Global Scientific JOURNALS

"CONSUMER AWARENESS AND PREFERENCE ABOUT ORGANIC FOOD IN BHOPAL"

A Research Project Report Submitted to

(Balaji Institute Of Telecom And Management, Pune)

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ON SUCCESSFUL COMPLETION OF THE

1st YEAR

In the Subject Of

"Research Paper Writing"

Submitted By

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Under the Guidance of

Dr. Sanjit Kumar Dash

DATE: 27 August 2020

1

<u>DECLARATION BY THE CANDIDATE</u>

I declare that the Research Paper Report entitled "Consumer awareness and preference about organic food in Bhopal" is submitted by me is based on original research conducted by me during the period from 1st April 2020 to 31st August 2020 under the guidance of Dr. Sanjit Kumar Dash and I further declare that there is no falsification of data/ material to the best of my knowledge.

I further declare that the material obtained from other sources has been duly acknowledged in the Report.

Date: 27 August 2020

Place: Pune   **(Signature of the candidate)**

CERTIFICATE OF THE GUIDE

I certify that the work incorporated in the Research Report titled,**" Consumer awareness and preference about organic foods in Bhopal"** submitted by **Shivani Prajapati** is her /his original work which was carried out by the candidate under my supervision and guidance. I further certify that the above work was duly approved by me and this work is the result of the candidate's independent study and effort. Such material has been obtained from other sources has been duly acknowledged in the thesis.

Date: 27 August 2020   **(Signature of faculty mentor)**

Place: Pune, Maharashtra   **(Signature of research guide)**

<u>ACKNOWLEDGEMENT</u>

I would like to express my sincere gratitude to my Faculty Mentor Mr. Rajkiran Pund and Research Guide Dr. Sanjit Kumar Dash for their never-ending encouragement and support.

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Date:

Place: Pune   **(Signature of candidate)**

4

INDEX

LIST OG TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

- **Milliequivalents:** concentration of electrolytes
- **Genetically modified organisms (GMO):** genetic material altered using genetic engineering techniques.

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ABSTRACT

Since the last decade, organic foods are getting importance as people are getting aware of the importance of healthy foods and their impact on our minds and bodies. People are getting more and more health-conscious and giving time to healthy habits. The whole process of growing organic food until its packaging it is done without the use of any artificial fertilizers and pesticides. The whole concept of organic farming is to preserve resources and lead to sustainability. The study titled "**Consumer awareness and preference about organic foods in Bhopal**" will mainly focus on understanding the level of awareness and the factors involved which affect the preference of people while purchasing foods of the selected location with the help of a structured questionnaire. The study was conducted on 226 respondents. The questionnaire was well designed to record the responses about their awareness, preference, factors affect their buying behavior, where they buy the product from, the pricing of the product, and the source of information about the products. This research will help to create awareness about organic foods.

INTRODUCTION

The demand for organic foods in India has been increased since the last decade as people are getting aware of the nutritious value of organic foods. People are also becoming more and more health-conscious and therefore they are willing to adopt healthier habits which include the intake of healthy foods as well.

India is one of the largest organic food producers and stands on the 9th position among 178 countries with 8,35,000 organic producers and 14,50,000 hectares area under organic cultivation. Also, Sikkim has been declared as the first 100% organic state and known as Harbinger of organic farming around the world.

Despite all of these India is giving very little for organic foods and there is a huge scope in this. The awareness among people regarding the benefits of organic foods has to be conveyed as there is a huge gap between conventional foods and organically produced foods when it comes to minerals.

