



STUDY OF FROZEN FOODS POPULARITY AMONG THE PEOPLE OF PUNE CITY

Priya Deshmukh¹ & Amar M. Dhere²

¹*P.G. Department of Food Science and Nutrition, SNDT College of Home Science, Pune*

²*Assistant Professor and Head, Department of Science, SNDT College of Home Science,
Pune*

Corresponding Author - Amar M. Dhere

E-mail ID - prof.amardhere@gmail.com

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Abstract:

The purpose of the current study is to identify the buying behaviour of purchasing frozen food with reference to Pune people. This study aims to provide light on many different aspects of frozen food and consumer purchasing habits. In the increasing and health-conscious times of our generation, frozen food has been seen and considered as an artificial kind of food, but certainly, it has noticeably become a part of our life and is influencing the consumer's purchasing decision when it comes to grocery shopping. The research used exploratory research design to get an in-depth understanding of the subject matter. The primary data is collected through questionnaire and the secondary data is collected through research articles. The research was conducted with 100 respondents using convenience sampling at different super-markets was carried out in Pune. Statistical package for social science (SPSS) software has been used to analyse the result. The tools like a regression test were performed to calculate the validity and to assess the reliability questions, the Cronbach Alpha test was conducted of the questionnaire. The study's target population consists of those who purchase and use frozen food items in their homes. It was found that the frozen food has a significant impact on buying decision and consumer behaviour.

Key word: Frozen food, health conscious, nutritional benefits, easy to eat, pune.

Introduction:

India is the world's second largest producer of food next to China and has the potential of being biggest industry with food and agriculture sector contributing 26 percent to Indian GDP, but, only a small percentage of the farm produce is processed into value -added products. For

instance, even though the country is the second largest producer of fruits and vegetables, hardly two percent of the production is processed. India is a large producer of food and is offering different opportunities and business propositions in food and food processing technologies, skills and equipment. The food-based

industries encompass canning, dairy and food processing, specialty processing, packaging, frozen food / refrigeration.

Freezing is a widely used long-term preservation method for foods, where they retain attributes associated with freshness much better than other conventional preservation methods like canning and drying. Frozen foods are the foods that are prepared by freezing the food and the growth of frozen foods is growing significantly because it is very easy to cook, food taste and odour of the food does not change by freezing the foods and also it is used as food storage due to which buyers are more attracted to it. The frozen food is the best option for the people who runs in a busy schedule and who do not want to spend more time in the kitchen. Although it is a huge producer of food products, India still has immense untapped potential in the frozen food export industry. The demand for Indian recipes from Indians settled across the globe has served as an impetus to development of the frozen food industry in recent years. The availability of frozen foods in the Indian market has brought about great change in the life-style of the people of India. Earlier, women were spending lots of time in the kitchen and with the introduction of frozen foods; they were able to prepare a variety of mouth-watering dishes within no time to meet the

taste of their family members. Among the different reasons for the popularity of frozen foods in India, the improving standard of living of the middle-income grouped people in India has also contributed towards the development of companies in the frozen food industry in India.

Today the frozen food market in India can be described as in its nascent stage with few products, with low consumer awareness levels, and with an underdeveloped frozen food distribution network, plus lack of freezer space at the retail end. The demand for frozen food is driven by convenience. The increase in disposable money, health advantages, accessibility in retail establishments, and the growth of working women are further motivating factors. Everyone enjoys good food, and with the rising culture of food influencers who share their best tips and tricks for making your favourite recipes, many people have found their hidden culinary talents. The love for cooking, however, has become more difficult to engage in these days due to a hectic home and work life, and that is where frozen foods come to the relief.

Freezing is one of the oldest and most widely used methods of food preservation, which allows preservation of taste, texture, and nutritional value in foods better than any other method. The

freezing process is a combination of the beneficial effects of low temperatures at which microorganisms cannot grow, chemical reactions are reduced, and cellular metabolic reactions are delayed. Freezing technology is one of the most well-established long-term preservation techniques for producing high-quality, nutritious foods with prolonged shelf-life. Freezing preservation retains the quality of agricultural products over long storage periods. As a method of long-term preservation for fruits and vegetables, freezing is generally regarded as superior to canning and dehydration, with respect to retention in sensory attributes and nutritive properties. The safety and nutrition quality of frozen products are emphasized when high quality raw materials are used, good manufacturing practices are employed in the preservation process, and the products are kept in accordance with specified temperatures. Products which come under the frozen food industry are fruits, vegetables, fisheries, milk products, meat, poultry and other packaged and convenience foods. Vegetables like drumsticks and okra and prepared food like chapatis and parathas are nowadays available in frozen form in neat packets all over the world. The frozen food market consists of the retail sale of frozen bakery and desserts, frozen fish/seafood, frozen fruit and vegetables, frozen meat products,

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frozen potato products and frozen ready meals and pizza.

