

---

## An Empirical Investigation on Level of Awareness regarding Processed and Packaged Food Among Youth of Haryana

Vikram<sup>1\*</sup>, Dr. Palak Bajaj<sup>2</sup>, Dr. Rajan Sharma<sup>3</sup>

<sup>1</sup>Research Scholar, University School of Management, Kurukshetra University Kurukshetra  
vikram.usom@kuk.ac.in, ORCID ID: 0000-0002-1883-8245

<sup>2</sup>Assistant Professor, Institute of Management Studies, Kurukshetra University Kurukshetra  
palakbjaja86@gmail.com

<sup>3</sup>Assistant Professor, Institute of Management Studies, Kurukshetra University Kurukshetra  
rajansharma@kuk.ac.in

---

### Abstract

**Purpose** -To study the consumer's cognizant and attitude towards processed and packaged food.

**Research Methodology**- Respondents were selected by using stratified convenience sampling method. 145 respondents from Haryana were interviewed. A structured questionnaire was used to assess the level of awareness in special reference to packaged and processed food among youth. The Statistical tools like crosstab analysis and chi-square test were employed.

**Findings**: From the results it is evident that education and income levels play an important role in being cognizant regarding packaged and processed food whereas other demographic variables like age, gender, occupation were found to be insignificantly differentiating the various groups of respondents.

**Implications**- The majority of respondents expressed strong intentions to purchase packaged goods that are environmentally friendly. The awareness level regarding effect of Preservatives, food colours, MSG in the preparation of the food is very high. Indian consumers' dietary habits are being influenced by changing socio-cultural trends. So, manufacturers should check the quality and level of Preservatives, food colours, MSG and eco-friendly packaging which will cause lesser amount of degradation of environment.

**Keywords** Consumer awareness, Preservatives, processed food, packaged food, consumers' dietary habits

**Paper type** Research paper

---

### INTRODUCTION

India is the world's largest producer of a variety of agricultural and food products, but only around 10% of that production is processed. In the upcoming years, India's demand for processed food goods is expected to rise, creating chances for increased value addition, decreased waste, and alternative employment prospects (Dhanya V et. Al, 2020). For instance, in 2020, approximately 900 million individuals in India were of working age (15–64), constituting 67% of the overall population of the nation. This figure is anticipated to rise by another 100 million by the year 2030. The Confederation of Indian Industry (CII) report indicates that during the next ten years, India would likely account for a startling 24.3% of the increased global workforce. Due to their hectic schedules and lack of resources to prepare meals at home, the working population of India is becoming more and more in demand for ready-to-eat food. India's eating habits and culinary techniques have seen significant change in the previous several years as a result of urbanization, cultural change, and social development. Because of the stress of their busy lives, individuals wanted quick and simple cooking methods and foods (Malik et al., 2018). Due to the availability of several quick foods in the market and their need for products that are both fresh and simple to prepare, modern people have adjusted their lifestyles and behaviours towards ready-to-eat and ready-to-cook products (Alvarez et al., 2018). Today's ready-to-eat/serve, ready-to-cook products are purchased at major food markets since they are the most direct substitute for our

everyday diet. Young people are more likely to spend their money on ready-to-eat and ready-to-cook products. Young customers, who are easily targeted by RTE manufacturing companies due to the level of convenience, texture, and pleasant flavors over the entire shelf life of the products, are driving up demand for these foods. Due to their accessibility, convenience, and popularity as snacks, ready meals and snacks have attracted consumer interest.(Temgire et al., 2021)

A food item is considered to be processed when it is turned into an edible form of food or when its added value causes it to change into another food item (Govt. Of India,2019). Current trends show that increasing technology and consumption of packaged foods in the diets of modern society lead to increase in the use and need of food additives. Food additives are substances that are used in the production, processing, treatment, packaging, transportation or storage of food (Amit et al., 2017). Over time, processed food items have become more significant in consumer baskets around the world. Patterns of food intake have evolved over time due to increased money, urbanisation, demographic changes, improved transportation, and altered consumer views of quality and safety (Regmi, 2001; and Wilinson & Rocha, 2008).

It is justified that maintaining food distribution and transportation would be impossible without the use of food additives in the present rapid urbanization and increasing population (Carocho et.al, 2019). Almost all the food additives currently in use have been found to cause health problems in consumers. This has raised health concerns to consumers and government. However, regardless of the increasing incidence and range of health problems of additives in packaged foodstuffs, awareness of consumers regarding them is not as such significant. (Sachithanathan, 2017).

Although law permits the use of food additives, excessive consumption of these leads to myriad side effects. Increased consumption of fast food, high or rich in food preservatives and flavoring agents among adolescents has been directly correlated with obesity. High levels of Nitrosodimethylamine in diet have a possible role in high incidence of gastrointestinal cancers. It has been seen that the food preservatives sodium benzoate and propionic acid and colorant curcumin suppress Th1-type immune response in vitro. (Mohammadbeigi et al., 2018). Regular soda intake independent of weight status is associated with asthma among US high school students. Research has confirmed a link between attention deficit hyperkinetic disorder and food additives (Park et al., 2013). Children are suffering the most from food additives because they are exposed to food chemicals from infancy and human bodies are not meant to be exposed to the degree of food chemicals and food additives that we are currently consuming. These additives may include side effects such as food allergies, increased waist lines, decreased absorption of minerals and vitamins and more (Trasande et al., 2018). Many surveys conducted have established that the consumers are unaware of the function, role and disadvantages of such additives, preservatives and in fact many of them perceived the additives to be healthy and therefore approach them positively (Zhong et al., 2018). Consumers with lower levels of education are more likely to trust government institutions to regulate food additives (Hoek et.al, 2019).

