

## **A STUDY TO ANALYZE THE AWARENESS AND HABIT OF FAST FOOD CONSUMPTION AMONG YOUNGSTERS IN MUMBAI**

Author's Name: Dr. Vanitha Esaimani

Designation: Asst. Professor

KES Shroff College of arts and Commerce

Author's Name: Dr. Bhavika R. Karkera

Designation: Principal

Dnyan Ganga Education Trust's Degree College of Arts, Commerce and Science

### **ABSTRACT**

The choice of any individual to eat in today's modern world especially among working women's is fast food rather than traditional food as they don't have time to prepare the same, also as they step out of their house they get variety of food to eat with their friends and colleagues even in their office canteen. The most preferred fast food in a city like Mumbai with its variants are missal pav, pav bhaji, chaat items(sevpuri, behpuri, ragdapattice, panipuri) pizza, burger, wada pav, samosa pav, dabeli, falooda, Idli, dosa, toast sandwich and Chinese food (such as noodles, fried rice, Chinese bhel, etc), Frankie and so on . Even in the year 2011, Mumbai city had a population of 12,442,373 of which 8,522,641 are females and many among these were working population. The reason of choice for fast food is it is very easy to prepare even in roadside stalls, if you think from shopkeeper's point of view and from customer's point of view it is the most take away preferred menu as it is easily available in parcels. Increasing disposable income and convenient availability of such fast food not only in roadside stalls but also branded outlets is increasing the demand more and more in the society. These fast foods are demanded by all age group, but student group is the major chunk of population in Mumbai. Understanding the consumption patterns of fast foods by youngsters' is the topic of interest to this research paper. The various demographic factors considered for most of the research are gender, education, place of residence, monthly income and so on, but in this

research, youngsters are considered as the most important demographic factor. For this research study, 305 sample respondents were chosen from selected area in Mumbai suburbs. For the primary data researcher has used the questionnaire. Author has also formulated few hypotheses and used Chi Square test, to test them. It is concluded that the level of awareness (of the respondent) about side effects of eating fast food have influence on frequency of eating fast food.

## KEYWORDS

Fast Food, Consumption, Youngsters, Habit

## Objective:

The main objective of this paper is to highlight findings of the study in the context of various factors behind consumption of fast food among youngsters.

## Methodology:

**This paper is mainly based on primary data collected by the authors.** The articles which are published on various factors behind consumption of fast food among youngsters have been studied for the research.

## 1. Introduction

Consumption of fast foods has become a global phenomenon. There is a rising trend among the newer generation about fast food culture. The fast-food sector in India is rising at the rate of 40% per annum. India ranks 10th in the fast food per capita spending figures {*Joseph et al., (2015), Ashakiran and Deepthi (2012)*}. Fast foods are characterized as fast, simply accessible and low-cost alternatives to homecooked meals. Availability at low prices, convenience, anxiety to eat, shortage of time due to added use of technology, urbanization, more women's joining the workforce, prolonged working hours, social adaptability, better economic life, Change in lifestyle, breakdown of joint family system where members of family used to eat food together triggered the demand for fast foods among young people in Mumbai. Fast food is a new and fast habituated option to consume in the brief noon hours. Eating out eliminates hunger and offers pleasure, entertainment, time saving, social activity and psychological assistance.

Fast food simply are filled with high calories and lacks in micro-nutrients such as vitamins, minerals, protein, amino acids, and fiber. Consumption of fast food with a sedentary lifestyle has resulted in causing chronic diseases such as obesity, diabetes, cardio-vascular diseases and cancer. Frequent eating of fast food

leads to weight gain and obesity due to high fat and sugar. World Health Organization (WHO) predicts that about 2.7 billion adults will be overweight and obese by 2025. Understanding the consumption patterns of fast foods by youngsters' is the topic of interest to this research paper. The various demographic factors considered for most of the research are gender, education, place of residence, monthly income and so on, but in this research, youngsters are considered as the most important demographic factor

## 2. Literature Review

*Subhalakshmi.K, Dhanasekar.M (2018)* studied fast food consumption pattern and health problems. They used doctrinal method. They concluded that fast foods consumption has increased among teenagers. They say fast food consumption have actually sliced up the Third World due to economic process.

