

FRESH VS FROZEN FOOD: A STUDY ON CONSUMPTION PATTERNS OF MILLENNIALS

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ABSTRACT

Background: Now days we get food in many forms such as fresh food, frozen foods, convenience food, packed foods etc. Frozen foods are made-up or partially made-up dishes which have been frozen to -20 degree C and which can be stored for at least 6 weeks and generally much longer in the freezer. Though fresh food is always the best option for human consumption, there must be a comparison made and reasons found for choosing frozen food over fresh in a fast-paced world. **Objective:** To understand the reasons behind the consumption patterns of millennial towards frozen food and to study the consumption patterns of millennial for frozen food and fresh food. **Methodology:** The present descriptive study was carried out in the context of millennials. The four dimensional study was carried to know the food consumption patterns such as purchasing patterns, nutritional perceptions, family acceptance and cooking preferences. The sample size of 95 millennials was collected through Google forms, analysis the data such as means; percentages and Cronbach's alpha were applied. **Results:** The results of the study revealed that Consumption status of frozen foods since last one year for millennials has increased by 34.7% and 62 respondents inclined for the frozen vegetables and processed vegetarian food over fresh food in same category. **Conclusion:** As millennials are 30-40 years old, married, and probably have children by now, this research has found that their consumption pattern has switch from fresh to frozen foods. However the motivating factors that motivates them to choose frozen food over fresh foods still includes the personal preference and convenience in cooking.

Key Words: Millennial, Lifestyles, Food Consumption patterns, Frozen Fresh, Health Food.

INTRODUCTION

The Indian food industry is changing constantly, where people are accepting new cuisine and innovative methods of cooking. As more than 1/3rd of the population are millennials where both the partners are working having good spending power, they are the mall generation where they found new food in display, which urge them to buy the frozen food. Millennials are the

generation of two era before technological revolution and after the smart phones and internet emergence, which they have accepted both with open minded moreover after the aftermath of pandemic, the reliance on the frozen food had increased phenomenally. Frozen food is semi processed food which required minimum time to become the final product which has being accepted widely by all age groups, where kids

are more inclined towards these kind food which has variety as well as taste, the cooking of same is convenient for parents to satisfy the palate of their kids as well as guests too.

Barb Renner (2021) stated that the food industry revolves around three major issues i.e. perishability, price and personal preferences. The food is the perishable commodity; people were not as much concerned about the perishability of food before pandemic hit the world. As the fresh food cannot be stocked up in high amount and it loses its palatability too, moreover the people need to increase their frequency of visit for purchasing fresh food stuff. As per the survey done by the authors, they found that there is almost 50% downfall in the frequent shoppers from year 2019 to 2020. Secondly as far as prices are concerned, they added that price is always a priority for a customer, 90% consumers see the price of the food and tend to buy fresh food as compared to frozen. In today's scenario where inflation is rising day by day frozen food is in the front foot or equivalent to the fresh food in pricing, whereas in some food the baseline price of the fresh food is higher than the frozen food. They also found the 62% of people are inclined towards the frozen food in last one year than the fresh food due to frozen alternatives are available for the fresh ones. Moreover, the prices of the fresh foods are kept on fluctuating on day-to-day basis than the frozen food. Thirdly comes the personal preferences of the consumers, they think that the frozen food has been better than the fresh food in virtue of taste, nutritional aspects and convenience. This preference is among the millennials and youngsters and want to buy good frozen food and remove the stigma of frozen food is not good adding value to their lifestyle, raise in economic status and purchasing power of the oneself over the coming years.

Fernandes (2022) described about 75 million Indian millennials are changing their eating habits very rapidly along with that the market is also evolving in same pace to meet the demand of consumers. He also referred that these day majority of the millennials approximately 55% of them prioritise

convenience in deciding about the food they want to purchase. To meet the rising demand of millennials and change in lifestyle in buying online products the grocery apps are gaining high popularity day by day and somehow it reduces the impulsive buying of the people when they visit the grocery shops or supermarkets. Moreover, millennials are bending towards healthier food options as they are become diet conscious these days which is leading them to buy organic food whether it is fresh or frozen which is being kept in display by the stores.