With the current trends of increased consumption of packed food in the diet, the incidence and range of such ill effects has also increased. Studies which explore the knowledge and perceptions of the people about these chemicals are necessary as they give inputs for planning intervention strategies (Chronic et al., 1990). Despite this, the issue of consumer awareness about usage of food labeling information has attracted little research attention in developing countries and little is known about consumer expectations and their response to such food label information (Legesse et. al 2016). People look at food labels for different reasons. But whatever the reason, many consumers would like to know how to use this information more effectively and easily. The information about nutrition labeling and the health benefits of the food is one of the important factors that influence decision making (Miller & Cassady, 2015). The modern package label has taken the responsibility for educating the consumer about the product by multitasking such as attracting, promoting and motivating at the point of purchase through the information on the label. (Penttinen Emma, 2022). The labels should be closely observed for nutrient content declaration on calories, fat, protein, dietary fiber,

vitamins and mineral content either as percentage daily value or recommended dietary intake (RDI) or per 100 g or 100 ml or per servingsize (Marittea et. al, 1999). Low awareness of food labeling, low level of education, low health consciousness, products attributes, food labeling format, influence of media, perceived role of regulatory authorities and non-availability of consumer guidelines on the use of food labeling have been reported by studies from various countries as factors related to consumers not reading and using food labeling information in purchasing food. (Sachithananthan et. al, 2017)

While compliance with legal requirements is fundamental to food safety, consumers also have aresponsibility in handling and preparing food to do what is within their own control to protect themselves. By demanding improved standards, consumers can act as a powerful influence on thefood industry as a whole. Important food hazards which affect food safety are microbial hazards(*Food, Nutrition,HealthandFitness*,2023).

Different people have different food and nutritional requirement, choices and preferences. Somepeople have health problems that require a certain amount of nutrients and need to avoid certaintypes of foods or ingredients. Some foods have specific instructions for preparation and use; somerequire specific storage conditions, etc.(Adams, 2000) Also, the production and expiry date on the label indicatethe shelf life of different foods. All these suggest the need for consumers to be well informed about the above characteristics of packaged food before purchase and this information is expectedto be found on the food label(Roche, 2015).

## Significance of the study

This study is significant because it can provide insight into how conscious Haryana's youth are about packaged and processed foods. Understanding the youth's knowledge and perceptions of these food products is critical given the region's rapidly changing dietary patterns and urbanisation. Also, help in predicting their level of knowledge of processed and packaged food's benefits and side effect on health can aid in predicting future trends in different sorts of increasing demand for organic food at a reasonable price. The shifting lifestyles and purchasing patterns, as well as the modes and locations of purchase, are all changing frequently. Examining this element can yield important information that stakeholders in the food business, health professionals, and legislators can use to create focused interventions and awareness-raising efforts that encourage this group of people to make educated food choices.

According to the research that is currently available, consumers in developing nations like India are becoming more health and nutrition aware, and a variety of factors, such as awareness, wealth level, and information availability, influence their purchasing decisions(Ali et al., 2010). However, there is limited research on the specific dynamics of processed and packaged food awareness among the youth population in Haryana.

By conducting an empirical examination to evaluate the degree of understanding, attitudes, and habits of Haryana's young regarding processed and packaged food, this study seeks to close this knowledge gap. The results can help us comprehend the variables influencing young people's decisions about food, which will help researchers design focused interventions that encourage healthier eating habits(Sarma & Pais, 2008,Farhan, 2020).

This research also assists marketers and producers in determining the needs of the current and future market of packaged and processed food.

## LITERATURE REVIEW

Author	Title	Objective	Research Methodology	Findings
--------	-------	-----------	----------------------	----------

Legesse et.al,2016	A survey on awareness of consumers about health problems of food additives in packaged foods and their attitude toward consumption of packaged foods.	To show the degree of packaged food consumption, consumer awareness of food additive risks, and attitudes toward packaged foods.	SPSS software (version 16)	71.68% don't frequently purchase packaged food because of price factor. The rest (28.32%) often purchase packaged food. 64.15% of the respondents are well known about the health problems of packaged foods. (70.96%) respondents now also want to continue consumption of packaged foods.
Vedavalli Sachithanathan, 2017	A survey on the consumer awareness about additives in packaged food and their effects on health.	To investigate the socioeconomic background of the study subject, as well as consumer awareness and attitude toward packaged food use.	A semi structured questionnaire. SPSS 22 software and the Chi square.	90.3% of female in the high-income group did not even like packaged food as they like don't like preserved food. In the low-income category, 87 percent of female don't enjoy packaged food, but 53.1 percent of male members did.
Mmari & Lwalamira, 2015	Consumer Perceptions regarding processed food Packaging in the	To examine buyers' perceptions of packaging attributes and the role of packaging-related attributes on processed cereal product purchase decisions.	Statistical Package for S.s.c program version 16.	Packaging benefits consumers, especially in case of protection of food (mean rating 34/10), cleanliness (33/10), product information (31/10), and branding (31/10). These functions are significant, as are specific package material features such as durability (30/10), nice grip (30/10), attractiveness (28/10), ease of opening & closing not before use (26/10), & recycled content and degradability (18/10).
Monteiro & et. al, 2018	Increasing use of mega food and its influence on health of human.	To evaluate the time trend in proportion of packaged foods to Brazilian households' purchases of food and to examine the possible impact on diet quality overall.	Data collected by comparable household surveys. : unprocessed foods (Group 1); processed culinary ingredients (Group 2); ready-to-eat food (Group 3).	More than the Thirty Yrs. consumption of Group 1 & Group 2 foods has been little bit replaced by consumption of Group 3 ultra-processed food, in lower as well as upper-income consumers.
Eun-Jung et.al, 2007	Middle School Students' Awareness of Food Products and Purchasing of Processing Foods Containing Functional Foods	To know the thinking of middle school students about food additives & their behavior towards purchasing of processed foods.	SPSS/WIN 12.0.	The students showed low interest in artificial seasoning, sweetener, artificial dye & artificial preservative. students were not aware about the food additives enough