*Ebru Onurlubaş and NeslihanYilmaz (2013)* conducted survey to identify the fast food consuming habits of university students and found that 97.4% of the students eat fast food. The authors applied factor analysis to found out the reason of consuming fast food as Product-Quality-Price relation, Correctitude of Location, Product and Service, and Scarcity of Time.

*Munmun Shabnam Bipasha, Shatabdi Goon (2013)* examined the preference, prevalence and pattern of fast food consumption among the students and concluded that the important factors for the preference of fast food included good taste, easy accessibility, increased convenience, and pocket friendly in nature. They also proved that approximately 22% of the respondents consumed fast food 4 days per week and more than one-fifth had the meal every day. It was also found that 54% of the respondents skipped their breakfast majorly due to class pressure. They also spoke that 98% of the students knew about the negative effects of fast food consumption but were tranquilly addicted to it. Finally, the researcher's recommended that health education, dietary guidelines and effective public awareness campaigns should be initiated for the university students to improve their health.

*TenneychellKhongrangjem, Sushma Marita D'Souza, Priya Prabhu, Vijay BasappaDhange, Vrindha Pari, Sunil Kumar Ahirwar, Kumar Sumit (2018)* that after their survey they found that 72.5% reported that the main reason to consume fast food is delicious taste. 51% had inadequate knowledge and only 26.25% had adequate knowledge about the effect of consuming fast food. It was concluded by the author that nutrition counselling, significance of balanced diet and telling them the harmful effects of fast food consumption will help them to curb addiction.

**Dr. NaheedVaida (2013)** found that flavor, variety, brand, fast service and availability were found main driving force in fast food intake. Also exposure to advertisements, media influence and urbanization were considered the chief factors in fast food intake.

**Vaishali Krishna Pawar (2015)** Great taste, attractive appearance along with advertising has played a major role in attracting people particularly adolescents

**Harsh Kumar, Rajdeep Palaha and Amandeep Kaur (2013)** aimed to study the fast food habits of the hostlers. It provides converging evidence of a direct causal link between food advertising, parent's role and behavioral pattern of the hostlers about the fast food consumption. The authors signified a direct uncertainty in the knowledge, awareness and prudent consumption behavior amongst students. Overall, it is concluded that the hostlers commonly adopted the fast food culture.

**J.M.J.K. Jayasinghe and L.P.U. De Silva (2014)** expressed University students who stay most of the time away from home tend to consider convenience, availability and style of eating as important factors in fulfilling their food and energy requirement. It was also found that 54% of the students consumed fast foods more than once a day. Price and taste were the major attributes that determined the selection of fast food among students. Overall, no differences were found between attitude towards fast food consumption and gender, frequency of fast food consumption and nutritional status and body mass index and gender.

### **3. Need of the Study**

#### **Statement of the Problem:**

The problem of this research is to find out the relation between the respondent, their habits and demographic factors and their consumption of fast food. The purpose of this study is to develop a better understanding of characteristics of youngster and their consumption of fast foods.

### **4. Objectives of the Study**

- To know whether youngsters are consuming fast food or not.
- To know whether youngsters are aware about the side effects of consuming fast food.
- To know the level of awareness (of youngsters) about the side effects of consuming fast food.
- To know the amount of money spend by youngsters on fast food.
- To know the reasons for eating fast food.
- To know the place of purchase for fast foods.

## 5. Data Collection Method

This empirical research is basically based on Primary data collected by the author from various respondents. The respondents to this study are youngsters in Mumbai suburban areas.

### Methods and Materials:

- **Primary Data:** A structured questionnaire was prepared and distributed among the youngsters. Data collected from 305 respondents by online method (using questionnaire in Google Forms format).
- **Secondary Data:** The researcher gathered required information from various books, journals and published articles, besides gathering data from Internet.

### Tools used:

- Suitable statistical technique was used for testing the hypothesis.