The study also showed that the millennials have more focus on the restaurants rather than the quick meals and survey also finds that these millennials are the economy drives as they have the highest purchasing power than any age group today, therefore restaurants focus on their demand of convenience food which take less than 40 minutes to be on the table or to their door step.

Every day the food trends are changing especially after the pandemic, when most of the people were at home and were working from home, their dependency on the frozen food increase drastically as it took less than half an hour to get ready and taste is super, on top it is it's easy to stock up in the refrigerator. According to survey author finds that there is 11% increase in packed or frozen food which is coming at par of the US consumption.

Ramya (2014), as per her research it was found that the working women these days are more attracted towards the packed or processed food. This is a meal replacement i.e not cooking fresh food however total shift to packed food which is in high demand in metro cities where the people live in nuclear families and both the partners are working and not have enough time to purchase the fresh ingredients to cook a meal, or the bachelors those who really do not know how to cook certain foods and not have enough resources to eat out or may live in a place out of their own ethnicity. The shift of meal from fresh to convenience had made a drastic change in the lifestyle of the millennial as it has affected their change of mindset and

eating habits. Some of the millennials think that the consumption of convenience food had made their life very easy and most preferred because they find those ingredients in the packed food which may not be available as such in market and not produced nearby and not easy to procure from locally. She further states that not all the home cooked fresh food is replaced totally but some are do changed like bakery products, dairy products, ready to eat meals, frozen items (French fries, chicken nuggets, fish fries etc.) and pre-mixes which do not take too much labour to cook the food. The major meals replacements are like dried milk powder, pre packed sweets, ready to eat meals by various ITC, Haldirams etc, instant food, frozen meat products, frozen vegetables and many more.

Saini (2022) has mentioned with the generation changes, you will find change in their consumption pattern too, there is a steady transformation in the consumption and demand of frozen food around the world in last 10 to 20 years especially in developing countries. In this research author found that the taste of the frozen products is almost close to the taste of fresh ones in comparison to other convenience foods in food market as well as the attitude of the consumer and its adoption depends upon the number of factors which is vulnerable especially in country like India where mind sets play an important role in kitchen. We still live in the joint families with our parents those who are having different understanding about food and its purchasing patterns and fixing frozen food into is a hard task. According to their survey they found that the exports rise up to 44.62% of overall revenue in 2020 and it has drastically impacted due to COVID-19. They also found that people are more into use of frozen green peas, sweet corn, and processed food like French fries etc.

Insights (2022) in report mentioned about the increasing use of online shopping via smart phones which is handy to present generation and order according to their desire and need especially in working class people which makes increased use of frozen food which they will receive at the door step whenever they require and whatever attracts to them.

In 2020, the global market had above-average year-over-year growth of 15.35%, based on their survey. This may be primarily related to the panic buying that occurred among consumers due to the global spread of COVID-19. Growing demand for frozen goods from developing nations as well as growing demand from the food service sector is both responsible for the increase in Compound Annual Growth Rate (CAGR).

The rising demand for ready-to-eat foods like cold cuts and ready meals is driving this market's steady expansion. Ready-to-eat (RTE) food consumption has increased significantly as a result of the frantic lifestyles of millennials and the growing number of working people around the world. Foods that keep for a long time are gaining in popularity. The factors which are found which has lead to the increase in the use of Frozen food and RTE's are:

1. Lockdowns which lead to less workforce at manufacturing facilities during Covid-19 to impede market expansion.
2. Increasing online food buying and customer awareness.
3. Market is driven due to growing rate of women employment and empowerment.
4. Rise in demand of convenience food.

As we consider the factors for increased demand of Frozen food there are some factors which also restrain their growth and inclined towards Fresh Food buying also:

1. Inclination & Preference towards the use of natural and fresh food.
2. Adopting older methods of consuming food rather than modern ways.

Zachariah (2016) stated that consumer market of the future is now being identified as the millennial generation. In true sense, today's food market is becoming more and more millennials oriented that too in emerging nations, where youthful populations imply that people between the ages of 16 and 36 have a substantial amount of purchasing power.