ORGANIC VS CONVENTIONAL

Vegetables Type of Soil Management	Minerals (in milliequivalents)						
	Calcium	Magnesium	Potassium	Sodium	Manganese	Iron	Copper
Snap Beans							
Organic	40.5	60.0	99.7	8.6	60.0	227.0	69.0
Conventional	15.5	14.8	29.1	0.0	2.0	10.0	3.0
Cabbage							
Organic	60.0	43.6	148.3	20.4	13.0	94.0	48.0
Conventional	17.5	15.6	53.7	0.8	2.0	20.0	0.4
Lettuce							
Organic	71.0	49.3	176.5	12.2	169.0	516.0	60.0
Conventional	16.0	13.1	53.7	0.0	1.0	1.0	3.0
Tomatoes							
Organic	23.0	59.2	148.3	6.5	68.0	1938.0	53.0
Conventional	4.5	4.5	58.6	0.0	1.0	1.0	0.0
Spinach							
Organic	96.0	293.9	257.0	69.5	117.0	1584.0	0.0
Conventional	47.5	46.9	84.0	0.8	1.0	19.0	0.5

Research conducted by Firman E. Bear at Rutgers University in the Natural Gardener's Catalog (1995)

Table -1

Organic foods are produced without the use of any artificial fertilizer and pesticides. They are produced with the help of techniques that leads to

10

sustainability. So, organic food leads to health benefits, improved food quality, and improved biodiversity.

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RESEARCH PROBLEM

1 To know about the awareness and preference about organic foods among people of Bhopal.

2 To know what are the major factors that are constraints for people to buy organic foods.

3 Also, no research has been conducted for the preference and awareness of organic foods among people of Bhopal.

12

REVIEW OF LITERATURE

The demand has been increased rapidly for organic foods as the awareness has been increased for health, environment, and safety of food. Several studies have been conducted on consumers of organic foods on their awareness, attitude, and behavior which resulted that in developing countries' awareness and knowledge as well as consumption of organic food is lower while in developed countries it is higher. Consumers have an accepting attitude towards organic foods but as far as the market is concerned it's low because demand and supply are not increasing much. They are willing to pay 5-7% premium for organic foods.

1. Analyzing the factors affecting consumer awareness of organic food in India.

by Sushil Kumar and Jabir Ali (2011).

In this study various factors that are considered as important such as education, the stream of education, gender, and also income level. Male participants of the survey are more aware of organic food and so it is directly linked to the educational level of any person. Also, organic foods are costlier than conventional foods, so due to this reason it depends on the income level of the person is he/she can afford it or not. So, there is a lot of market potential, but the need is to educate consumers about organic foods.

2.Factors influencing consumer buying behavior and awareness towards organic foods: A study on Chandigarh and Panchkula consumers.

By Dr. Geetika Sharma, Dr. Rakhee Dewan and Santosh Bali

This study found out that people are aware of the benefits of organic foods. People living in urban areas are more aware of organic products as compared to people living in rural areas. This study also revealed that people are willing to purchase organic foods but the issue for them is lack of availability. Even they are ready to pay an extra amount because these products are beneficial for health.

3.Consumer attitude and behavior towards organic foods: a cross-cultural study of Turkey and Germany.

13

By Nihan MUTLU (2007)

The study showed that generally organic foods consumers of both the nations are educated, have a full-time job, and belongs to the middle-income group. The Majority of respondents from both the country believe that organic foods are healthier than conventionally grown foods. Germans are unaware of certification of organic farms but Turkish people are aware of it. Turkish are buying as they are motivated to save resources for future generations whereas German people buy because they want to save the environment, help the farmers and they like organic foods better. The barriers for the two respondents turned out to less availability and high prices.

4.Organic and conventional food: A literature review of the economics of consumer perceptions and preferences.

By Samuel Bonti-Ankomah and Emmanuel K Yiridoe (2006)

The study showed that yields of organic foods are comparatively lower than that of conventional foods. People prefer to have foods that are grown locally rather than exported from other places. People are willing to pay premium prices but lack of availability is a problem for them. Organic foods have a wide range but are unavailable in some seasons.

14

RESEARCH OBJECTIVES

1. To find out consumer awareness about organic foods.

2. To find out consumer preference about organic foods.

HYPOTHESIS

1. H0 - There is no significant awareness of organic foods in Bhopal.
   H1 - There is significant awareness of organic foods in Bhopal.