## 6. Data Analysis

The data collected has been analyzed with the help of suitable statistical tests. Appropriate statistical techniques such as percentage and Chi Square test were used for hypothesis testing.

With regards to consumption of fast foods amongst the youngsters, hypotheses for the study are as follows:

### Hypothesis 1

There is a significant relationship between gender of the respondent and whether the respondents are regularly eating fast food or not.

### Hypothesis 2

There is a significant relationship between place of residence (of the respondent) and spending on eating fast food in a week.

### Hypothesis 3

There is a significant relationship between frequency of eating fast food (of the respondent) and their level of awareness about side effects of eating fast food.

### Hypothesis 4

There is a significant relationship between spending on eating fast food in a week and their level of awareness about side effects of eating fast food.

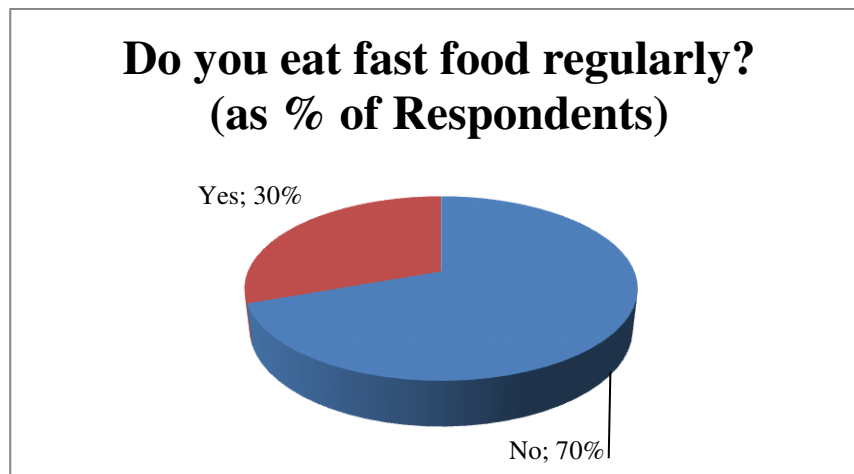
## ANALYSIS OF SURVEY DATA

Understanding the views and opinions of the respondents is one of the most important aspects to be considered which helps in understanding their consumption of various types of fast foods.

### Consumption of Fast Foods

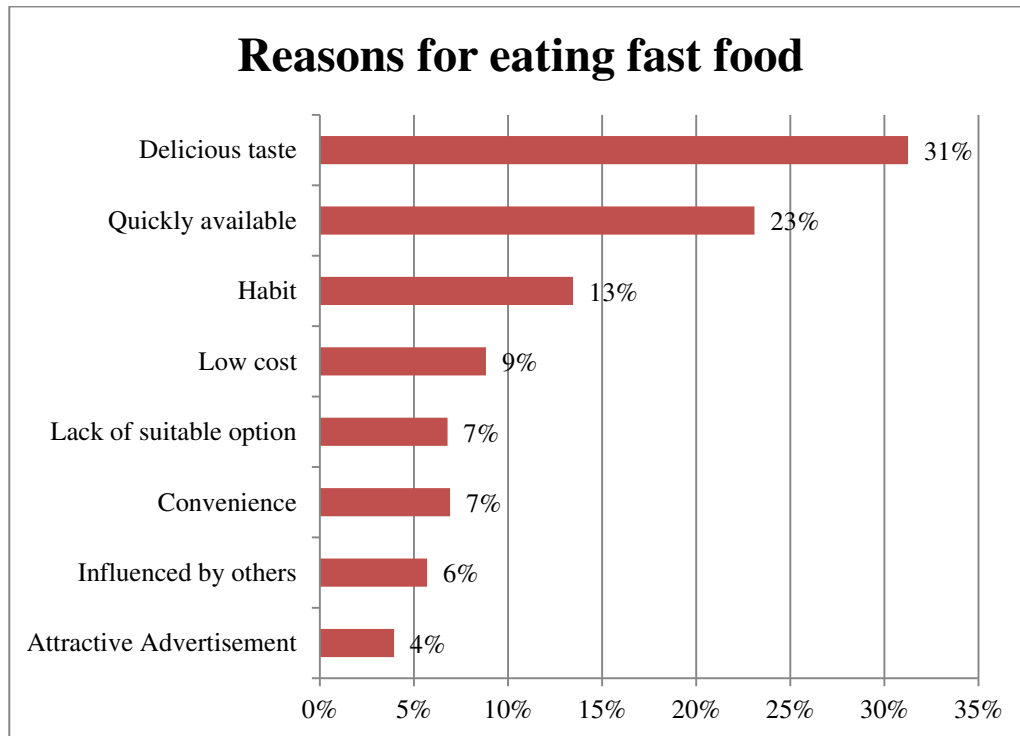
Views and opinions of the respondents show that consumption of fast foods may or may not depend upon on the demographic factors such as gender, place of residence, education, and so on.