Objectives:

1. To identify the buying behaviour of frozen food trends among the customers.
2. To analyse the awareness about frozen food.
3. To find the amount of money spent over frozen food products.

Methodology:

For performing the present study data was collected from the following source.

(1) Primary Data Collection- The primary data or first data was collected through the survey tool. The survey method was best to suit the requirement of present work hence it was applicable as a reliable source of data collection. Furthermore, it has been done through the self-designed questionnaire. The data was gathered through structured and pilot tested questionnaires. This questionnaire was distributed to the consumers who visit food retail outlets Pune. This data was collected in the month of 1st and 2nd week of March, 2022. The questionnaire covered socioeconomic, demographic, 28 questions to make sure that it gave answers of the underlying objectives. Before collecting the information from respondents, facial

validity of the said questionnaire was done with five experts from academics in the SNDT College of Home Science, Pune.

(2) Secondary Data Collection- The secondary information of the present work was collected from the published and unpublished work. This was collected from the university library, digital databases, websites and records. They all are cited in the bibliography.

Sample Selection – For the requirement of present work samples was selected with the non - probability quota sampling method. But here one rule was applicable for aiming to cover the samples across all the food retail outlets in Pune. Researcher specifically visited all the outlets and selected the sample (consumers) after asking their willingness to participate in the present study. The written consent was first filled to not disclose the identity and kept the data of the sample secure. Total 100 responses were collected across various outlets and age groups to achieve

and fulfil objectives and testing the hypothesis.

Hypothesis:

Null Hypothesis (H_0) -The family with a big number size did not prefer frozen food because it saves a lot of time for cooking.

Alternate Hypothesis (H_1) - The family with a big number size preferred frozen food because it saves a lot of time for cooking.

The above Hypotheses will be tested via Kruskal Wallis test on the data set that will be obtained by questionnaire collection. On the basis of results the hypothesis the Null Hypothesis (H_0) is rejected and Alternate Hypothesis (H_1) is accepted.

Statistics Used: The common statistical tests like mean, median, standard deviation were used to find the scores and value of data. Data was analysed by using SPSS (Version- 24.6) for various statistical tests. In order to meet the objectives and test hypotheses, parametric and parametric tests were conducted.

Results and Discussion:

Table No.1: Frequency of purchasing frozen food

Time/Period	Frequency	Percent
Once in a week	19	19.0
Twice in a week	23	23.0
Once in a month	28	28.0
Twice in a month	16	16.0
Once in a quarter	14	14.0
Total	100	100.0

The above table shows the frequency of purchasing frozen food among the respondents. Almost 28% respondents purchase frozen food once in a month. About 19% respondents buy frozen food every week. This may be due the demand for frozen food items has been

rising as both the working-age urban population and the student population have grown. The number may be increases after COVID-19 as more people change their eating habits and including the consumption of nutritious foods.

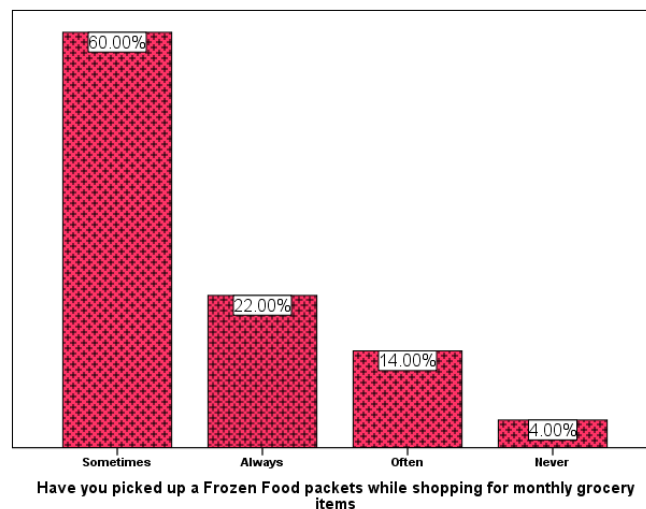


Diagram No.1: Responses buy frozen food while shopping for monthly grocery items

The above graph shows that 60% of respondents sometimes buy frozen food while shopping for monthly grocery items because of the long shelf-life of frozen foods and because they desire to stock up in case of food shortages. While 22% of respondents always buy frozen food when shopping for monthly grocery items

because of its ease of preparation, it is also a convenient option for food at any time of day. Many families with both parents working all the time simply do not have the time to cook meals from scratch. For them, frozen food is often a lifesaver, as it can be quickly prepared and does not require much clean up.