2. H0 - People do not prefer organic foods in Bhopal.
   H1 - People prefer organic foods in Bhopal.

16

RESEARCH METHODOLOGY

Data interpretation method: the data is collected by administrating a structured questionnaire of 23 questions in which 8 were about demographics. This research is both exploratory and conclusive. Through this research paper, I tried to find and understand the awareness and preferences of people about organic foods. To test both the hypothesis statements, I have used SPSS software as well as excel to analyze the data.

The various statistical techniques used in the research are:

- Cross tabs
- Multiple responses – crosstabulation
- Cross tabs and chi-square technique
- Factor analysis
- Reliability test

Sampling design:

- **Research type:** This research is both exploratory and conclusive.
- **Sampling method:** Convenience sampling method has been used.
- **Sample size:** Response was collected by a total of 226 participants.
- **Method of collecting data:** The data were collected by a structured questionnaire.

DATA ANALYSIS AND INTERPRETATION

1 Reliability Analysis

Case Processing Summary		N	%
Cases	Valid	226	100.0
	Excluded	0	.0
	Total	226	100.0

Table - 2

Reliability statistics

Cronbach's Alpha	N of Items
.622	29

Table - 3

The reliability is 0.622 which is greater than 0.6 and so it justifies that the data is reliable.

2 – Pie chart

Are you aware about organic food?
226 responses
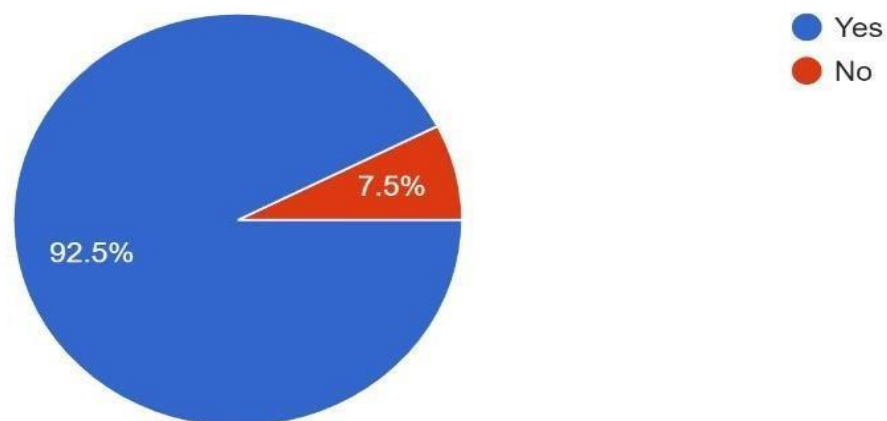
Figure - 1

This pie chart shows how much people are aware of or not aware of organic foods. And 92.5% of participants are aware of organic foods.