The large millennial generation in India have constant rising purchasing power, and the nation's food business is looking for new strategies to appeal to this consumer group more.

Mohit Khattar, CEO of Gourmet Retailer Godrej Nature's Basket, quoted a statement for the millennials that they have higher spending power than their predecessors. "Incomes have grown much faster in India in the last couple of years than they have in the past. Spending has migrated from staple to discretionary."

It is being found that the demand for the fresh food is increasing due to its reliability and quality, people are becoming more health-aware these days and expect high quality of fresh food. Singh (2017) found that using frozen packaged foods or ready-to-eat foods will surely benefit many of the working people in the following ways and foster a culture of environmental responsibility. Firstly, they will tend to spend less time in the cooking for all the meal times instead they may spare the time for their family. Secondly, less time will be spent using different types of cooking utensils, which will result in less time spent using soaps and cleaning agents. Thirdly using as little water as possible when cooking and cleaning dishes. Frozen foods pre-packaged and ready to eat foods are however the biggest boon for the modern working generation. The manufacturers make sure that their products are promised for environmental leadership in all parts of their business. They are in continuous R&D into innovations and flexible solutions per the needs of consumers.

The present study was carried out in the context of millennial. To understand the reasons behind the consumption patterns of millennial towards frozen food and to study the consumption patterns of millennial for frozen food and fresh food. A large part of popular culture and trends is determined by millennial, since they are the largest generation of workers. Hence marketers and product developers are likely to pay more attention to the millennial generation, or those born between the early 1980s and the year 2000.

The objectives of the study were:

- To understand the reasons behind the consumption patterns of millennial towards frozen food over fresh food.
- To study the consumption patterns of millennial for frozen food and fresh food.

METHODOLOGY

Research Design: The study follows a descriptive research design.

Locale: Data was collected online from subjects residing in Pathankot, Jalandhar, Amritsar and Gurdaspur.

Sampling Design: 95 respondents were selected. Random sampling technique was used to select the respondents. Millennials were randomly selected for the filling of questionnaire which was distributed to the respondents through online mode by using Google forms.

Tools and Technique: On the basis of initial information obtained from literature and research findings and various variables such as purchasing patterns, nutritional perceptions, family acceptance and cooking preferences a well-structured questionnaire with 20 statements was developed to study and understand the consumption patterns of millennial for frozen food and fresh food among millennial. The tool was in English and Likert scale was chosen for the scaling technique starting from 1 to 5 point for Strongly Disagree-1, Disagree-2, Neutral-3, Agree-4 and Strongly Agree-5. Glen (2011) for Analysing and measuring internal consistency among questions asked we have used Cronbach's alpha test table (5). It was developed by developed by Lee Cronbach's in 1951. The multiple questions under Likert Scale are checked by the Cronbach's alpha for their reliability. The results tell us that how closely test items are related to each other in a group.

Data Analysis and Statistical Analysis: In this research it was tried to understand the consumption patterns towards fresh and frozen food. The four dimensions of the food consumption pattern are considered such as purchasing patterns, nutritional perceptions, family acceptance and

cooking preferences. The data was analysed on the basis of age, gender, occupation and marital status of the respondents. The results were computed as frequency, averages and percentages. Cronbach's alpha was used to measure internal consistency among questions asked from respondents.

RESULTS AND DISCUSSION

74.7% of the respondents are male and 25.3% of the respondents were female. Also for marital status with spouse is highest 37.9% among respondents. With the finding it is evident that the respondents who are using frozen foods along with fresh foods come from families and therefore it is assumed that the purchasing decisions for the food is taken by males and female alike among millennial respondents.

