to voluntarily opt out.

#### **Statistical Analysis**

The data was stored, processed and analyzed on Microsoft Excel. The analysis included the evaluation of all the questions and their scoring. Mean scores with Standard Deviation for knowledge and awareness were calculated. The scores for knowledge and awareness were then tested for correlation with the Pearson's correlation test. The regression was also calculated for the same. Null hypothesis was tested with Chi Square Test of independency to identify any relation of gender with both knowledge and awareness. Level of significance was also calculated (P<0.05).

## **Results & Discussion**

#### **Demographic characteristics**

As shown in Table 1, total population of respondents 211 accounting for 54.9% females and 45.0% males. Maximum numbers of respondents (47.8%) were in the age range of 10-25 years; 34.1% were between 26-40 years; 13.7% between 41-55 years and 4.2% were above 55 years of age. Wojcicki and Heyman (2012) also reported in their study that majority of teenagers never looked at the nutrition labels but they looked at calories and fat. Among the different levels of education, the highest number of respondents, 44.0% were Graduates, followed by 41.7% Post Graduates. Respondents with the qualifications of only Up to Secondary and Higher Secondary were 3.7% and 8.0%, respectively.

Charact	eristics	Responde	nts (n=211)		
Qandan	Female	116	54.90%		
Gender:	Male	95	45.00%		
	10 – 25	101	47.80%		
	26 – 40	72	34.10%		
Age (years):	41 – 55	29	13.70%		
	>55	9	4.20%		
	Up to secondary	8	3.70%		
	Higher secondary	17	8.00%		
Education:	Graduate	93	44.00%		
	Post Graduate	88	41.70%		
	Doctorate	5	2.30%		
	Student	38	18.00%		
	Academics	22	10.40%		
Occuration	Business	21	9.90%		
Occupation:	House maker	12	5.60%		
	Service	77	36.40%		
	Others	41	19.40%		
	Unmarried	127	60.10%		
Marital status	Married	80	37.90%		
Marital status:	Divorced	3	1.50%		
	Widow/Widower	1	0.50%		
Number of family	Less than 3	10	4.70%		
members:	3 to 6	186	88.10%		

	7 to 10	13	6.10%
	More than 10	2	0.90%
	Less than 10,000	11	5.20%
	11,000 to 25,000	25	11.80%
	26,000 to 50,000	32	15.10%
Monthly family income (INR):	51,000 to 1,00,000	53	25.10%
	More than 1,00,000	36	17.00%
	Did not disclose	54	25.50%

As of the marital status, majority of the respondents (60.1%) were Unmarried, 37.9% were Married, 1.5% were Divorced and 0.5% were Widow/Widower. Majority of the respondents (88.1%) had a family of 3 to 6 people, 6.1% had a family of 7 to 10 people, 4.7% had less than 3 people in their family and 0.9% had more than 10 people in their family. 25.5% people chose to not disclose their monthly family income. For the ones who did, 11% had a monthly family income (INR) less than Rs.10,000/-; 11.8% had it between Rs.11,000/- to Rs.25,000/-, 15.1% had it between Rs.26,000/- to Rs.50,000/-, 25.1% had it between 51,000/- to Rs.1,00,000/- and 17.0% had more than Rs.1,00,000/-

#### Knowledge of respondents regarding food labels:

Knowledge based questions and the frequency of correct and incorrect responses along with their percentage has been shown in Table 2 for all the 211 respondents.

S. No.	Questions	Incorrect Responses		Correct Responses		
1	What according to you are food labels?	42	19.9%	169	80.0%	
2	What are the things coded as E111, E132, etc. on food labels?	81	38.3%	130	61.6%	
3	What does F+ mark mean?	111	52.6%	100	47.3%	
4	In which order are the ingredients listed on the ingredient list?	116	54.9%	95	45.0%	
5	For what amount of nutrients is there nutrient content value mentioned?	42	33.1%	74	66.8%	

Table 2: Frequency and Percentage of correct and incorrect responses for knowledge-based questions

Eighty percent of respondents correctly answered for food labels. When questioned about the E-numbers/codes, the majority of respondents (61.6%) provided accurate responses. Almost half of the people correctly recognized the meaning of F<sup>+</sup> i.e., fortification. Forty five percent respondents correctly identified the order of ingredients. Question based on amount of product for which its nutrients' content values are mentioned was answered correctly by 66.8% people.