18
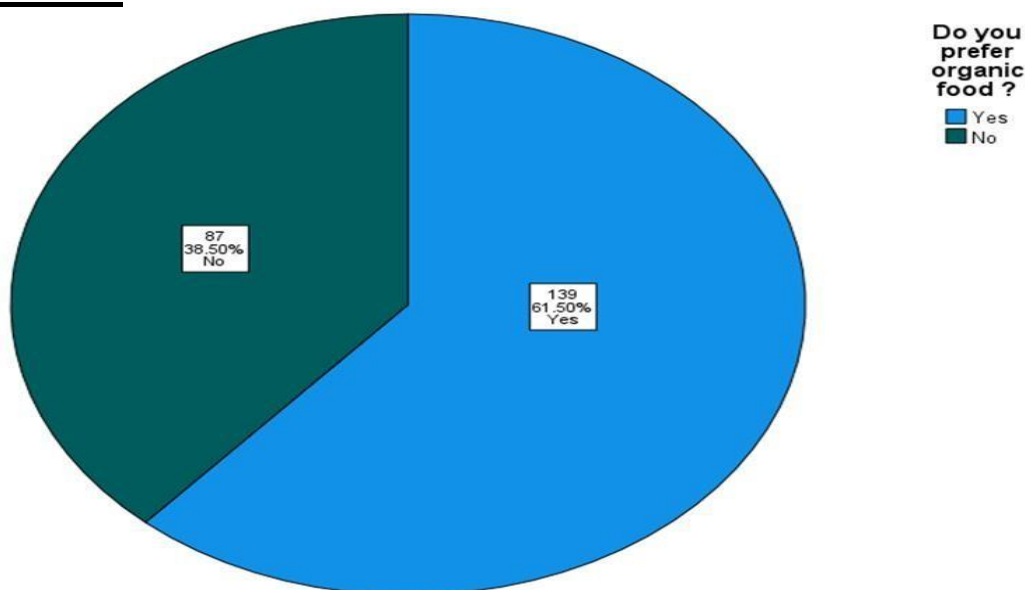
3 – <u>Pie chart</u>

Figure - 2

This pie chart shows that 61.5% of people prefer organic foods whereas 38.5% do not prefer organic foods.

4 – <u>Bar graph</u>
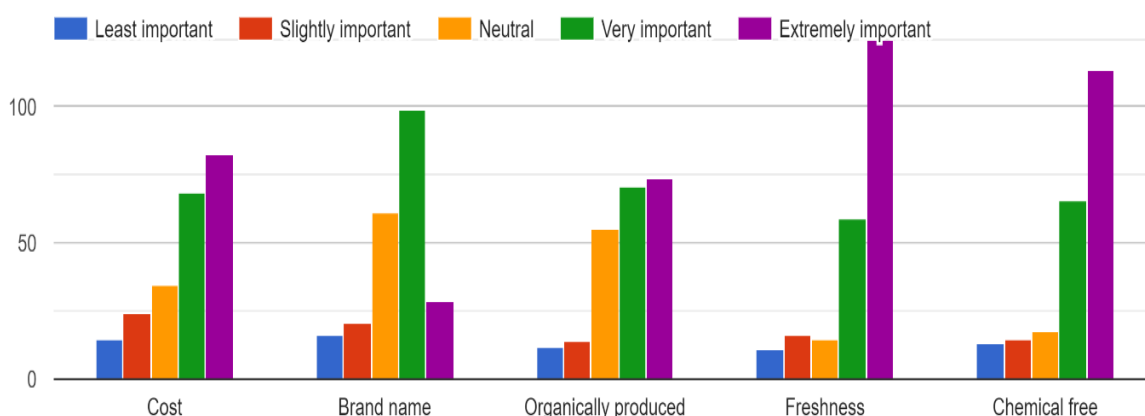
Figure - 3

This bar chart shows how these attributes affect a person's buying food products and according to this freshness and chemical-free foods are mostly

19

preferred followed by brand name.

5 – <u>Pie chart</u>

Where do you usually shop for food?
226 responses

- ● Natural / Specialty food stores
- ● Large food store
- ● Small / locally owned food store
- ● local farmers market / open air market
- ● Online Shopping

Figure - 4

This pie chart shows where people like to shop for their foods and most preferred by them is a small / locally owned food store and the least preferred is online shopping.

6 – <u>Cross tabulation</u>

gender * where do you usually shop for food? Crosstabulation
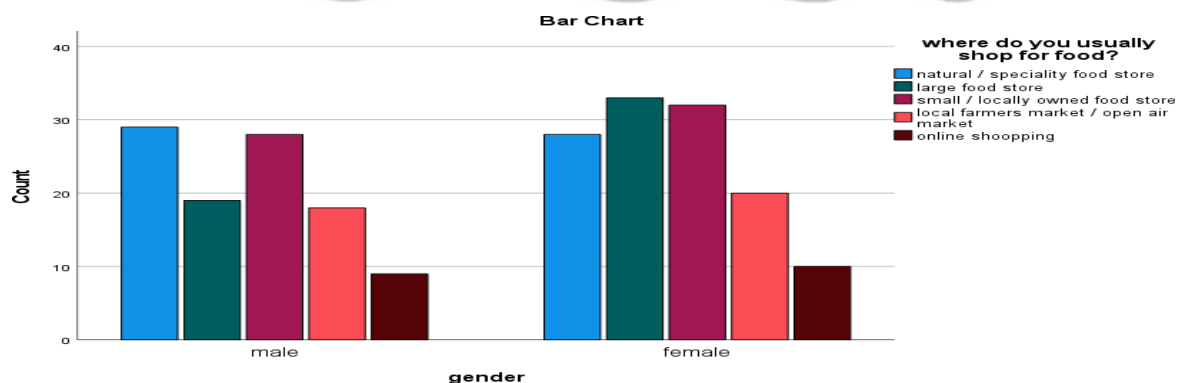
Figure - 5