It is observed that out of the total respondents (n=305), about 70% of the respondents mentioned that they do not regularly eat fast food and the remaining 30% of the respondents mentioned that they do regularly eat fast food.



It is observed that out of the total respondents (n=305), about 70% of the respondents mentioned that they do not regularly eat fast food and the remaining 30% of the respondents mentioned that they do regularly eat fast food.

When asked about 'reasons for eating fast food', there are various reasons cited by the respondents. Out of the total responses (n=736), about 31% of the respondents said that it is 'delicious taste', whereas for 23% of the respondents it is 'quickly available' This is followed by 'habit' as mentioned by 13% of the respondents and for 9% of the respondents it is 'low cost'.



When asked about ‘from where do you prefer to purchase fast food?’ there are various places cited by the respondents. Out of the total responses (n=551), about 32% of the respondents said that it is roadside stalls', whereas for 26% of the respondents it is 'college / office canteen'. This is followed by 'branded outlets' as mentioned by 24% of the respondents and for 19% of the respondents it is ‘online purchase’.

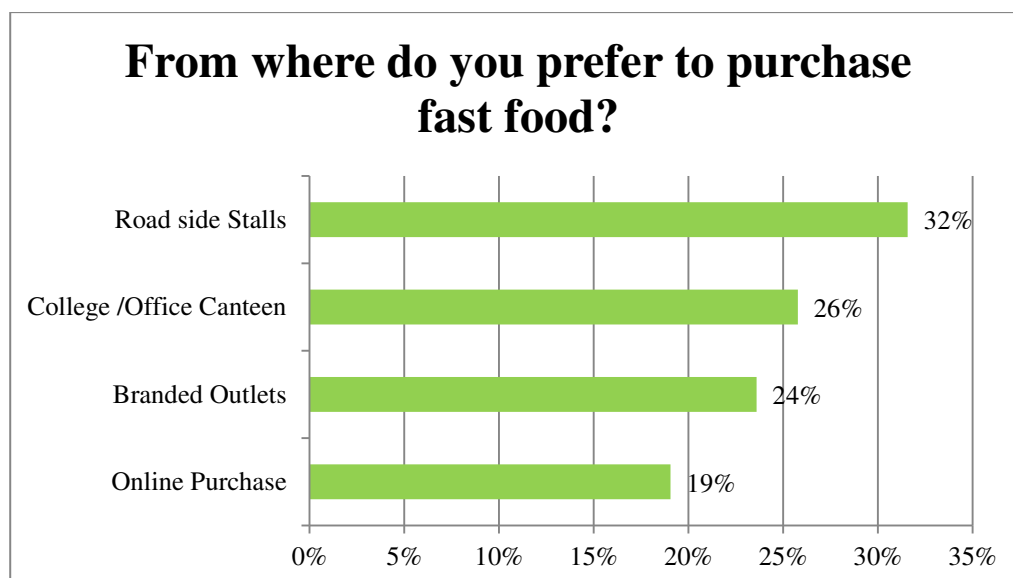


Table 1.1 shows details about some of the demographic profile of the respondents in the context of consumption of fast foods by them.