Table No.2: Responses aware about preparation of Frozen Food products.

	Frequency	Percent
Very much	24	24.0
Something	61	61.0
Very little	12	12.0
Not at all	3	3.0
Total	100	100.0

The above table shows that 61% of respondents know something about the preparation of frozen food. This is because steps or instructions are given on the back side of the frozen food product. The respondents must follow the process or

step that is given on the packet to prepare their meal. And 24% of respondents know very much about the preparation of frozen food it will happen because they consumed the frozen food long time ago, or may have seen the advertisements.

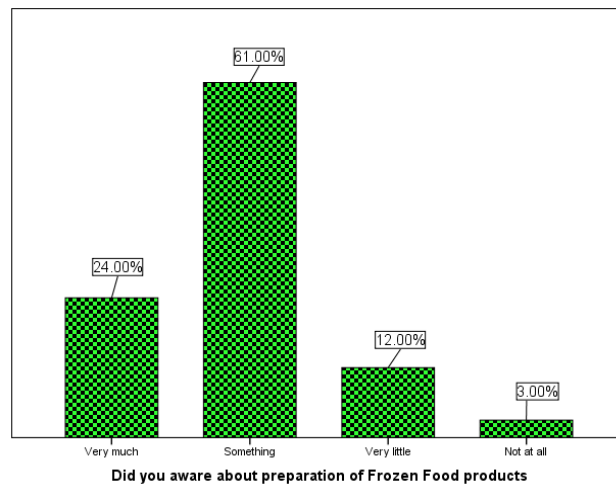


Diagram No.2: Responses aware about preparation of frozen food

The above graph shows that 24% of respondents are very much aware of the preparation of frozen food, as frozen foods come with detailed cooking instructions, so there is no room for error. And because the preparation is done, all that remains is to heat it up and serve it. This reduces the

possibility of contamination during the preparation process. Furthermore, it can help to maintain freshness. While 61% of respondents know something about the preparation of frozen food, as the frequency of consumption is lower.

Table No. 3. Amount of money spend by responses on frozen food (In Rs.)

Amount	Frequency	Percent
100 - 500	23	23.0
500 - 1000	42	42.0
1000 - 2000	30	30.0
2000 - 3000	5	5.0
Total	100	100.0

The above table shows that 42% of respondents spent 500–1000 (In Rs.) it means middle class people buy it and it is

cost effective. It is affordable, and people might be aware of frozen food. While 30% of respondents spent 1000-2000 it means

they are thinking that frozen food can be an alternative and convenient option in a busy life. And only 5% of respondents

spent 2000-3000 it means that people are ready to buy expensive frozen food.