where do you usually shop for food?

		natural / speciality food store	large food store	small / locally owned food store	local farmers market / open air market	online shopping	Total
gender	male	29	19	28	18	9	103
	female	28	33	32	20	10	123
Total		57	52	60	38	19	226

Table - 4

This cross-tabulation shows according to gender where they prefer to shop for foods. For females most preferred is a large food store and the least preferred is online shopping. For males most preferred is natural / specialty food store and the least preferred is online shopping only.

7 – Multiple responses (frequencies)
Frequencies of what all factors that people are aware of about organic foods. (Multiple responses)

		Responses		Percent of Cases
		N	Percent	
factor s	certified	94	11.3%	41.8%
	GMO free	48	5.8%	21.3%
	environmental / animal friendly	112	13.5%	49.8%
	natural	149	18.0%	66.2%
	nutritional	141	17.0%	62.7%
	healthy	159	19.2%	70.7%
	chemical free	126	15.2%	56.0%
Total		829	100.0%	368.4%

Table -5

a. the Dichotomy group tabulated at value 0.

This tabulation is done to see the frequencies of multiple response questions. So, people are most aware that organic food is healthy followed by organic food is naturally produced.

21

8 – Multiple responses (frequencies)

Frequencies of how people get information about food while shopping.

		Responses N	Responses Percent	Percent of Cases
information	Store employee	95	17.9%	42.2%
	Food labels	132	24.8%	58.7%
	Family/friends	108	20.3%	48.0%
	Past purchase experience	141	26.5%	62.7%
	Social media	56	10.5%	24.9%
Total		532	100.0%	236.4%

Table - 6

a. the Dichotomy group tabulated at value 0.

This tabulation is done to see the frequencies of multiple response questions. So while purchasing foods mostly people get information from food labels followed by past purchase experience and the least they get information is from social media.

9 - Factor Analysis

Correlation Matrix[a]

		lowprice	availability	variety	moreknowledge	moreadvertisements	cost	brandnameattribute	organicallyproduced	freshnessattribute	chemicalfree attribute
Correlation	lowprice	1.000	.324	.347	.339	.328	.231	.057	.118	.101	.087
	availability	.324	1.000	.456	.457	.360	.229	.201	.245	.241	.203
	variety	.347	.456	1.000	.300	.569	.005	.073	.094	.118	.114
	moreknowledge	.339	.457	.300	1.000	.368	.202	.181	.246	.217	.242
	moreadvertisements	.328	.360	.569	.368	1.000	-.015	.022	.124	-.003	.083
	cost	.231	.229	.005	.202	-.015	1.000	.607	.573	.670	.572
	brandnameattribute	.057	.201	.073	.181	.022	.607	1.000	.653	.585	.589
	organicallyproduced	.118	.245	.094	.246	.124	.573	.653	1.000	.695	.717
	freshnessattribute	.101	.241	.118	.217	-.003	.670	.585	.695	1.000	.846
	chemicalfreeattribute	.087	.203	.114	.242	.083	.572	.589	.717	.846	1.000
Sig. (1-tailed)	lowprice		.000	.000	.000	.000	.000	.196	.038	.065	.096
	availability	.000		.000	.000	.000	.000	.001	.000	.000	.001
	variety	.000	.000		.000	.000	.471	.139	.078	.039	.044
	moreknowledge	.000	.000	.000		.000	.001	.003	.000	.001	.000
	moreadvertisements	.000	.000	.000	.000		.410	.373	.032	.484	.106
	cost	.000	.000	.471	.001	.410		.000	.000	.000	.000
	brandnameattribute	.196	.001	.139	.003	.373	.000		.000	.000	.000
	organicallyproduced	.038	.000	.078	.000	.032	.000	.000		.000	.000
	freshnessattribute	.065	.000	.039	.001	.484	.000	.000	.000		.000
	chemicalfreeattribute	.096	.001	.044	.000	.106	.000	.000	.000	.000	

