

Exploring the Factors affecting Organic Food Purchase as Immunity Booster during the Pandemic

Abstract:

Organic food products are gaining popularity and are widely accepted by ~~the~~ consumers all over the world. As they are grown and processed without ~~the use of~~ chemicals, consumers feel that it is safe for consumption and does not have any health hazards. The ongoing pandemic situation, COVID-19, has also given ~~a~~ momentum to the acceptance level of these products, as producers are marketing their products with a tag, 'immunity booster'. This study was an effort to identify and validate the dimensions influencing organic food purchases by ~~the~~ consumers. ~~Questionnaire~~ ~~A questionnaire~~ having 45 questions was developed and administered to 750 respondents. Exploratory factor analysis was applied to explore the factors determining organic food purchase. Exploratory factor analysis yielded ~~a~~ ~~five-factor structure~~. Confirmatory factor analysis was used to verify and confirm ~~the~~ five-factor structure. Multiple Regression Analysis ~~was~~ applied to identify the most prominent factor, which influenced the customer to make the purchase.

Key-words: health hazard, nutrient value, consumption, purchase intention, ~~Immunity~~ ~~immunity~~ ~~Booster~~ ~~booster~~, ~~questionnaire~~, COVID-19.

INTRODUCTION

The concepts of organic agriculture were developed in the early 1900s by Sir Albert Howard, F.H. King, Rudolf Steiner, and ~~others~~. It referred to food raised, processed and stored processed without ~~the use of~~ chemicals, fertilizers, pesticides, growth hormones and generic modification¹. Due to its nutrient value and non-involvement of chemicals, organic food ~~are is~~ widely accepted by ~~the~~ consumers. Consumers are ~~in search of~~ ~~searching for~~ safe consumption ~~and~~ during this ongoing pandemic situation, and this consumer attitude has given momentum to organic food acceptance level². Now ~~a~~ ~~adays~~, organic food producers ~~are promoting~~ ~~promote~~ their products with the tag 'Immunity Boosters', ~~and it is~~ positively influencing the demand ~~of for~~ organic food³.

India is leading in organic food production with 835000 producers, and Switzerland ~~is~~ leading in Organic Food Consumption per capita with \$325(healthcareer.co).

LITERATURE REVIEW:

Compare to conventional food, ~~and~~ organic food, is ~~safer~~. This trust factor is dominating consumer perception (Rimal and Balasubramanian 2005). Factors like nutritional labels and consumer educational campaigns are the main features ~~which is leading to~~ ~~leading to the~~ point of purchase of organic food among the consumers (Drichoutis, Lazaridis and Naygya 2006).

~~S. Chib (2019) in her study derived a four structure model and the influencing factors were~~

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~~nutrient value, accessibility & availability, consumer perception~~In her study, S. Chib (2019) derived a four-structure model and the influencing factors were nutrient value, accessibility & availability, consumer perception, and consumer ideology^{4,5}. Health concern, environmental care, chemical residues, pesticides, ~~presence of nutrient~~nutrients, and improved flavour and taste are the deciding factors as per Squires et al. (2001). Consumer's belief system consisting of dimensions like health concern, taste and chemical free is results' belief system consists of dimensions like health concerns, taste, and chemical free results in their inclination towards organic food (Lea and Worsley,2005). Factors like expensiveness, limited availability ~~and product confusion is preventing consumers to go, and product confusion prevent consumers from going~~ for organic food (Fotopoulos and Krystallis, 2002). Difficulty in finding and lack of product clarity ~~is also stopping the consumers to adapt~~also stops the consumers from adapting organic food items (Baourakis, 2004). Factors like expected value and perceived value are the important deciding factor for organic food purchase (Zee-Sun Yun & Dawn Thorndyke Pysarchik, 2010). In India, the acceptance level is the highest among the Gen-Y (Gen Y, or Millennials- born between 1981 and 1994/6 and are currently between 24-39 years old) consumers (Choo, HoJung; Chung, Jae-Eun; Dawn Thorndike Pysarchik, 2004). ~~Factors like e~~Consumer innovativeness, perceived risk and demographic factors influenced organic food purchase (Somnath Chakrabarti and Rajat K Baisya ,2009). Rising per capita income, urbanization and globalization are the deciding factors for organic food purchase intention (Pratap S. Birthal, P. K. Joshi , Ashok Gulati 2006). Mehra S., Ratna P.A., (2014) discuss, factors like cleanliness, quality, variety ~~and availability throughout the years motivates, and availability motivate~~ the customer to go for organic food^{6,7}. According to Mukherjee D; (2012), the most prominent reason for ~~the purchase of purchasing~~ organic food was value for money. Money spent by the customer and the benefits obtained as per their expectations played the main role in deciding the purchase of organic food. Oroian C. E., ~~(2017), made the comparison between the different players of diffusion of innovation~~ (2017) compared the different players of diffusion of innovation, namely innovators and early adopters. He found that income was the most dominating parameter⁸. -Bordeanu B. M. (2017); concluded that organic food purchase was more amongst the innovator's group. Chandrashekar H.M., ~~(2014) explained that determinants of organic food were quality of of the food, its taste, variety~~ (2014) explained that determinants of organic food were quality of the food, taste, variety, and availability⁹. Value for money and availability were the secondary factors. According to him dimensions like, promotional offers were having hardly any role, and they have not influenced the customers in their purchase decision. Ahmed R., Rahman K. (2015), parameters like personal influence and demographic factors like income and education level influenced the customer about organic food purchase. Baladhandapani K., Sivalingam N (2017); ~~was of the view that factors encouraging organic food purchase was disposable income, urbanization~~believed that factors encouraging organic food purchase were disposable income, urbanization, and globalization. Change in the consumption pattern also helped in the purchase of organic food in the developing countries¹⁰⁻¹⁷.