Owolabi & Isaac,2009	Effect of Product Packaging onConsumer Buying Behaviour towards Agro-processed Food Products inOyo State, Nigeria	To find out how packaging colour, packaging size, packaging materials and quality of materials influenced consumer buyingbehaviour towards agro processed food products in Ibadan,	Structured questionnaire and analyzing the data using simple regression and ANOVA (SPSS20.0)	Packaging colour, packaging size, packaging information and quality of materials had a significant effect on consumerbuying behaviour towards agro-processed food products.
Dr. Vijayudu Gnanamkonda,2014	Consumer's Perception Towards Branded Packaged Food	Rural consumers' attitude toBranded Packaged Food Products.	Questionnaire and semi-structured interview. The questionnaire is designed based on the FCQ.	Culture of rural consumers is moderately changed. The mobility of branded packagedfood is less. A group of consumers like 'high income' & consumers for whom food preparing time is a issue uses the packaged food on regular basis.
Swamy, Kumar & Rao,2012	Consumer buying attitude in Regards to instant food product	To study the current buying pattern of existing homes forInstant Food Products and topredict demand for Instant Food Products in Hyderabad.	Sampling and Analytical Tool	Little part of the consumers in IG3 22.78% were known about Dosa/Idli mixproduct in the market followed by 17.22% inIG2, 9% in IG1 and 7.78% inIG4.
Shamsuzza ma & Zia,2018	Female Packaged and ProcessedFood Consumers and the factorsWhich motivate them	To conduct a segmentation on women packaged processed food consumers factors motivating the purchase of boxed processedfood.	Structured Questionnaire & statistical analysis like frequency distribution, cross tabulation & clusteranalysis	Female consumers are affected to purchase packagedprocessed foods because of many reasons, including the accessibility of certain ingredients, a lack of recipe knowledge, ease of allocation,time savings in or before and cooking, the availability of the off the season foods, health concerns, emergency situations, and the desires of family members. Some see packaged processed food intake as a current trend.
Solberg, Terragni & Granheim, 2016	of ultra-processed foodin Norway	A review of food sales was used to detect use of ultra-processed items like vector of salt, sugar, & fat – in the Norwegian diet.	Data collection & Analyses of that Data	Ultra-processed productsrepresented for 58.8% ofpurchases and 48.8% of expenditure. One purchase out of three wasa sweet ultra-processed product.
& Kumar, 2020	India's Future Prospects forPackaged Sustainable food	Examine the Indian food industry's composition. To explain the idea, topic, and importance of packed ecological food in India. Research the difficultiesand potential in India for packaged sustainable food.	Techniques based on secondary data, including quantitative and qualitative	Sustainable packaged foods have a lower impact on the environment and ecological footprint. As a result, it is crucial to enhance packaged sustainable food which is bothsafe and nutritious.
Bhatt, Shahir, 2015	Rural Customers' PerceptionsToward Packaged Food	To determine the important factors to consider while buying packaged food	self-administered questionnaire & techniques like	Health, convenience, and mood are three characteristicsthat have a substantial link with age, while

		products	ANOVA and post-hoc tests	health, mood, price, and brand are four factors which have a significant association with monthly income.
Ansari, M. U. A. & Siddiqui, D.A, 2019	Consumers Purchasing Behavior Toward Packaged Food Items and Packaging Features	To look at the effect of graphics, colors, size, shape, product information, and/or packaged material on consumers' buying decisions	Questionnaire & analysis was done using Confirmatory Factor Analysis and Structural Equation Modeling	The packaging qualities are examined as they play a role in communicating product quality, that affects purchase behaviour.

## OBJECTIVES OF THE STUDY

- To assess the extent of awareness towards packaged and processed foods among youth
- To assess the cognizant about the effects of preservatives, food colour, MSG used in processed and packaged food between male and female.

## HYPOTHESIS OF THE STUDY

The following are the hypothesis of the study:

- H<sub>a1</sub>: There is a significant association between types of food available and Age
- H<sub>a2</sub>: There is a significant association between habit of consumer on the basis of gender
- H<sub>a3</sub>: There is a significant association in cognizant about the effects of Preservatives, food colours, MSG and gender.
- H<sub>a4</sub>: There is a significant association between availability of processed and packaged foods and Education
- H<sub>a5</sub>: There is a significant association between the point of purchase and Income

## RESEARCH METHODOLOGY

### Sampling and data collection

Haryana is divided into six administrative divisions by Government of Haryana and the population of Youth is approximate 9.3 million. The six administrative divisions of Haryana act as sub groups or strata and from these strata respondents were selected using convenience sampling making the overall sampling criteria as stratified convenience sampling. The most

popular of all sampling approaches is convenience sampling. This method is considered to be the simplest and least time-consuming. The present study is based on empirical analysis on level of awareness of processed and packaged food among youth.