a. Determinant = .008

Table - 7

22

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.794
Bartlett's Test of Sphericity	Approx. Chi-Square	1073.558
	df	45
	Sig.	.000

Table - 8

Here the KMO measure of sampling adequacy is 0.794 which is closer to 1. Generally, a value above 0.5 is preferable but value above 0.6 is considered good. When the KMO measure is above 0.5 then it is possible to extract from the considered variables.

Communalities

	Initial	Extraction
Low price	1.000	.398
availability	1.000	.538
variety	1.000	.610
More knowledge	1.000	.466
More advertisements	1.000	.604
cost	1.000	.647
Brand name	1.000	.642
Organically produced	1.000	.731
freshness	1.000	.808
Chemical free	1.000	.771

Table - 9
Extraction Method:
Principal
Component
Analysis.

Here the extraction values show the proportion of each variance retained by each factor. The higher the variance the better it is and factors with low variance are not presented well. So in this case, only the rate of a factor of

23

low price has 0.398 variance which means that the data is not represented. Apart from that, every variable has a value above 0.5 which means the variance is good.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.975	39.753	39.753	3.975	39.753	39.753
2	2.240	22.404	62.158	2.240	22.404	62.158
3	.815	8.149	70.307			
4	.703	7.035	77.341			
5	.594	5.937	83.278			
6	.511	5.111	88.389			
7	.399	3.993	92.382			
8	.375	3.748	96.131			
9	.257	2.571	98.702			
10	.130	1.298	100.000			

Table - 10

Extraction Method: Principal Component Analysis.
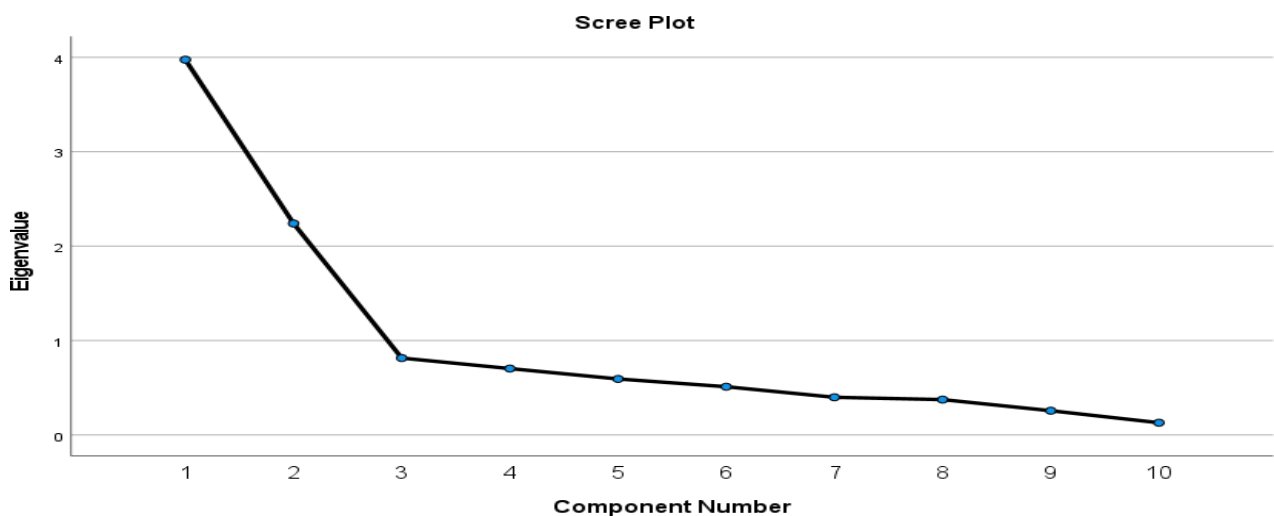
Figure - 6