OBJECTIVE OF THE STUDY

The objectives of the study are as follows:

1. To study the awareness level ~~with respect to~~ concerning organic food among the people in Nagpur.
2. To check whether demographic variables ~~have an influence on~~ influence organic food consumption.
3. To explore and validate the dimensions of organic food consumption.
4. To identify the most prominent factor out of the derived factor.

HYPOTHESIS

1	Null Hypothesis	Respondents were not aware of organic food.
	Alternate Hypothesis	Respondents were aware of organic food.
2	Null Hypothesis	Demographic variables has do not influence <u>no influence on</u> organic food consumption.
	Alternate Hypothesis	Demographic variables has influence on <u>influence on</u> organic food consumption.

RESEARCH METHODOLOGY

~~Study~~ The study was conducted from March 2020 to October 2020. It was ~~conducted~~ completed in two parts. Part I dealt with an in-depth review of the literature. It helped ~~in~~ identifying identify the various determinants of organic food consumption and thus formulating the questionnaire for data collection. Part II included the identification of factors influencing Organic Food Consumption through Exploratory Factor Analysis (EFA). It was followed by Confirmatory Factor Analysis (CFA) to validate the derived factor structure through EFA. ~~Multiple Regression Model~~ was used to identify the most influencing factor out of the derived factor structure.

SAMPLE SELECTION AND QUESTIONNAIRE ADMINISTRATION

Both Online and Offline method was adopted to collect the data and response rate was 98.13%. 750 questionnaires were administered. 736 was found completely and correctly filled. 14 questionnaires ~~were having~~ had ambiguity, hence dropped from further analysis.

Development of Instrument:

~~Literature~~ The literature review paved the way to develop the questionnaire having 45 questions. They were classified into four parts as below:

Number of demographic questions	4
Number of questions related to awareness of organic food products	2
Number of questions related to purchase <u>purchasing</u> intention of organic food	2
Number of topic <u>topic</u> -related questions	37
Total	45

~~Data Analysis was done by usin~~ Usin Jamovi 1.2.24.0 software ~~did~~ data Analysis. Jamovi is an ~~open~~ open-source “3rd generation” statistical spreadsheet designed from the ground up to be easy to use. (<https://www.jamovi.org/>)

DEMOGRAPHIC ANALYSIS & DISCUSSION:

The table below depicts the demographic profiling of the respondents. This study considered four demographic variables, namely gender, age, qualification and monthly household income.

Table 1:- Demographic Analysis

Demographic characteristics of the Respondents		
Variables and categories	N=736	%
Age		
Below 25	72	9.78
25-30	192	26.09
31-35	217	29.48
36-40	88	11.96
41-45	67	9.10
46-50	53	7.20
Above 50	47	6.39
	736	100%
Gender		
Male	359	48.91
Female	377	51.09
	736	100%
Qualification		
Undergraduate	72	9.78
Graduate	421	57.20
Postgraduate	162	21.99
Doctorate	81	10.99
	736	100%
Monthly Income		
Less than 30000	189	25.81
30001-40000	171	23.23
40001- 50000	117	15.90
50001-60000	72	9.78
60001-70000	67	9.10
70001-80000	54	7.34
Above 80000	66	8.97
	736	100%

Cross tabulation was performed to analyse-analyze the awareness level of the-organic food among the respondents. Out of 359 male respondents, all the 348 respondents were aware of organic food, and 11 were not aware of organic food. So the awareness percentage among the male respondents was 96.94 %. Out of 377 female respondents, 327 were aware of, and 50 were not aware of organic food products. Awareness-The awareness percentage among females was 86.74 %. Out of 736 respondents, 675 were aware of organic food products. Percentage-The percentage of awareness about the-organic food products among the

respondent was 91.71 %. This study proves, 'Awareness Level with respect to Organic Food is high among the Respondents'.