#### Knowledge level:

Graph 1 shows the knowledge level of the respondents about food labels. It was found that 31% respondents had poor knowledge of food labels, 45.0% respondents stood at the acceptable level of knowledge regarding food labels and 40.2% respondents had a good knowledge of food labels. The average knowledge score of the study population was 3±1.29. Thus, stating that the citizens of Western India have an acceptable average knowledge score (60.0%) regarding food labels.

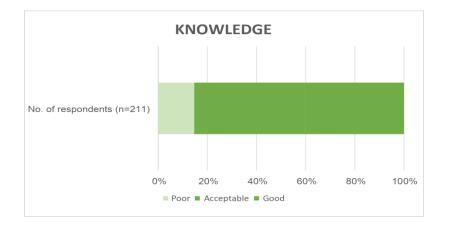


Figure 1: Bar Graph of knowledge regarding food labels

#### Awareness of respondents regarding food labels:

The frequency of referring to and considering certain details on food labels before buying a food product was assessed under this section.

S. No.	Question	Α	lways	C	Often	Son	netimes	N	ever	De	pends
1	How often do you read food labels?	64	30.3%	39	18.4%	74	35.0%	11	5.2%	23	10.9%
2	Ingredients	100	47.3%	36	17.0%	68	32.2.%	7	3.3.%		
3	Nutrition fact Panel	63	29.8%	46	21.8%	78	36.9%	24	11.3%		
4	Health claims	77	36.4%	48	22.7%	58	27.4%	28	13.2%		
5	Country of Origin	83	39.3%	32	15.1%	64	30.3%	32	15.1%		
6	Handling and storage information	84	39.8%	41	19.4%	53	25.1%	33	15.6%		
7	Food expiry Date	17 4	82.46%	14	6.6%	10	4.7%	13	6.1%		
8	Cost	15 7	74.4%	20	9.4%	27	12.7%	7	3.3%		
9	Net weight	96	45.4%	47	22.2%	49	23.2%	19	9.0%		
10	Brand name	16 6	78.6%	16	7.5%	25	11.8%	4	1.8%		
11	Allergen Warnings	74	35.0%	31	14.6%	48	22.7%	58	27.4%		

Table 3: Awareness of respondents regarding food labels

The respondents were also asked about the frequency of referring to 10 specific details presented to them which are found on food labels. It was observed that 47.3% respondents claimed to always look at the "list of ingredients", while 17.0% claimed to do so often, 32.2% claimed to do so sometimes and only 3.3% said they never do. As for the "nutrition fact panel," 29.8% of respondents claimed to always consult it, 21.8% claimed to do often, 36.9% claimed that they sometimes do so, and 11.3% reported to never do so. Regarding the "health claims", the fraction of respondents who said they always consider them was 36.4%, of the ones who said they do so often was 22.7%, of the ones who stated they do so sometimes was 27.48% and of the ones who reported

to never do so was 13.2%. The "country of origin" was apparently looked at always by 39.3% of individuals, often by 15.1%, sometimes by 30.3% and never by 15.1%. Out of the 211, 39.8% respondents professed that they always look at the "handling and storage information", 19.4% said they do so often, 25.11% said that they sometimes do and 15.6% said they never do. Most of the respondents (82.46%), said they always checked the "food expiry date", 6.6% said they checked it often, 4.7% said they sometimes do so and 6.1% said they never checked it. For the "cost" also, majority of the subjects (74.4%), claimed to always look for it, 9.4% said they do so often, 12.7% said they do so only sometimes and 3.3% said they never consider it. The "net weight" was claimed to be referred to always by 45.4% respondents whereas often, sometimes and never by 22.2%, 23.2% and 9.0% respondents, respectively. A lot of respondents (78.6%), said they always paid attention to the "brand name", 7.5% said they do often, 11.8% said they do so sometimes while only 1.8% said they never do. 35.0% respondents reported that they always check for "allergen warnings", 14.6% said they often do, 22.7% of them said they do so sometimes and 27.4% said they never do.