Component Matrix

24

Component

	1	2
Low price	.335	.534
availability	.494	.542
variety	.326	.709
More knowledge	.475	.490
More advertisements	.276	.726
cost	.756	-.274
Brand name	.744	-.296
Organically produced	.822	-.234
freshness	.845	-.308
Chemical free	.834	-.277

Table - 11
Extraction Method:
Principal
Component
Analysis.
a. 2 components extracted.

10– Chi-square test

1. Hypothesis Testing

1. H0: there is no significant awareness of organic foods in Bhopal.

   H1: there is significant awareness of organic foods in Bhopal.

2. Level of Confidence 95% and level of significance 5%, n=226
3. Statistical Test: Chi-Square

4. At df=4 and LOS 5%, Chi-Square Critical Value is 9.49

5. Test

25

Are you aware of organic food * "TV Advertisements and programs are working on raising awareness about organic foods." Crosstabulation

Count

		"TV Advertisements and programs are working on raising awareness about organic foods."					
		strongly disagree	disagree	neutral	agree	strongly agree	Total
Are you aware of organic food	Yes	10	14	62	74	49	209
	No	1	3	9	4	0	17
Total		11	17	71	78	49	226

Table - 12

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	9.884^a	4	.042
Likelihood Ratio	12.570	4	.014
Linear-by-Linear Association	7.260	1	.007
N of Valid Cases	226		

Conclusion – we reject H0 because 9.884 > 9.49and the P-value is less than 0.05 (Since the calculated value is greater than critical value)

Table - 13

2. **Hypothesis Testing**
1. H0: People do not prefer organic foods in Bhopal.
   H1: People prefer organic foods in
Bhopal.

2. Level of Confidence 95% and level of significance 5%, n=226

3. Statistical Test: Chi-Square

4. At df=4 and LOS 5% Chi-Square Critical Value is 9.488.

5. Test

Do you prefer organic food? * It is essential that I consume organic food Crosstabulation

Count

| | | It is essential that I consume organic food | | | | | |
		strongly disagree	disagree	neutral	agree	strongly agree	Total
Do you prefer organic food?	Yes	0	4	46	39	50	139
	No	2	4	11	19	51	87
Total		2	8	57	58	101	226

Table - 14

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	19.463[a]	4	.001
Likelihood Ratio	20.850	4	.000
Linear-by-Linear Association	6.278	1	.012
N of Valid Cases	226		

a. Conclusion – we reject H0 because 19.463 > 9.488 and the P-value is less than 0.05. (Since the calculated value is greater than critical value)

Table - 15

27

FINDINGS

- 92.4 % of people are aware of organic foods.

- 61.5 % of people would like to prefer organic foods if made available in the market whereas 38.5% do not prefer organic foods.

- For buying food freshness is the most important factor followed by chemical-free and cost.

- People are aware that organic foods are healthier, natural, and nutritious than conventional foods.

- The information people gather while purchasing foods is from past purchase experience followed by food labels and family/friends.

- People generally purchase food from local stores and they least prefer online mode for purchasing.

28

DISCUSSIONS AND SUGGESTIONS

Organic food companies should take a strong foot forward to create more awareness about what exactly are the benefits of organic foods. They can provide various side benefits of buying organic food so that people would tempt to buy them.