More than 50 percent of Haryana's current population is below the age of 25 and over 65 percent below the age of 35. Thus, we can say that Haryana is a Young Nation with its majority of population is Youth. To make the current study holistic in nature, data was collected from the consumers of all demographic profiles. But it is not possible to contact and collect data from such a vast mass. A total of 200 questionnaires were distributed in these administrative zones of Haryana and 145 questionnaires were found fit for the data analysis, which leads to final sample size of 145.

The study is based on primary and secondary data. Secondary data extracted from various books, magazines, newspaper, journals, and websites.

**Primary Data** for this study is collected through a structured questionnaire which the respondents had to fill up as well as conversation with the respondents while filling up the questionnaire and also through informal unstructured personal interview with the dealers and distributors to know the demand and consumption of certain types of packaged food in the market.

The **Secondary Data** has been collected through the various different published Journals, books and various different websites over the Internet.



**Table 1.1 Demographic profile of the respondents**

Demographics		Frequency	Proportion of the sample (%)
Gender	Male	92	63.4
	Female	53	36.6
	Total	145	100
Age	13-17	5	3.4
	18-25	140	96.6
	26-30	0	00
	31-35	0	00
	Total	145	100
Education	10th	1	0.6
	12th	51	35.3
	Graduate	62	42.8
	Post-Graduate	30	20.7
	Doctorate	1	0.6
	Total	145	100
Monthly Income	<20,000	46	31.7
	20,000-30,000	22	15.2
	31,000-40,000	23	15.9
	40,000 & above	54	37.2
	Total	145	100
Profession	Self- employed	9	6.2
	Salaried	5	3.6
	Professional	3	2
	Student	124	85.5

(source: primary data)

The frequency distribution method was employed to evaluate the respondents' demographic characteristics. The sample size is 145 in total. The demographic composition of the respondents is shown in Table 1.1.

## STATISTICAL TOOLS AND TECHNIQUE

Chi-square Test for Testing the Hypothesis:

**Chi – Square Test** -> A chi-squared test, particularly Pearson's chi-squared test & variants thereof, is a statistical test that is valid to execute when the statistic is chi-squared distribution under the null hypothesis. In one or more divisions of a contingency table, Pearson's chi-squared test is performed to see if there is a significant difference between predicted and observed frequencies.

( $\chi^2$  = Pearson Chi-square value,  $df$  = Degree of

Freedom &  $p$  = Significance value)

## DATA ANALYSIS AND INTERPRETATION

Different demographic respondents do not prioritize all the items equally. Data analysis was carried out to determine whether or not consumers' level of awareness of packaged and processed food consumption patterns vary with differing age, gender, levels of education, household income, and occupations.

## TESTING OF HYPOTHESIS

**Problem: To identify the association between types of food available level and the Age**

$H_{a1}$ : There is a significant association between types of food available level and the Age

		AGE		Total
		13-17	18-25	
Are you aware about the different types of Foods available in the market today? If Yes then please Tick the one you are aware and consume.	Packaged Food	2	78	80
	Functional Food	1	22	23
	Organic Food	2	33	35
	Processed Food	0	6	6
Total		5	139	144

Chi- square statistics were used to examine association between Types of food available level and the Age. There is an insignificant association at .796 significance level between types of food available and

the Age ( $\chi^2 = 1.019$ ,  $df = 1$ ,  $p = .796$ ). Hence  $H_0$  is supported as value of  $p$  is .796 which is greater than 0.05. Hence hypothesis is supported and there is no significant association between Types of food Available level and the Age



## Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.019 <sup>a</sup>	3	.797
Likelihood Ratio	1.164	3	.762
Linear-by-Linear Association	.296	1	.586
N of Valid Cases	144		

### The Problem:

To identify the association between Habit of consumer on the basis of gender

**H<sub>a2</sub>:** There is a significant difference between habits of consumer on the basis of gender

		GENDER		Total
		Male	Female	
Do you check the ingredients and the other preservatives and things used in preparation of the product while buying it?	Yes	73	49	122
	No	18	4	22
Total		91	53	144



Chi-square statistics were used to examine association between Ingredients used in preparation of the product and the Gender. There is an insignificant association at 3.872 significance level between Ingredients used

in preparation of the product and the Gender ( $\chi^2 = 3.872$ ,  $df = 1$ ,  $p = .049$ ). Hence  $H_{12}$  is not supported as value of  $p$  is .049 which is less than 0.05

## The Problem:

### Chi-Square Tests

	Value	df	Asymptotic Significance (2- sided)	Exact Sig. (2- sided)	Exact Sig. (1- sided)
Pearson Chi-Square	3.872 <sup>a</sup>	1	.049		
Continuity Correction <sup>b</sup>	2.985	1	.084		
Likelihood Ratio	4.241	1	.039		
Fisher's Exact Test				.057	.038
Linear-by-Linear Association	3.845	1	.050		
N of Valid Cases	144				

To identify the difference in the awareness level regarding effect of Preservatives, food colours,MSG in the preparation of the food on the basis of age **Ha3**:

There is a significant difference in the awareness level regarding effect of Preservatives, food colors, MSG in the preparation of the food on the basis of age

		AGE		
		13-17	18-25	Total
Are you aware about the harmful effects of the Preservatives, Emulsifying Agents, MSG, Foodcolors used in preparation of the product?	Yes	3	115	118
	No	2	24	26
Total		5	139	144

Chi- square statistics were used to examine association between harmful effects of Preservatives,food colours, MSG used in preparation of the food and the Age. There is an insignificant association at 1.686

significance level between harmful effects of Preservatives, food colours, MSG used in preparation of the food and the Age ( $\chi^2 = 1.686$ ,  $df = 1$ ,  $p = .194$ ). Hence  $H_{03}$  is supported as value of  $p$  is .194 which is greater than 0.05.