The details which were looked at by the majority of people most frequently were the "food expiry date", the "brand name" and the "cost". Abudu et al., 2022 also found that majority of customers looked at expiry date followed by list of components.

On the basis of above results, respondent's level of awareness was categorized as below in table 4:

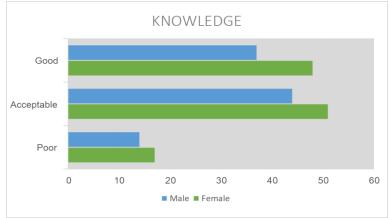
Score Range		All	
0 to 10 (Poor)	8	3.7%	
11 to 20 (Acceptable)	89	42.1%	
21 to 30 (Good)	114	54.0%	
Average	20	).84	
Deviation	±5.42		

Table 4: Awareness score of respondents

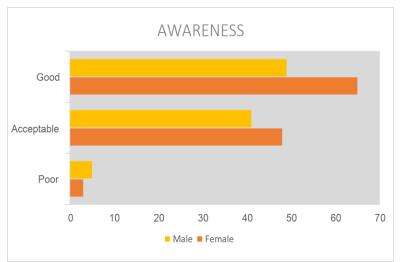
#### Influence of gender on knowledge and awareness of food labels

Knowledge and awareness scores for male and female respondents were recorded separately for the purpose of comparison.

Graph 2 is showing that there were 14.6% females and 14.7% males with poor knowledge, 43.9% females and 46.3% males with acceptable knowledge and 41.3% females and 38.9% males with good knowledge regarding food labels. Another study by Rakuła & Kiciak (2022) revealed that 31.6% of respondents read only specific material, whereas 9.6% read labels. Men (35.6%) and women (44.4%) exhibited knowledge on a good level most frequently.



Graph 2: Knowledge scores of Female and Male respondents





Graph 3 is depicting the fraction of male and female respondents present at each level of awareness. There were 2.5% females and 5.2% males with poor awareness, 41.3% females and 43.1% males with acceptable awareness and 56.0% females and 51.5% males with good awareness regarding food labels.

Average Scores	Female	Male	P value
Knowledge	3.04±1.30	2.95±1.28	0.97
Awareness	20.83±7.28	20.85±7.94	0.69

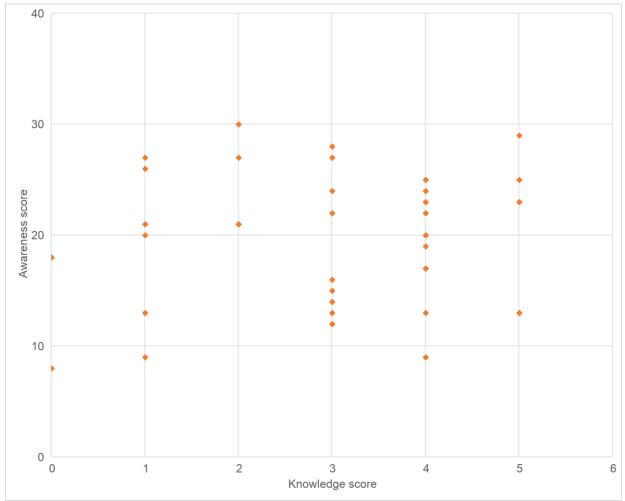
Table 5: Average ± SD Knowledge and Awareness Scores and P values

Table 5 presents that the average knowledge scores of female and male subjects were 3.04±1.30 and 2.95±1.28, respectively while the average awareness scores of female and male subjects were 20.83±7.28 and 20.85±7.94, respectively.