1 Advertisements on national television, social media, newspaper, etc about the health benefits of organic foods

2 Increase the availability by making it available on every possible general store.

3 Proper information needs to be provided to the people.

4 Production should be increased so that availability can be increased.

5 Online ordering of organic food should be an option so that it can be delivered door-to-door.

29

<u>LIMITATIONS</u>

- This research is only applicable to Bhopal, which turns out to be a limitation as the whole country has not been taken as a region.
- In this research, convenience sampling has been used.

CONCLUSION

- The main purpose of this study is to discover the awareness and preferences of people about organic foods in the selected region that is Bhopal the capital city of Madhya Pradesh.
- Through the survey it has been found that 92.5% of people are aware of organic foods whereas 61.5% of people would prefer organic foods if made available in the market, this shows that there is a lot of potential for organic foods so that people get organic food in there basket.
- To understand the buying behavior of people for food products, it has been found out that freshness, chemical-free, and cost, affect their buying intention the most.
- Awareness about organic food amongst people is that they know organic food is healthier, natural, and nutritional than conventional food.
- The most information people get about food is mostly from past purchases, food labels, and family/friends.
- This study also shows that people are willing to pay for organic foods but lack of availability is an issue.
- Educating more about organic foods is also a need as that would make them buy it more.

FURTHER RESEARCH DIRECTION

The research can further expand into various directions as organic foods have a wide scope.

- Further research can be done on actual organic food consumption in the Bhopal region and other regions can be included.
- This research does not focus on the consumption pattern of people for organic foods, which can also be researched further.
- Further research can also be done on what is the exact preference of people in organic food is as of now Ex: spices, pulses, etc.

32

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33

QUESTIONNAIRE

Required

1 Name *

Your answer

2 Email ID

Your answer

3 Gender *

Male
Female
Other

4 Age group, you belong to? *

Below 18 years
18 - 25 years
26 - 35 years
36 - 55 years
Above 55 years

5 Educational Qualification *

SSC
HSC
Graduate
Post Graduate
Professional

6 Marital Status *

Single
Married

7 Occupation *

Student
Housewife
Agriculture

34

Business
Service
Unemployed

8 House Hold Income *

Less than 2,50,000
2,50,000 - 5,00,000
5,00,000 - 10,00,000
More than 10,00,000

9 Are you aware of organic food? *

Yes
No

10 Do you prefer organic food over conventionally prepared food? *

Yes
No
Sometimes

11 Are you aware that organic food is: *

Certified
GMO-free
Environmental/animal friendly
Natural
Nutritional
Healthy
Chemical-free

12 Do you think that you eat healthily? *

Yes
Moderately
Not at all

To what extent you agree or disagree with the following statements:

13"It is essential that I consume organic foods." *

Strongly disagree

35

1
2
3
4
5

Strongly agree

14"Organic food is healthy compared to normal food" *

Strongly disagree

1
2
3
4
5

Strongly agree

15"TV Advertisements and programs are working on raising awareness about organic   foods." *

Strongly disagree

1
2
3
4
5

Strongly agree

Whether you buy organic foods presently or not, please indicate how important are these factors would be to make you buy organic :

16 low price for organic food *

Not at all important

1
2
3
4
5

Extremely important

17 Availability of organic food *

36

Not at all important

    1

    2

    3

    4

    5

Extremely Important

  18 Wider variety of organic food *

Not at all important

    1

    2

    3

    4

    5

Extremely important

  19 More knowledge about organic food *

Not at all important

    1

    2

    3

    4

    5

Extremely important

  20 More advertisements for organic food *

Not at all important

    1

    2

    3

    4

    5

Extremely important

  21 How important are these attributes for you while purchasing products? *

Least imp. Slightly imp. Neutral Very imp. Extremely imp

Cost

Brand name

Organically produced

Freshness

Chemical-free

22 While shopping for groceries which of the following are important indicators of information on food products for you? *

Store employee

Food labels

Family/friends

Past purchase experience

Social media

23 Where do you usually shop for food? *

Natural / Specialty food stores

Large food store

Small / locally owned food store

local farmers market / open-air market

Online Shopping

38