### Chi-Square Tests

	Value	df	Asymptotic Significance (2- sided)	Exact Sig. (2- sided)	Exact Sig. (1- sided)
Pearson Chi-Square	1.686 <sup>a</sup>	1	.194		
Continuity Correction <sup>b</sup>	.499	1	.480		
Likelihood Ratio	1.371	1	.242		
Fisher's Exact Test				.221	.221
Linear-by-Linear Association	1.674	1	.196		
N of Valid Cases	144				

## The Problem:

To identify the association between Availability of different types of food in the market and theEducation

## Hypothesis:

**Ha4:** There is no significant association between Availability of different types of food in the market

and the Education.

		EDUCATION					Total
		10th	12th	Graduate	Post Graduate	Doctrate	
Are you aware about the different types of Foods available in the market today? If Yes then please Tick the one you are aware and consume.	Packaged Food	0	30	38	11	1	80
	Functional Food	1	5	11	6	0	23
	Organic Food	0	13	10	12	0	35
	Processed Food	0	2	3	1	0	6
Total		1	50	62	30	1	144

Chi- square statistics were used to examine association between Availability of different types offood in the market and the Education. There is an insignificant association at 15.000 significance level between

Availability of different types of food in the market and the Education ( $\chi^2 = 15.000, df = 12, p = .241$ ). Hence  $H_0$  is supported as value of p is .241 which is greater than 0.05

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	15.000 <sup>a</sup>	12	.241
Likelihood Ratio	13.909	12	.307
Linear-by-Linear Association	1.132	1	.287
N of Valid Cases	144		

### The Problem:

To identify the association between the place of purchasing of packaged food and Income

### Hypothesis:

**Ha5:** There is no significant association between the awareness about the place of purchasing of packaged food and Income.

		Monthly Income				Total
		Below Rs. 20000	20000-30000	31000-40000	Above Rs.41000	
Mostly where do you purchase the packaged food from?	Shops	26	14	11	30	81
	Resturanet	10	4	6	15	35
	Roadside Hawkers	7	4	4	7	22
	Malls	3	0	2	1	6
Total		46	22	23	53	144

Chi- square statistics were used to examine association

between the awareness about the place of purchasing of packaged food and Income. There is an insignificant

association at 5.008 significance level between the awareness about the place of purchasing of packaged food and Income ( $\chi^2 = 5.008$ ,  $df = 9$ ,  $p = .834$ ). Hence

$H_0$  is supported as value of  $p$  is .834 which is greater than 0.05

### Chi-Square Tests

	Value	df	Asymptotic Significance (2- sided)
Pearson Chi-Square	5.008 <sup>a</sup>	9	.834
Likelihood Ratio	5.755	9	.764
Linear-by-Linear Association	.132	1	.716
N of Valid Cases	144		

## FINDINGS OF THE STUDY

Out of the total 145 respondents, a majority of the Population is the consumer of packaged food. Male respondents were 63.4% and Female respondents were 36.6% of the sample. Majority of respondents belonged to the age group of 18 to 25 years contributing to 96.6 percent of the sample. A large number of sample respondents were at least educated up to graduation and above. About 85.5% of the sample is student class and 6.3% of the sample was self-employed. 94.5% of the sample was unmarried and were the main consumers of the packaged food or the outside food. The average family income of the respondents was between forty thousand or more than that per month. Lunch comprised as the major contributor and the second most preferred timings were the Dinner timings for consuming the Packaged food. At least 4 times going out for consuming the outside food once in a month was preferred by almost half of the sample. The preferred food type of the respondents who consumed the outside food was the Traditional food topping the category followed by the Packaged Snacks category. The RTE segment was the least preferred one among the other options. Again, the most preferred types of food in packaged food by the respondents was the snacks followed by the RTE food products category. When it comes to the place of food preference in "Snacks" category Shops are on the top followed by Restaurants. In RTE Category Restaurants are priority after that Shops are second choice. In RTE Category Shops are again the priority followed by Restaurants, Malls & Roadside Hawkers.

### Other Key Findings

- Supermarket sales will grow at a considerably faster rate than sales in other types of stores. Because of the convenience, improved levels of hygiene, and appealing atmosphere, an increasing percentage of upper-income Indians will opt to buy at supermarkets.
- Increased demand for value-added milk-based products such as processed cheese, table butter, and ice cream should result from rising household incomes, urbanization, changing lifestyles, and the fast role of private and dairy-processing industries.
- Foreign corporations are concentrating their efforts on the processed-food market, which is underdeveloped and has great growth potential. In comparison to the kiosks and tiny stores from which Indians have historically purchased food, the advent of modern, structured retailing will raise demand for value-added items.