Statistical analysis with Chi Square Test showed that there was no significant difference between the knowledge and awareness of female and male respondents regarding food labels. The P value for the Chi Square Test of independency for gender and knowledge was 0.97 (>0.05) and that for gender and awareness was 0.69 (>0.05) which show insignificance of dependency. Hence, Null Hypothesis was accepted. Thus, it can be stated that gender holds no influence on the knowledge and awareness of individuals regarding food labels. It is compatible with the results of (Uyan Kulcu & Cebirbay, 2022).

#### Correlation of knowledge and awareness regarding food labels:

Statistical analysis with Correlation Coefficient Analysis showed that there was no relation whatsoever between knowledge and awareness of respondents. The R value came out to be 0.06 and P value, 0.33. Hence, Null Hypothesis was accepted. Thus, no relation between knowledge and awareness regarding food labels, whether positive or negative could be drawn from the analysis.



Graph 4: Correlation of knowledge and awareness

## Practice of respondents regarding food labels:

To assess the Practice of respondents regarding food labels 4 practice-based questions were incorporated into the self-administered questionnaire. Table 9 gives the fraction of people who do and do not practice/use the information given on food labels.

S. No.	Question	Yes				No		
1	Do you use the serving size mentioned on the food labels?	94		44.5%		117	55.4%	
2	Do you use the cooking instructions mentioned on the food labels?	148		70.1%		63	29.8%	
3	Do you use the quantity mentioned in the instructions for cooking?	131		62.0	0%	80	37.9%	
		Always		No		Not Ne	cessarily	
4	Do you buy foods from specific brands?	65	30.8%	8	3.7%	138	65.4%	

Table 6: Practice of respondents regarding food labels

When questioned if they use the serving size mentioned on the food labels, 44.5% respondents said they do and 55.4% said they don't. When the same was asked regarding the cooking instructions, majority of the respondents said they use them and 29.8% said they don't. The same question was posed regarding the quantities mentioned in the cooking instructions, 62.0% said they do and 37.9% said they don't. When asked if they buy foods from specific brands, 30.8% respondents said they don't. Hence, majority of the people do use the information given on food labels. A similar study conducted by Wojcicki and Heyman (2012) revealed that less than 25% of teenagers inquired said they routinely used the nutrition facts label information, with the largest percentage using the total fat on the label.

S. No.	Question	Y	'es		No	Mostly		Partially	
1	Do you think you know what food labels are?	177	83.8%	34	16.1%				
2	Are food labels easy to understand?	69	32.7%	7	3.3%	50	23.6%	85	40.2%
3	Is there a need to simplify food labels?	193	91.4%	18	8.5%				
4	Should there be more nutrition label awareness programs?	199	94.3%	12	5.6%				
5	Do you think the claims made on labels are always true?	50	23.6%	161	76.3%				
		Bann	Banners and Seminars and		nars and	TV Ads			
		Po	sters	C	GD's				
6	What kind of programs should they be?	31	14.6%	49	23.2%	131	62.0%		

Perception of	of respondents	regarding food labels:
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To assess the perception of respondents regarding food labels, 6 perception-based questions were incorporated into the self-administered questionnaire. Table 7 gives the information about what the respondents perceived of food labels.

When the respondents were asked if they thought they knew what food labels were, 83.8% answered positively and 16.1% did otherwise. When asked if according to them, food labels were easy to understand 32.7% said yes, 3.3% said no and 23.6% and 40.2% said they think food labels are mostly and partially understandable, respectively. Most of the respondents (91.4%) thought there is a need to simply food labels and only 8.5% had an alternate opinion. Even more respondents (94.3%) thought that there should be more nutrition labels awareness programs and only 5.6% didn't think so. Further when asked to choose the option with the best and most impactful kind of such programs 62.0% chose Television Advertisements, 23.2% chose Seminars and Group Discussions and 14.6% chose Banners and Posters. Lastly, only 23.6% respondents

Table 7: Perception of respondents regarding food labels

trusted the claims made on nutrition labels to always be true while majority of them (76.3%) thought they weren't always true.