**Gender-wise** analysis of the respondents shows that about 61% of them are Female and the remaining 39% are Male.

**Location-wise** analysis of the respondents shows that most of them (about 90%) have indicated their place of residence as 'Urban'.

**Table 1.1 Demographic Profiles – Consumption of Fast Foods (No. of Respondents)**

	Do you eat fast food regularly?			
	Yes (Eating)	No (Not Eating)	Total	In %
Gender				
Male	45	75	120	39%
Female	48	137	185	61%
Total	93 (30%)	212 (70%)	305 (100%)	
Place of Residence				
Rural	13	19	32	10%
Urban	80	193	273	90%
Total	93 (30%)	212 (70%)	305 (100%)	
Monthly Family Income (In Rs.)				
Less than Rs. 10,000	4	20	24	8%
10,000- 30,000	36	70	106	35%
30,000- 60,000	20	43	63	21%
60,00 - 90,000	13	34	47	15%
Above Rs 90,000	20	45	65	21%
Total	93 (30%)	212 (70%)	305 (100%)	

Source: Survey Data

Monthly Income-wise analysis of the respondents shows they belong to different income slabs. About 35% of the respondents are with monthly income of 'Rs. 10,000- 30,000/-' and about 21% of the respondents each belong to income groups of 'Rs. 30,000- 60,000/-' and 'Above Rs. 90,000'.



When asked ‘Are you aware of the side effects of eating fast food?’ most of the respondents (about 94%) are aware of the side effects of eating fast food.

**Table 1.2 Demographic Profiles – Consumption of Fast Foods (No. of Respondents)**

	Do you eat fast food regularly?			
	Yes (Eating)	No (Not Eating)	Total	In %
Are you aware of the side effects of eating fast food?				
No (Not Aware)	4	15	19	6%
Yes (Aware)	89	197	286	94%
Total	93 (30%)	212 (70%)	305 (100%)	
Are you aware of the side effects of eating fast food?				
Indication of level of awareness of the side effects of eating fast food				
Fully aware	37	80	117	38%
Moderately aware	53	112	165	54%
Not at all aware	3	20	23	8%
Total	93 (30%)	212 (70%)	305 (100%)	
Frequency of eating fast food				
Daily	33	1	34	11%
Not frequently	5	34	39	13%
Once in a month	1	45	46	15%
Once in a week	25	66	91	30%
Twice in a week	29	66	95	31%
Total	93 (30%)	212 (70%)	305 (100%)	

Source: Survey Data

## HYPOTHESIS TESTING

Summary of Hypothesis Testing is as shown below.

Hypothesis	Hypothesis Description	Test Used	Inference
Hypothesis 1	There is a significant relationship between gender of the respondent and whether the respondents are regularly eating fast food or not.	Combination Test	Gender of the respondent and whether the respondents are regularly eating fast food or not are dependent.
Hypothesis 2	There is a significant relationship between place of residence (of the respondent) and spending on eating fast food in a week.	Chi Square Test	Irrespective of place of residence (whether rural or urban), people spend on eating fast food.
Hypothesis 3	There is a significant relationship between frequency of eating fast food (of the respondent) and their level of awareness about side effects of eating fast food.	Combination Test	The frequency of eating fast food (of the respondent) and their level of awareness about side effects of eating fast food are dependent.
Hypothesis 4	There is a significant relationship between spending on eating fast food in a week and their level of awareness about side effects of eating fast food.	Chi Square Test	Irrespective of their level of awareness about side effects of eating fast food, people spend on eating fast food in a week.

The details are as given below.

### Hypothesis 1

There is a significant relationship between gender of the respondent and whether the respondents are regularly eating fast food or not.

#### Null Hypothesis

The two factors viz. gender of the respondent and whether the respondents are regularly eating fast food or not are not dependent (i.e. they are independent).

#### Alternative Hypothesis

The two factors viz. gender of the respondent and whether the respondents are regularly eating fast food or not are dependent.

For testing this, we are using combination test (such as F-test, T test and Mann-Whitney Test).