Our study shows that, demographic variables ~~is-are~~ not having any influence on customer intention ~~to~~ buy organic food. The significance value obtained is more than 0.05 in the demographic variables, namely age, gender, education and income. ~~Conclusion-The conclusion~~ of this study is, 'There is sufficient evidence to accept Null Hypothesis.' Hence the study proves: **Demographic variable ~~has no influence on~~ does not influence the organic food consumption.**

Objective 3: To explore and validate the dimensions of organic food purchase.

ANALYSIS AND RESULTS:

Exploring the Deciding Factors of Organic Food Consumption¹¹⁻¹³: Exploratory Factor Analysis (EFA) was applied to identify the deciding factors of organic food consumption. ~~Reliability-A reliability~~ test (Cronbach's Alpha) was done to check the internal reliability. Before applying EFA, Kaiser-Meyer-Olkin(KMO) and Bartlett's Test values was obtained. This test confirms the adequacy and sphericity of the data set. KMO score obtained was 0.907. ~~Value-The value~~ obtained was above the recommended value of 0.5. Bartlett's Test of Sphericity- exhibits a significance value of less than 0.05 (.001). It ensured the appropriateness of factor analysis.

Factor Extraction and Total Variance Explained: Factors were explored using the Eigen value criteria, and under that, factors with Eigen-value greater than 1.0, are considered. Principal Component Analysis and Varimax Rotation were considered for obtaining a component matrix. Related Jamovi- output is listed below. In the starting total, 37 items were considered for ~~the~~ study. ~~Items namely, S4, S5, S9, S14, S18, S19, S20, S21, S25, S27, S28 and S32 were dropped.~~ S4, S5, S9, S14, S18, S19, S20, S21, S25, S27, S28 and S32 were dropped due to the redundancy in items. In total, 26 items were considered for the final study. These 26 items converged into 5 factors, as depicted below.

Predicted Model

$\text{Purchase Intention} = 0.5565 - 0.0729(\text{Nutrient Value}) + 0.9985 (\text{Consumer Perception}) + 0.3294 (\text{Consumer Ideology}) - 0.1423 \text{ Perceived Risk} - 0.0787 (\text{Trust})$
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CONCLUSION:

This study proved that, ~~the~~ awareness level about ~~the~~ organic food was very high among the respondents and ~~the percentage was~~ 91.71%. ~~Awareness-The awareness~~ percentage among males was 96.94%, and in females, 86.74%. This study showed that, demographic variables were not having any role in deciding ~~the~~ organic food consumption. ~~Male were S~~ The study explored the determinants of organic food consumption, using Exploratory Factor Analysis, and it ~~converged~~ converted into 5 factors. The factors thus derived was named as Nutrient Value, Customer Perception, Customer Ideology, Perceived Risk and Trust. Derived five factors- together explained 74.5 % variance. To validate the results of EFA, confirmatory factor analysis (CFA) was used. Results of CFA demonstrate that, the ~~five-five~~ factor model is appropriate and has adequate reliability to explain the organic food consumption aspect.

Multiple Regression Model helped to ~~the~~ predict the influence of the identified factor and ~~also helped to help~~ identify the most prominent factor. ~~Most~~ The most important emerged from this study was Consumer Perception, and its role was 99.85 % which was almost 100. This study confirmed the fact that 'Consumer Perception', plays a key role in consumer ~~behaviour~~ behavior.

MANAGERIAL IMPLICATIONS

This study will help organic food producers and marketers to plan their promotional strategies effectively. It will also help the companies ~~to formulate pricing strategies, which will help them to~~ formulate pricing strategies, which will help them enhance their market share.

LIMITATION OF THE STUDY AND FUTURE RESEARCH

~~Sample~~ The sample size was very small, and the study covered ~~about~~ organic food consumption only. This study can be extended with more sample size and ~~also to other related areas like medical, agriculture, biotechnology, food technology and other related areas like medical, agriculture, biotechnology, food technology, and the~~ health sector.

Ethical clearance: Taken from ~~the~~ institutional ethics committee

COMPETING INTERESTS DISCLAIMER:

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

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