---

## SUGGESTIONS

This study of Haryana's youth consumer and their awareness of processed food's benefits and side effects impacts on health can aid us in predicting future trends in different sorts of foods, such as the unmet demand for organic food at a reasonable price. The shifting lifestyles and purchasing patterns, as well as the modes and locations of purchase, are all altering. The research will also assist us in determining disposable income and future spending on various sorts of meals available on the market.

● Make smaller pack sizes to allow for single serve usage and to encourage trial:

- Make the workplace a consumption possibility.
- Introduce RTE salads aimed towards health-conscious consumers.
- Although the youth are more and more health concerned and knowledgeable, a large portion of the Indian populace is still oblivious of the adverse effects of various preservatives, emulsifying agents, additives, food colours, and MSG used in the types of food they consume. As a result, the government has launched campaigns such as JAGO GRAHAK JAGO, aimed at raising knowledge of the substances in food packages among the general public and rural consumers.
- In the packaged food market, whether it's snacks, RTE, or RTC, International Brands have a good Mindshare, but National Brands have a greater consumption. The reason for this is that international brands receive more advertising and marketing than national and regional brands.
- Companies should choose such novel packaging or engage in research into packaging technologies that limit the usage of preservatives, additives, and emulsifying agents while maintaining quality, freshness, and taste, as well as a long shelf life.
- Remove uncertainty about the authenticity of RTE foods by using healthier product formulation and proper package message.

## Implications and limitations of the study.

The awareness of consumers of the health problems arising from use of packaged food among youth community and the use of this information in purchasing packaged food. This information will bring to the attention of the policy makers on the need to have programs to improve consumer awareness of food labeling information as well as the use of such information in the purchase of food. Also, manufacturers will understand the need to improve food labeling regulations and food label formats and provide wholesome and unique packaged foods to the consumers. Food purchasing practices and consumer behavior regarding to packaged food. Despite of maximum efforts, there are some limitations of this study, the research is confined to a mere zone in which it is conducted. The eating habit of people India changes by the region. The cultural diversity is too high. This causes the high variation in the eating habits and at the same time the consumption habits of processed food also change. The need for the people for food changes every 100 km of travel in India. The other disadvantage was of resources. India offers low scope for psychological research as there are few agencies that are doing research in India on varied topics. Hence the availability of data basis required for research is low. This limitation is a standard for most researchers conducted in India. The other limitation has been the low availability of funds as this research required a lot of travelling and huge data gathering for more reliable results, this was not performed by the researcher.

## CONCLUSION

Increasing consumer understanding of packaged food and the value of the labelling will help to better inform

customers on how to use packaged food. In an economically time-pressed Indian society, the necessity to meet quality and convenience requirements is driving the expansion of dried ready meals. Indian consumers' dietary habits are being influenced by changing socio- cultural trends. Its Indian RTE food store is increasing at a rate far faster than the country's growth in the economy.

Indian customers are becoming more aware of the long-term health risks connected with an erratic diet and junk food intake. Even though the significance of having a good and home-cooked dinner remains clear, mealtime fragmentation is leading to inconsistent and smaller quantity intake. Claims related to health and wellbeing has a substantial impact on consumer product selection. RTE manufacturers in India should concentrate on ensuring and conveying freshness, as well as providing more convenient product concepts.

A large mass of Indians is looking for time-saving goods and services in order to maximize leisure time in order to minimize stress and promote work-life balance. The pressure to achieve professional fulfillment is increasing all the time. Indians have a strong preference for things that are positioned for convenience. All elements of convenience-driven advantages should be at the centre of RTE makers' marketing communications.

Because of a natural preference for at-home consumption, Indians who do not prepare dinner at home on a regular basis prefer take-away meals over going out.

Indians are rapidly looking for simple and healthful options that mimic the flavor of home-cooked meals, driven by a desire to eat at home.

- A big percentage of Indian customers are undecided about whether health and food information are confusing or contradictory.
- Nearly 70 percent of Indian men & women express a strong desire to learn more about the connection between food and health.
- Convenience can be divided into 2 categories - 'Low or decreases blood' and 'Low or decreased fat' have a strong influence on 50 percent of Indians' food and beverage choices at all ages.

Though India is a major producer and exporter of agricultural produce at raw material stage, only less than 10 per cent of them are processed and traded. One major reason for this is the large consumer base domestically and having preference for fresh produce over processed food. Slow pace of urbanization and low labour force participation of women have resulted in the preference for fresh foods at the All-India level. Empirical literature suggests that as more women enter the workforce, consumption of processed food increases (Wang et al., 2015).

India has the potential to emerge as a major exporter of processed food by adhering to the quality standards. The Government initiatives for strengthening quality standards can provide impetus to the sector. An analysis of corporate data showed that profitability of food processing firms has been either higher or comparable with the level of other firms. However, the value-added component in food processing firms was found to be lower than other firms operating in the industrial sector. The econometric analysis on credit reveals the importance of credit for growth in this sector. Relative to the share of the food processing sector in industrial GVA, sectoral credit data suggest adequate availability of credit for the sector.

With the burgeoning urban and young population, demand for processed food items is set to increase in the coming years. The food processing industry in India needs to gear up to meet the demand by investing in necessary infrastructure. The industry requires a steady flow of raw materials from the producers/farmers meeting specific quality standards and at stable prices. Farmer producer organizations, by bringing together small farmers and agricultural

entrepreneurs, can enhance the opportunity to build more stable supply chain. Besides ensuring steady flow of income to the farmers, greater linkages with industry could also reduce wastages, particularly in perishables.