Thus, it can be stated that majority of the respondents think they know what food labels are. Most people thought that food labels need to simplified and that there is also a need to raise awareness regarding food labels. And according to the respondents Television Advertisements are the best medium to do so. The majority of respondents didn't trust the claims made on food labels.

## Conclusion

A food label is an important and direct means of communicating information to the consumer. A Quantitative and Empirical Research Design and Descriptive and Inferential Statistics were used to evaluate the knowledge and awareness levels and the perception and practice trends regarding food labels among the citizens of Western India. According to which, the average knowledge score of the study population is 3±1.29. With respect to knowing food labels, Western Indians score appropriately (60%).

They have Good or Acceptable levels of awareness of food labels, as they scored above-average awareness level (69.4%). No influence of gender was seen on the knowledge and awareness of individuals regarding food labels.

Many individuals responded that the food labels are complicated and need to be simplified in order to increase awareness in general public for which television advertisements may prove better medium.

The study also leaves way for further research to explore other areas of this subject such as difference in attitudes of vegetarian and non-vegetarian consumers, difference in attitudes of rural and urban consumers, difference in attitudes of consumers' who follow diets and those who don't and many more.

## References

- 1. Carr, T., & Descheemaeker, K. (2008). Nutrition and health. John Wiley & Sons.
- Nuban, C. E. H., Lada, C. O., Manongga, S. P., Berek, N. Ch., Datta, F. U., Jutomo, L., & Roga, A. U. (2022). Consumer Knowledge and Attitudes about Information on Food Labels for Packaged Foods in Rural and Urban Areas in Timor Tengah Selatan (TTS) District. *EAS Journal of Nutrition and Food Sciences*, *4*(5), 156–160. https://doi.org/10.36349/easjnfs.2022.v04i05.005
- 3. Ronquest-Ross, L.-C., Vink, N., & Sigge, G. O. (2015). Food consumption changes in South Africa since 1994. *South African Journal of Science*, *111*(9–10), 01–12.
- Stuckler, D., McKee, M., Ebrahim, S., & Basu, S. (2012). Manufacturing epidemics: The role of global producers in increased consumption of unhealthy commodities including processed foods, alcohol, and tobacco. *PLoS Medicine*, *9*(6), e1001235.
- Abd El-Kader, R. G., Von Kanel, S., Ogale, R. J., Kumardhas, V., & Adam, S. (2022). Nutrition Label Understanding among the Nursing Students in a Selected University: A Cross-sectional Study. *Journal of Pharmaceutical Negative Results*, 29–35.
- Abudu, J., Ampofo-Asiama, J., Kizzie-Hayford, N., Essuman, E. K., Seidu-Larry, S., & Dadzie, R. G. (2022). Relevance of Food Labels among Selected Students at the University of Cape Coast, Ghana. *European Journal of Nutrition & Food Safety*, 79–89. https://doi.org/10.9734/ejnfs/2022/v14i930537
- 7. Rakuła, M., & Kiciak, A. (2022). Consumer knowledge of food labeling. *Journal of Education, Health and Sport*, *12*(8), 270–282. https://doi.org/10.12775/JEHS.2022.12.08.027
- Uyan Kulcu, A. E., & Cebirbay, M. A. (2022). Una evaluación de la actitud, las preferencias y el conocimiento sobre el etiquetado de alimentos para la consultoría nutricional. *QhaliKay Revista de Ciencias de La Salud ISSN 2588-0608*, 6(2). <u>https://doi.org/10.33936/qkrcs.v6i2.4540</u>
- Wojcicki, J. M., & Heyman, M. B. (2012). Adolescent nutritional awareness and use of food labels: Results from the national nutrition health and examination survey. *BMC Pediatrics*, 12(1), 55. https://doi.org/10.1186/1471-2431-12-55