Table 1: Demographic characteristics of the respondents (n=95)

S. No.	Characteristics	Percentage	Number
1	Gender		
	Male	74.7%	71
	Female	25.3%	24
2	Age group		
	30-35 years	50.5%	48
	36-40 years	23.2%	22
	41-45 years	26.3%	25
3	Occupation		
	Self-employed	15.8%	15
	Employee	34.7%	33
	Student	21.1%	20
	House wife	27.4%	26
	Other jobs	1.1%	1
4	Marital status		
	Single	29.5%	28
	With spouse	37.9%	36
	Divorced	23.2%	22
	Widow/widower	9.5%	9
5	Monthly income		

	Less than 30000	50.5%	48
	Between 30000 to 50000	13.7%	13
	Above 50000	8.4%	8
	Not applicable	27.4%	26
6	Monthly income spend on frozen food		
	Rs. 1000 - 2000/-	40%	40
	Rs. 2000 - 3000/-	21%	21
	Rs. 3000 - 4000/-	16%	16
	Rs. 4000/- and above	18%	18
7	Monthly income spend on fresh food		
	Rs. 1000 - 2000/-	23.2%	22
	Rs. 2000 - 3000/-	12.6%	12
	Rs. 3000 - 4000/-	58.9%	56
	Rs. 4000/- and above	5.3%	5

Table 2: Comparison of monthly income spend on fresh and frozen food

S. No.	Monthly Income Spend	Fresh	Frozen
1	Rs. 1000 - 2000/-	23.2%	40%
2	Rs. 2000 - 3000/-	12.6%	21%
3	Rs. 3000 - 4000/-	58.9%	16%
4	Rs. 4000/- and above	5.3%	18%

With the comparison as shown in above graph for monthly income spend for fresh food is 53% and for frozen food is 18% it is analysed that the monthly purchasing of frozen food is way below when compared with fresh food.

Among reasons for using frozen food over fresh food, the most prominent is convenience in cooking 35 responses followed by personal preference 26 responses and perishability issues 20 responses. The same was suggested by Barb Renner (2021) that the food industry revolves around three major issues i.e. perishability, price and personal preferences the food is the perishable commodity.

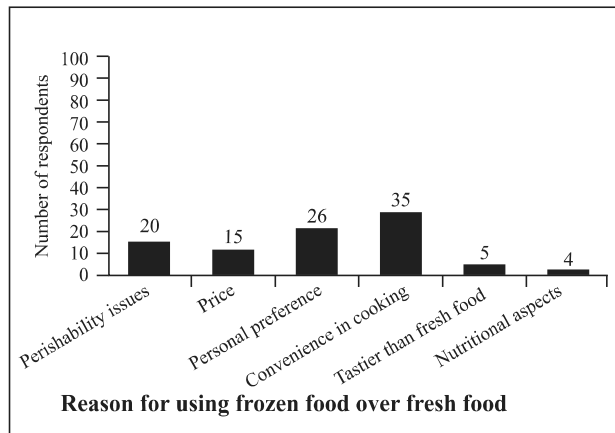


Figure 1: Reason for using the frozen food over fresh food

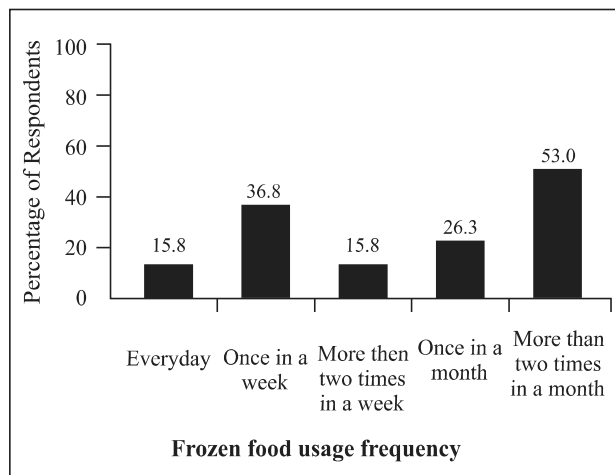


Figure 2: Usage frequency for frozen food in your meal preparations

In above graph although higher percentage 53% is found to be for usage of frozen food twice in a month, the significant finding is derived for usage of frozen food once in a week that is 36.8% which shows that consumption of frozen food is happening after every six days. This is taken to be a good indicator for incorporation of frozen food in consumption pattern among respondents. Sahgal (2022), despite global economic slowdown and hiccups, the global economy is getting ready to picking up the acceleration during the post-pandemic period. The frozen food industry continues to thrive and expand in spite of all odds. Author states that, post pandemic the consumer behaviour and consumption patterns

have undergone an exponential shift. During pandemic, people had started eating food that was more convenient as well as healthier. Frozen foods are in trend these days because of three key ancillary factors-value for money, convenience and healthfulness.