## Reference

1. Adams, M. (2000). Ensuring Safe Food From Production To Consumption. In *International Journal Of Food Science And Technology* (Vol. 35, Issue 3). <https://doi.org/10.1046/j.1365-2621.2000.00351.x>
2. Amit, S. K., Uddin, M. M., Rahman, R., Islam, S. M. R., & Khan, M. S. (2017). A Review On Mechanisms And Commercial Aspects Of Food Preservation And Processing. *Agriculture And Food Security*, 6(1), 1–22. <https://doi.org/10.1186/s40066-017-0130-8>
3. Chronic, R., Risk, D., Isbn, C., Pdf, T., Press, N. A., Press, N. A., Academy, N., Academy, N., & Press, N. A. (1990). Diet And Health: Implications For Reducing Chronic Disease Risk. In *Choice Reviews Online* (Vol. 27, Issue 06). <https://doi.org/10.5860/choice.27-3332>
4. *Food, Nutrition, Health And Fitness*. (2023).
5. Miller, L. M. S., & Cassady, D. L. (2015). Food Label Knowledge.A Systematic Review. *Sustainability (Switzerland)*, 9(1), 1–17. <https://doi.org/10.1016/j.appet.2015.05.029>
6. Mohammadbeigi, A., Asgarian, A., Moshir, E., Heidari, H., Afrashteh, S., Khazaei, S., & Ansari, H. (2018). Fast Food Consumption And Overweight/Obesity Prevalence In Students And Its Association With General And Abdominal Obesity. *Journal Of Preventive Medicine And Hygiene*, 59(3), E236–E240. <https://doi.org/10.15167/2421-4248/jpmh2018.59.3.830>
7. Park, S., Blanck, H. M., Sherry, B., Jones, S. E., & Pan, L. (2013). Regular-Soda Intake Independent Of Weight Status Is Associated With Asthma Among Us High School Students. *Journal Of The Academy Of Nutrition And Dietetics*, 113(1), 106–111. <https://doi.org/10.1016/j.jand.2012.09.020>
8. Penttinen Emma. (2022). *Consumer Awareness Of Greenwashing*. 9(12), 1–86. [https://www.theseus.fi/bitstream/handle/10024/748285/thesis\\_penttinen\\_emma.pdf?sequence=2](https://www.theseus.fi/bitstream/handle/10024/748285/thesis_penttinen_emma.pdf?sequence=2)
9. Roche, K. A. (2015). Food Labeling: Applications. In *Encyclopedia Of Food And Health* (1st Ed.). Elsevier Ltd. <https://doi.org/10.1016/B978-0-12-384947-2.00785-6>
10. Sachithanathan, V. (2017). A Study On The Consumer Awareness Of Food Additives In Packaged Food And Their Effects On Health In Abha Region, Saudi Arabia. *Journal Of Food Technology And Preservation*, 1(3), 14–27.
11. Trasande, L., Shaffer, R. M., & Sathyanarayana, S. (2018). Food Additives And Child Health. *Pediatrics*, 142(2). <https://doi.org/10.1542/peds.2018-1410>
12. Zhong, Y., Wu, L., Chen, X., Huang, Z., & Hu, W. (2018). Effects Of Food-Additive-Information On Consumers' Willingness To Accept Food With Additives. *International Journal Of Environmental Research And Public Health*, 15(11). <https://doi.org/10.3390/ijerph15112394>
13. Ahsan Ansari, M. U., & Siddiqui, D. A. (2019). Packaging Features And Consumer Buying Behavior Towards Packaged Food Items. *Ansari, Mua And Siddiqui, Da (2019). Packaging Features And Consumer Buying Behavior Towards Packaged Food Items. Global Scientific Journal*, 7(3), 1050-1073.
14. Azam, A. (2016). An Empirical Study On Non-Muslim's Packaged Halal Food Manufacturers: Saudi Arabian Consumers' Purchase Intention. *Journal Of Islamic Marketing*.
15. Bhatt, S., & Bhatt, A. (2015). Consumer Behavior Towards Packaged Food In Rural Areas: An Empirical Study In Ahmedabad District, Gujarat. *Iup Journal Of Marketing Management*, 14(1), 7.
16. Brierley, M., & Elliott, C. (2015). Boys' Healthy Packaged Food Choices. *International Journal Of Men's Health*, 14(1).
17. Carocho, M., Barreiro, M. F., Morales, P., & Ferreira, I. C. (2014). Adding Molecules To Food, Pros And Cons: A Review On Synthetic And Natural Food Additives. *Comprehensive Reviews In Food Science And Food Safety*, 13(4), 377-399.
18. Cj, J., & Kumar, A. (2020). Future Prospect Of Packaged Sustainable Food In India.
19. Da Costa Louzada, M. L., Ricardo, C. Z., Steele, E. M., Levy, R. B., Cannon, G., & Monteiro, C. A. (2018). The Share Of Ultra-Processed Foods Determines The Overall Nutritional Quality Of Diets In Brazil. *Public Health Nutrition*, 21(1), 94-102.
21. Dhanya, V., Shukla, A. K., & Kumar, R. (2020). Food Processing Industry In India: Challenges And Potential.