For testing this, we have considered responses for the following two datasets:

- Gender (A2) and Do you eat fast food regularly? (B1)

Coding of responses is as follows:

Gender (A2) - Female: 2, Male: 2

Do you eat fast food regularly? (B1) – Yes: 1, No: 2

Statistical tests applied and their results are given subsequently.

Data obtained for Gender (A2) and Do you eat fast food regularly? (B1)

Description / Statistics	Gender (A2)	Eating fast food or not? (B1)
n (Count)	305	305
Mean (Average)	1.61	1.70
Median	2.00	2.00
Standard Deviation (Variance)	0.49	0.46
Standard Error	0.03	0.03
F-Test – Variance		
Condition is False Do not Accept alternative hypothesis	A2 variance < B1 variance	
p-value:	15.073%	
T-Test		
Condition is True Accept alternative hypothesis	A2 average < B1 average	
p-value:	1.091%	
Mann-Whitney Test		
Condition is True Accept alternative hypothesis	A2 Median <= B1 median	
p-value:	40.418%	

Alternative hypothesis is accepted. Hypothesis 1 stands accepted.

The two factors viz. gender of the respondent and whether the respondents are regularly eating fast food or not are dependent.

## Hypothesis 2

There is a significant relationship between place of residence (of the respondent) and spending on eating fast food in a week.

## Null Hypothesis

The two factors viz. place of residence (of the respondent) and spending on eating fast food in a week are not dependent (i.e. they are independent).

### Alternative Hypothesis

The two factors viz. place of residence (of the respondent) and spending on eating fast food in a week are dependent.

### Data from the Survey

**Association between place of residence (of the respondent) and spending on eating fast food in a week**

	Place of Residence			
	Rural	Urban	Total	In %
Spending on eating fast food in a week (In Rs.)				
100- 250 Rs.	6	67	73	24%
250 - 500 Rs.	5	35	40	13%
50- 100 Rs.	12	82	94	31%
Above 500Rs.	1	10	11	4%
Less than Rs.50	8	79	87	29%
<b>Total</b>	<b>32 (10%)</b>	<b>273 (90%)</b>	<b>305</b>	<b>100%</b>

### Chi-Square Tests

	Value	df	P value Asymp. Sig. (2-sided)
<b>Pearson Chi-Square Value (Statistics Value)</b>	1.2696	4	0.8665
<b>Critical Value of Chi-Square</b>	9.4877	4	0.05

df= Degrees of Freedom

Above table shows results of the data about place of residence (of the respondents) and spending on eating fast food in a week. Results showed that Pearson Chi-square value (Statistics value) for association between them is 1.2696 at  $df = 4$  which is not greater than the critical value of chi-square (9.4877) at significant level 0.05 for  $df = 4$ . This indicates acceptance of null hypothesis. This means that the two factors viz. place of residence (of the respondent) and spending on eating fast food in a week are not

dependent. Thus it may be said that irrespective of the place whether urban or rural, people are spending on eating fast food.

**Null hypothesis is accepted. Hypothesis 2 stands rejected.**

### **Hypothesis 3**

There is a significant relationship between frequency of eating fast food (of the respondent) and their level of awareness about side effects of eating fast food.

### **Null Hypothesis**

The two factors viz. frequency of eating fast food (of the respondent) and their level of awareness about side effects of eating fast food not dependent (i.e. they are independent).

### **Alternative Hypothesis**

The two factors viz. frequency of eating fast food (of the respondent) and their level of awareness about side effects of eating fast food are dependent.

For testing this, we are using combination test (such as F-test, T test and Mann-Whitney Test).

For testing this, we have considered responses for the following two datasets:

- How often do you eat fast food? (B2) and Your level of awareness about the adverse effects of eating junk food (B9)

Coding of responses is as follows:

How often do you eat fast food? (B2) – Daily: 5, Not Frequently: 1, Once in month: 2, Once in a week: 3, Twice in a week: 4

Your level of awareness about the adverse effects of eating junk food (B9) – Fully aware: 3, Moderately aware: 2, Not at all aware: 1

Statistical tests applied and their results are given subsequently.