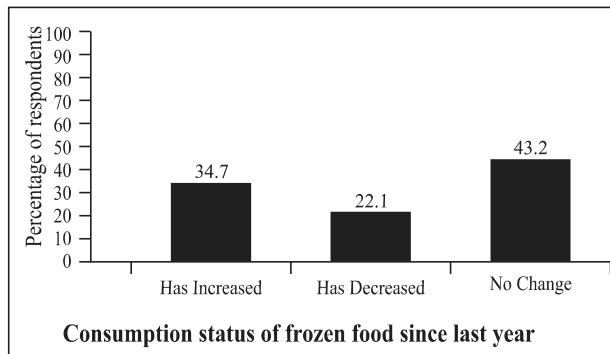


Figure 3: The consumption status of frozen foods since last one year

As shown in above graph the majority of respondents 43.2% say that there is no change in consumption of the frozen food as compared to 34.7% respondents who say that they have increased their consumption. A more balanced consumption is shown as no major increase can be interoperate from results.

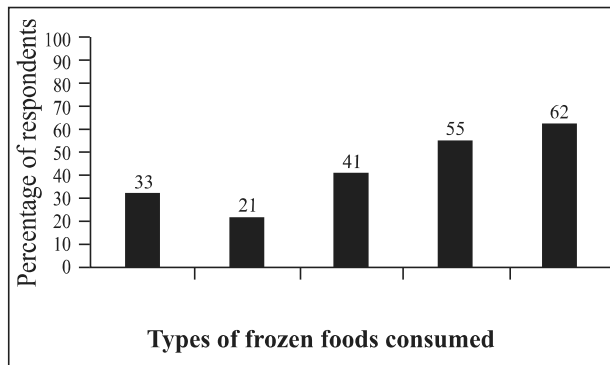


Figure 4: Different types of frozen foods consumed

When asked from respondents about their preference of type of frozen food they eat, the most surprisingly vegetarian process food 62 responses is found to be most preferred followed by frozen readymade food 55 responses. This shows that the respondents are choosing frozen food only for those products which require many efforts to cooking otherwise in

products which require many efforts to cooking otherwise in home kitchens.

Table 3: Analysis of the data obtained through with Mean and Standard Deviation

S. No.	Statements	Means	Standard Deviation
1	Started using the frozen food due to the demand of my children	2.53	1.34
2	I prefer to consume vegetarian frozen food only	2.68	1.35
3	I might have to purchase the extra refrigerator for storing frozen food	2.20	1.24
4	Although I use frozen food but I still consider fresh food healthier than frozen food	4.13	1.27
5	Marketing /advertisements have changed my family's perception about frozen food	2.69	1.31
6	While purchasing frozen food I can differentiate between healthier and junk food	3.63	1.04
7	I am more satisfied with nutritional aspect of frozen food as compared to fresh food	2.45	1.20
8	For my family frozen food is occasional food ingredient	3.78	1.20
9	Purchasing of frozen food sometimes is due to impulse buying	3.01	1.30
10	Purchasing of fresh vegetables and fruits is a tedious task for me	2.72	1.40
11	I find cooking of frozen food more convenient than fresh food	3.27	1.39
12	Consumption of frozen food has increased my monthly food budget	3.01	1.25
13	I usually keep good stock of my favourite frozen food	2.99	1.14
14	Use of preservatives in frozen food is not a concern for me	2.19	1.21
15	Use of fertilizers while growing fruits and vegetables is a concern for me	3.86	1.37
16	I consume frozen food only when I have less time for cooking	3.43	1.23
17	Using of frozen food gives variety to my food consumption	3.08	1.28
18	I can reduce food waste by using frozen food	3.13	1.36
19	Frozen foods are more tastier than fresh foods	2.37	1.31
20	It will be difficult for me to change habit of eating frozen food within my family	2.75	1.07

Above table consist of analysis for 20 statements asked from the respondents regarding the consumption pattern variables such as purchasing patterns, nutritional perceptions family acceptance and cooking preference. The results of the study

revealed that cooking preferences and Nutritional perceptions are the major variables which influence the acceptance of frozen food among millennial.