- Department Of Economic And Policy Research, Reserve Bank Of India. *Rbi Bulletin March, 2020*, 27-41.
22. Adams, M. (2000). Ensuring Safe Food From Production To Consumption. In *International Journal Of Food Science And Technology* (Vol. 35, Issue 3). <https://doi.org/10.1046/j.1365-2621.2000.00351.x>
23. Amit, S. K., Uddin, M. M., Rahman, R., Islam, S. M. R., & Khan, M. S. (2017). A Review On Mechanisms And Commercial Aspects Of Food Preservation And Processing. *Agriculture And Food Security*, 6(1), 1–22. <https://doi.org/10.1186/s40066-017-0130-8>
24. Chronic, R., Risk, D., Isbn, C., Pdf, T., Press, N. A., Press, N. A., Academy, N., Academy, N., & Press, N. A. (1990). Diet And Health: Implications For Reducing Chronic Disease Risk. In *Choice Reviews Online* (Vol. 27, Issue 06). <https://doi.org/10.5860/choice.27-3332>
25. *Food, Nutrition, Health And Fitness*. (2023).
26. Miller, L. M. S., & Cassady, D. L. (2015). Food Label Knowledge: A Systematic Review. *Sustainability (Switzerland)*, 9(1), 1–17. <https://doi.org/10.1016/j.appet.2015.05.029>
27. Mohammadbeigi, A., Asgarian, A., Moshir, E., Heidari, H., Afrashteh, S., Khazaei, S., & Ansari, H. (2018). Fast Food Consumption And Overweight/Obesity Prevalence In Students And Its Association With General And Abdominal Obesity. *Journal Of Preventive Medicine And Hygiene*, 59(3), E236–E240. <https://doi.org/10.15167/2421-4248/jpmh2018.59.3.830>
28. Park, S., Blanck, H. M., Sherry, B., Jones, S. E., & Pan, L. (2013). Regular-Soda Intake Independent Of Weight Status Is Associated With Asthma Among Us High School Students. *Journal Of The Academy Of Nutrition And Dietetics*, 113(1), 106–111. <https://doi.org/10.1016/j.jand.2012.09.020>
29. Penttinen Emma. (2022). *Consumer Awareness Of Greenwashing*. 9(12), 1–86. [https://www.theseus.fi/bitstream/handle/10024/748285/thesis\\_penttinen\\_emma.pdf?sequence=2](https://www.theseus.fi/bitstream/handle/10024/748285/thesis_penttinen_emma.pdf?sequence=2)
30. Roche, K. A. (2015). Food Labeling: Applications. In *Encyclopedia Of Food And Health* (1st Ed.). Elsevier Ltd. <https://doi.org/10.1016/B978-0-12-384947-2.00785-6>
31. Sachithananthan, V. (2017). A Study On The Consumer Awareness Of Food Additives In Packaged Food And Their Effects On Health In Abha Region, Saudi Arabia. *Journal Of Food Technology And Preservation*, 1(3), 14–27.
32. Trasande, L., Shaffer, R. M., & Sathyanarayana, S. (2018). Food Additives And Child Health. *Pediatrics*, 142(2). <https://doi.org/10.1542/peds.2018-1410>
33. Zhong, Y., Wu, L., Chen, X., Huang, Z., & Hu, W. (2018). Effects Of Food-Additive-Information On Consumers' Willingness To Accept Food With Additives. *International Journal Of Environmental Research And Public Health*, 15(11). <https://doi.org/10.3390/ijerph15112394>
34. Fast, R. B. (1999). Origins Of The Us Breakfast Cereal Industry. *Cereal Foods World*, 44(6), 394-397.
35. Harper, J.M. (1981). *Extrusion Of Foods*, Vol. 1. Florida: Crc Press, Inc..
36. Research And Market India Ready-To-Eat Food (Rte) Market Study, 2013-2023: Analysis By Segment, Distribution Channel And State, Featuring Profiles Of Leading Players 2020
37. Alvarez, M. V., Ponce, A. G., & Moreira, M. R. (2018). Influence Of Polysaccharide-Based Edible Coatings As Carriers Of Prebiotic Fibers On Quality Attributes Of Ready-To-Eat Fresh Blueberries. *Journal Of The Science Of Food And Agriculture*, 98(7), 2587–2597. <https://doi.org/10.1002/jsfa.8751>
38. Malik, T., Saxena, M., Yadav, K. S., & Jambeshwar, G. (2018). Development Of A Ready To Cook Curry. *International Journal Of Innovative Science And Research Technology*, 3(3), 354–357. [www.ijisrt.com](http://www.ijisrt.com)
39. Temgire, S., Borah, A., Kumthekar, S., & Idate, A. (2021). *Recent Trends In Ready To Eat / Cook Food Products : A Review*. 10(5), 211–217.
40. Ali, J., Kapoor, S., & Moorthy, J. (2010). Buying behaviour of consumers for food products in an emerging economy. *British Food Journal*, 112(2), 109–124. <https://doi.org/10.1108/00070701011018806>
41. Farhan, M. (2020). Market expansion for organic food in India: Assessing the consumers' attitude. *International Journal Of Green Economics*, 14(3), 278–291. <https://doi.org/10.1504/IJGE.2020.111465>
42. Sarma, M., & Pais, J. (2008). Financial Inclusion and Development: A Cross Country Analysis. In *Annual Conference of the Human Development and Capability Association, New Delhi, 168(10–13)*, 1–30. <https://doi.org/10.1002/jid>