Data obtained for How often do you eat fast food? (B2) and Your level of awareness about the adverse effects of eating junk food (B9)

Description / Statistics	How often do you eat fast food? (B2)	Your level of awareness about the adverse effects of eating junk food (B9)
n (Count)	305	305
Mean (Average)	3.13	2.31
Median	3.00	2.00
Standard Deviation (Variance)	1.19	0.60
Standard Error	0.07	0.03
F-Test – Variance		
Condition is True Accept alternative hypothesis	B2 variance > B9 variance	
p-value:	0.000%	
T-Test		
Condition is True Accept alternative hypothesis	B2 average > B9 average	
p-value:	0.000%	
Mann-Whitney Test		
Condition is True Accept alternative hypothesis	B2 Median >= B9 median	
p-value:	0.440%	

Alternative hypothesis is accepted. Hypothesis 3 stands accepted.

The two factors viz. frequency of eating fast food (of the respondent) and their level of awareness about side effects of eating fast food are dependent.

**Alternative hypothesis is accepted. Hypothesis 3 stands accepted.**

#### Hypothesis 4

There is a significant relationship between spending on eating fast food in a week and their level of awareness about side effects of eating fast food.

#### Null Hypothesis

The two factors viz. spending on eating fast food in a week and their level of awareness about side effects of eating fast food are not dependent (i.e. they are independent).

### Alternative Hypothesis

The two factors viz. spending on eating fast food in a week and their level of awareness about side effects of eating fast food are dependent.

### Data from the Survey

Association between spending on eating fast food in a week and their level of awareness about side effects of eating fast food

	Indication of level of awareness of the side effects of eating fast food				
	Fully aware	Moderately aware	Not at all aware	Total	In %
Spending on eating fast food in a week (In Rs.)					
100- 250 Rs.	27	40	6	73	24%
250 - 500 Rs.	20	19	1	40	13%
50- 100 Rs.	28	61	5	94	31%
Above 500Rs.	8	2	1	11	4%
Less than Rs.50	34	43	10	87	29%
Total	117 (38%)	165 (54%)	23 (8%)	305	100%

### Chi-Square Tests

	Value	df	P value Asymp. Sig. (2-sided)
Pearson Chi-Square Value (Statistics Value)	11.9758	8	0.045
Critical Value of Chi-Square	15.5073	8	0.05

df= Degrees of Freedom

Above table shows results of the data about spending on eating fast food in a week and their level of awareness about side effects of eating fast food. Results showed that Pearson Chi-square value (Statistics value) for association between them is 11.9758 at  $df = 8$  which is not greater than the critical value of chi-square (15.5073) at significant level 0.05 for  $df = 8$ . **This indicates acceptance of null hypothesis.** This

means that the two factors viz. spending on eating fast food in a week and their level of awareness about side effects of eating fast food are not dependent (i.e. they are independent).

**Null hypothesis is accepted. Hypothesis 4 stands rejected.**

## 7. Conclusion

It is observed that demographic factors (such as gender, place of residence, education and monthly income) have influence on the consumption of fast food by youngsters.

**Some of the other findings from the survey are as listed below.**

- About 70% of the respondents mentioned that they do not regularly eat fast food and the remaining 30% of the respondents mentioned that they do regularly eat fast food.
- About 73% of the respondents mentioned their food preference as 'vegetarian' and the remaining 27% mentioned it as 'non-vegetarian' food.
- When asked 'Are you aware about the side effects of eating fast food?' most of the respondents (about 94%) are aware of the side effects of eating fast food.
- When asked about 'extent of their awareness level about the side effects of eating fast food', most of the respondents (about 54%) said that they are 'moderately aware', whereas about 38% of the respondents said that they are 'fully aware'.
- When asked about 'frequency of eating fast food', about 31% of the respondents indicated it as 'twice a week', whereas about 30% of the respondents said that it is 'once a week'.
- We have asked the respondents to rank four factors (**viz. Cost, Taste, Hygiene, Online offers**) as their priority for purchasing fast food.
  - **Cost:** Rank 1 (as indicated by 27% of the respondents), Rank 2 (as indicated by 19% of the respondents), Rank 3 (as indicated by 33% of the respondents).
  - **Taste:** Rank 1 (as indicated by 30% of the respondents), Rank 2 (as indicated by 37% of the respondents), Rank 3 (as indicated by 20% of the respondents).
  - **Hygiene:** Rank 1 (as indicated by 23% of the respondents), Rank 2 (as indicated by 30% of the respondents), Rank 3 (as indicated by 33% of the respondents).
  - **Online offers:** Rank 1 (as indicated by 20% of the respondents), Rank 4 (as indicated by 51% of the respondents).