Some of the important points obtained from above analysis are:

1. Fresh foods are still considered healthier than frozen foods.
2. Choice of frozen food is occasional as a cooking ingredient.
3. Cooking of frozen food is taken to be more convenient.
4. Children are acting as motivators for couples for using frozen food.
5. Frozen food consumption has increased the monthly food budget.

Jain (2022) consumption patterns are changing constantly among millennials the shift of consumption behaviour from cereal based food to high-value foods from fresh to processed, from processed to branded packaged food. It is also making a paradigm shift of millennials in purchasing behaviour for which is booming the frozen food market.

Table 4: Consumption pattern variables

Purchasing Patterns
Purchasing of frozen food sometimes is due to impulse buying
Purchasing of fresh vegetables and fruits is a tedious task for me.
Consumption of frozen food has increased my monthly food budget
I usually keep good stock of my favourite frozen food
I might have to purchase the extra refrigerator for storing frozen food
Nutritional Perceptions
Although I use frozen food, but I still consider fresh food healthier than frozen food
While purchasing frozen food I can differentiate between healthier and junk food
I am more satisfied with nutritional aspect of frozen food as compared to fresh food
Use of preservatives in frozen food is not a concern for me
Use of fertilizers while growing fruits and vegetables is a concern for me
Family Acceptance
Started using the frozen food due to the demand of my children
I prefer to consume vegetarian frozen food only

Marketing /advertisements have changed my family perceptions about frozen food
For my family frozen food is occasional food ingredient
It will be difficult for me to change habit of eating frozen food within my family
Cooking Preferences
I find cooking of frozen food more convenient than fresh food
I consume frozen food only when I have less time for cooking
Using of frozen food gives variety to my food consumption
I can reduce food waste by using frozen food
Frozen food are more tastier than fresh foods

Table 5: Average scores for variables

Variables	Average Scores	Frozen
Purchasing patterns	23.2%	2.78
Nutritional perceptions	12.6%	3.27
Family acceptance	58.9%	2.90
Cooking preferences	5.3%	3.05

By using descriptive analysis it was determined that most of the statements are over the midpoint (2.5) this result shown in table (9) depicts that there is the acceptance of frozen food among millennials and are found to be in high level of acceptance.

Table 6: Reliability for tool

Reliability Statistics	
Cronbach's Alpha	Number of Items
0.878	20

Reliability for the questions asked for the variables, the reliability test indicates the alpha coefficient value is 0.878 which indicates that the instrument was reliable, there were total 20 statements asked for 04 variables such as purchasing patterns, Nutritional perceptions, Family acceptance, cooking preferences etc.

CONCLUSION

In the study it was found that both frozen food and fresh food

are of equal importance to the millennial. According to our tool used to find the best possible result for the never-ending pro and cons of frozen and fresh food. Majority of people buy processed foods like French fries, burger patties or snacks items in frozen form as they are convenient to be used whereas these item to be processed at home itself is a tedious job and providing taste to same is a challenge, moreover respondents believes that the frozen food is nutritious and healthy too. During our study we underlay various statements to our respondents where they believe that, it's easier to purchase and cook frozen food, it's very much acceptable by their family and favourite for their children, it has better shelf life than fresh foods and all the nutrients are intact as in fresh food.

RECOMMENDATION

It is a never ending debate that which food is better frozen or fresh. To come to an accurate and precise conclusion we recommend that, the sample from both fresh food and frozen food may take and detailed analysis should be conducted in the laboratory where all necessary evaluations(sensory and objective) should be carried out and value of each food along with the nutrient contents before processing and after processing and preservation may be generated which will help the people to judge which food they want to prefer.

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