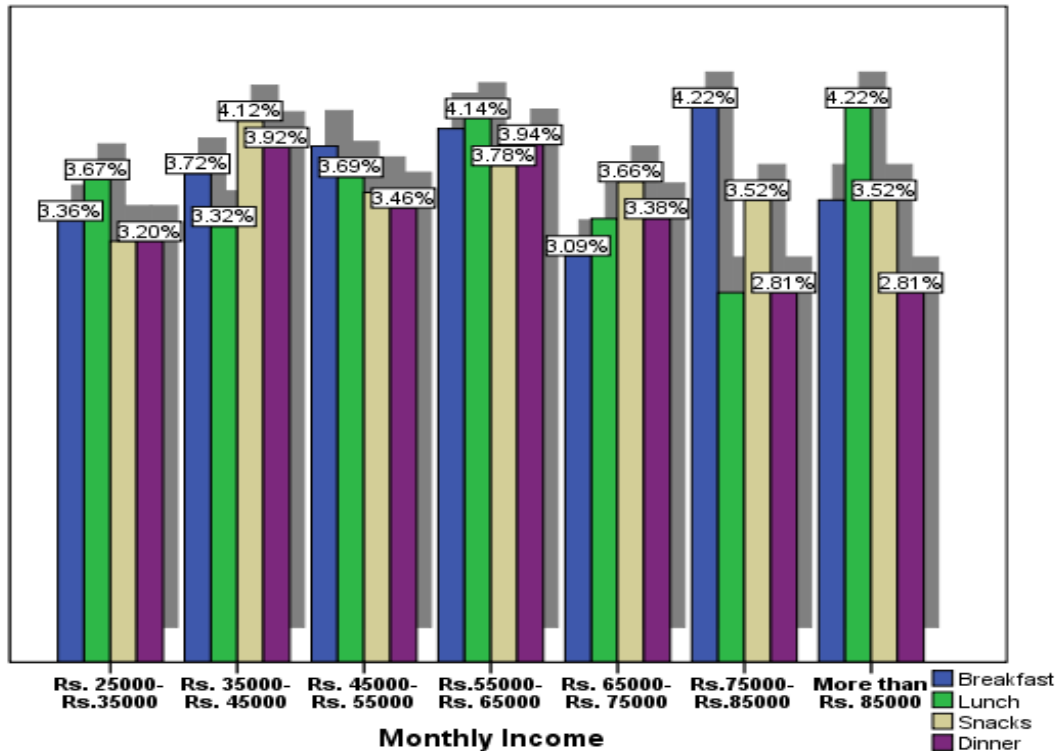


Diagram No.3: Money spent on frozen food

The above is a diagram/graph with the time for frozen foods to be consumed in conjunction with the monthly income. A variety of ways were found to delineate the consumption of frozen food based on individual preference. The respondents prefer to eat frozen food during lunch and breakfast if their monthly income ranges from Rs.25000 to

Rs.30000. In the income group between Rs.55000 and Rs.65000, a similar trend was observed. For respondents with monthly incomes between Rs.35000 and Rs.40000, frozen food is more likely to be consumed as snacks and dinner. The respondents take frozen food for breakfast when their monthly income is between Rs.75000 and Rs.85000.

Table No.4: Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
A Frozen Food Pack saves a lot of effort in cooking	100	1.84	0.692	1	5
Number of Family member	100	3.00	0.696	2	5

The above table reflects that, mean (M)=1.84 have large differences with SD=0.692 for the A Frozen Food Pack saves a lot of effort in cooking as well as mean of number of family members (M)=3.00 and SD=0696 have huge difference denoted the multiple levels of responses collected in the present study.

Table No.5: Kruskal Wallis Ranks

	Number of Family member	N	Mean Rank
A Frozen Food Pack saves a lot of effort in cooking	2-3	22	56.73
	4-5	58	44.12
	5-6	18	60.47
	More than 7	2	77.25
	Total	100	

Table No.6: Kruskal Wallis Test Statistics^{a,b}

	A Frozen Food Pack saves a lot of effort in cooking
Chi-Square	10.218
df	3
Asymp. Sig.	0.017

a. Kruskal Wallis Test

b. Grouping Variable: Number of Family member

From the above table it shows that Kruskal Wallis test value H=10.218 of two variable at the significance level $p = 0.017$ of number of family members and A

Frozen Food Pack saves a lot of effort in cooking. The assumed significance level ($\alpha = 0.05$) is greater than calculated values i.e. $p = 0.017$.

Henceforth,
Null Hypothesis (H_0) -The family with big number size wasn't prefer frozen food because it save lot of time for cooking is rejected with 0.05 significance level.

Whereas
Alternate Hypothesis (H_1) - The family with big number size was prefer frozen food because it save lot of time for cooking is retained.

Conclusion:

The buyer's behaviour of frozen food products mainly focuses on how people see the frozen food products, awareness about frozen food, what frozen food they buy the most, how much they spend on frozen food, consumption of frozen food among the different age groups etc.

Lack of time for the customers to prepare in their daily lives is the main reason they choose frozen food instead of regular cuisine. The greatest alternative for this is to exclusively purchase frozen meals. Many of the respondents to this study's questions said they purchase frozen food to save and protect themselves from food shortages. According to the findings of this survey, individuals in the Pune region have a favourable attitude towards frozen food items including fruits, vegetables, meat products, etc.

Additionally, it is important that a person eat healthily and lean towards frozen meals owing to the time restrictions of the present period and cost management. After conducting this study, it was once again established that frozen meals significantly affect both purchasing behaviour and decisions.

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