- When asked about ‘how much **Online offers** do you spend on fast food in a week (**In Rs.**)’, most of the respondents (about 31%) said that it is ‘50- 100 Rs’, followed by ‘Less than Rs.50’ as indicated by 29% of the respondents. Another 24% of the respondents said that it is ‘100- 250 Rs’.

Based on the analysis of the data for this study it may be concluded that there is consumption of fast food by youngster and it depends on various factors.

## REFERENCES

- [1] Ashakiran S., Deepthi R. (2012). Fast foods and their impact on health. Journal of Krishna Institute of Medical Sciences University 2012;1:7-15. It is cited by Joseph et al. (2015).
- [2] Dr. Naheed Vaidya (2013). Prevalence of fast food intake among urban adolescent students. IJES. 2013;2(1):353–359.
- [3] Ebru Onurlubaş and Neslihan Yılmaz, (2013). Fast food consumption habits of university students, Journal of Food, Agriculture & Environment Vol.11 (3&4): 12-14 2013
- [4] Harsh Kumar, Rajdeep Palaha and Amandeep Kaur (2013). Study of Consumption, Behavior and Awareness of Fast Food among University Hostlers. Asian Journal of Clinical Nutrition, Volume 5 (1): 1-7.
- [5] J.M.J.K. Jayasinghe and L.P.U. De Silva (2014). Fast Food Consumption and Health Status of Students. Journal of Food and Agriculture, 7 (1 & 2): 38 - 50
- [6] Joseph, N., Nelliyanil, M., Rai, S., Y P, R. B., Kotian, S. M., Ghosh, T., & Singh, M. (2015). Fast Food Consumption Pattern and Its Association with Overweight Among High School Boys in Mangalore City of Southern India. Journal of clinical and diagnostic research: JCDR, 9(5), LC13–LC17. Available from: <https://doi.org/10.7860/JCDR/2015/13103.5969>. [Last accessed on 2020 March 26].
- [7] Munmun Shabnam Bipasha and Shatabdi Goon (2013). Fast food preferences and food habits among students of private universities in Bangladesh. ISSN: 2220-9476 South East Asia Journal of Public Health 2013;3(1):61-64. Bipasha & Goon, publisher and licensee Public Health Foundation Bangladesh

[8] Subhalakshmi K. and Dhanasekar M. (2018). A Study on Fast Food Culture among Teenagers in Urban India, International Journal of Pure and Applied Mathematics, Volume 120, No. 5, 2018, pp. 215-238, [ISSN: 1314-3395 (on-line version)].

[9] Tenneychell Khongrangjem, Sushma Marita Dsouza, Priya Prabhu, Vijay Basappa Dhange, Vrindha Pari, Sunil Kumar Ahirwar, Kumar Sumit (2017). A study to assess the knowledge and practice of fast food consumption among Pre-University students in Udupi Taluk, Karnataka, India. Clinical Epidemiology and Global Health 6 (2018) 172–175. <https://doi.org/10.1016/j.cegh.2017.11.003>, 2213-3984/, 2017 INDIACLEN. Published by Elsevier, a division of RELX India, Pvt. Ltd.

[10] Vaishali Krishna Pawar (2015). Health hazards and knowledge about junk foods-a review. IJNR. 2015;1(2):146–157. It is cited by Dsouza et al. (2017) [3].