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PHYTOMORPHOLOGY

Brand Determined Preferential Purchase of Organic Food Items by Metropolitan Urban Dwellers of India

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Abstract

The success of organic food production is anticipated to hinge on consumer demand, purchasing behaviour, and consumption patterns. A survey conducted with the urban population between 2022 and 2023 aimed to investigate the purchasing of organic food items in major metropolitan cities in India. This survey was independent of various socio-demographic factors, including age groups, area of residence, employment status, and family structure. Among the consumers, primarily students, there was a distinct preference for organic products over conventional ones when both options were available. Spearman's correlation analysis was employed to explore relationships between different factors and the purchasing of organic items. The primary determinants influencing the preference for organic products included brand reputation, perceived environmental benefits, and product availability. Interestingly, the certification of organic products showed a negative correlation with consumers' preferences for organic foods, suggesting a lack of awareness among buyers regarding these certifications. Brands appeared to serve as indicators of authenticity for organic foods. Strategic policy changes are essential to address this disconnect and enhance awareness about organic products. One effective corrective measure could be implementing training programs for students in schools and colleges, focusing on marketing, certification, and organic production methods.

Keywords: Awareness; Brand; Certification; Consumers; Organic food; Purchase

Introduction

The success of organic food production hinges on consumer demand, purchasing behaviour, and consumption patterns (Hansmann et al., 2020). According to the Research Institute of Organic Agriculture (FiBL), sales of organic food and beverages reached nearly 135 billion euros in 2022. The largest market for organic foods was the United States, accounting for 43% of the global market, followed by the European Union at 34% and China at 9.2%. In 2022, Switzerland recorded the highest per capita consumption of organic food (Willer et al., 2024). India produced approximately 2.9 million metric tons (MT) of certified organic products in the 2022-23 period, encompassing a wide range of food items, including oil seeds, fibers, sugar cane, cereals, millets, cotton, pulses, aromatic and medicinal plants, tea, coffee, fruits, spices, dried fruits, vegetables, and processed foods. The scope of production extended beyond the edible sector to include organic cotton fiber and functional food products (APEDA, 2023). Given the undeniable relationship between consumer behaviour and the food industry, understanding consumers has become the focal point of numerous studies (Basha & Lal, 2019). It is essential to explore consumers' willingness to purchase organically produced foods (Eyinade et al., 2021).

The consumption of organic food has been steadily rising, driven by an increasing health consciousness and environmental awareness among consumers (Azlie et al., 2023; Wang et al., 2024). Developed nations such as the United States, France, and Germany are recognized as the largest consumers of organic food products. Consequently, surveys and studies examining consumer behaviour towards organic food have predominantly focused on these countries (Tandon et al., 2020). Organic food, consumer behaviour, and sustainable food production for consumption have emerged as significant research areas globally (Kristia et al., 2023). However, research in developing countries, particularly India, remains limited despite its relatively nascent organic food market (Basha & Lal, 2019). India boasts the highest number of Asian organic producers (Garg et al., 2024). A primary challenge facing organic food marketers in India is the low level of domestic consumption, which is primarily concentrated in metropolitan areas. To understand the slow adoption of organic food, it is crucial to conduct comprehensive studies exploring the relationship between consumers' attitudes, intentions, and behavioural patterns (Prakash et al., 2023). Investigating the factors influencing consumer preferences for organic food is vital for developing the organic food market (Kalyan & Metta, 2024) and encouraging sustainable, healthy eating habits. Such research can also yield valuable insights for policymakers and marketers. Furthermore, a related study suggested examining the impact of emerging factors such as environmental education, certification labels, and branding on consumers' choices regarding organic food (Huo et al., 2024).

This paper explores the attitudes of metropolitan Indian consumers towards organic food products, focusing on factors such as availability, quality, and brand perception. It examines consumers' knowledge of the superior attributes of organic foods compared to conventional options. Additionally, the study investigates the willingness of urban residents to purchase organic items despite their higher costs, as well as specific characteristics such as freshness, spoilage rates, and shelf life. A preliminary investigation was conducted to verify the certification of organic food products for authenticity. The findings of this study will help forecast purchasing and consumption trends of organic food among urban consumers in India and shed light on current awareness levels regarding health, agricultural practices, environmental concerns, and economic implications. This information can be instrumental in developing strategies to encourage the purchase of healthier food alternatives. In agrarian, developing, and low-income economies like India, enhancing awareness and implementing effective policies to promote eco-friendly and healthier food choices can significantly improve the quality of life for the population.

Methodology

A survey was conducted to assess the attitudes of urban Indians regarding various aspects of purchasing organic food items. A sample population was drawn from metropolitan cities across India using a questionnaire. The questionnaire comprised two sections with 23 questions. The first section contained four attributes evaluated through multiple-choice questions, focusing on the socio-demographic profile of the respondents. The second section explored the factors influencing respondents' decisions to purchase organic products. Table 1 presents sections I and II of this questionnaire. The form was administered using Google Forms.

A total of 230 respondents completed the questionnaire, and their responses were subsequently collected and analyzed. Responses were compiled and analyzed to calculate mean values, percentage

Table 1. Factors influencing decisions of the respondents to purchase organic products

Section I - Socio-demographic factors of the population	
1	Place of stay of respondents (divided into capital, Delhi+National capital region, NCR, national capital region and other metropolitan cities like Mumbai, Kolkata, etc.)
2	Family structure of respondents (Nuclear or Joint family)
3	Employment status of the respondents (Independent and employed people or dependent people comprising mainly of students)
4	Age- group of respondents in Delhi + NCR and Other metropolitan cities
Section II - Factors assessed for determining the purchase of organic products	
5	Brand name of organic food
6	Organic product pesticide free
7	Method of production of food item
8	Freshness of organic product
9	Fat content of organic product
10	Packaging of organic food item
11	Is your organic product providing value for money?
12	Is your organic food item seasonal?
13	Does your organic food item possess Longer Shelf life than counterparts?
14	How authentic is your organic food?
15	Are you purchasing certified organic food products?
16	Do you think organic food items get spoilt earlier than conventional food products?
17	Do you think organic food items are expensive than conventional food product?
18	Do you think buying organic food shows your concern for environment?
19	Do you think organic product are more nutritious than conventional products?
20	Do you prefer organic food over conventional ones?
21	Are you concerned about the ill effects of non-organic foods on environment?
22	Are all the organic products that you use easily available in your area?
23	Do you think there should be more awareness through various platforms to promote organic foods?

responses, and Chi-square values, allowing for the assessment of how socio-demographic profiles influence the purchase of organic products. Spearman's rank correlation analysis (Zar, 2005) was conducted to evaluate the impact of various attributes on consumers' decisions to buy organic food items. Data tabulation and statistical analysis were performed using MS Excel (2019).

Results

Socio-demographic profile of respondents

The respondents primarily belonged to the dependent category, predominantly comprising students aged 15 to 25 who lived in metropolitan areas outside of Delhi and the NCR and who are part of joint families (Fig. 1A). A chi-square analysis examining the relationship between the purchase of organic food items and the socio-demographic profiles of the respondents revealed no significant correlation between the socio-demographic profile (independent variable) and purchase of organic food items (dependent variable) (Table 2).

Purchase of organic food items by respondents

Almost ninety per cent of respondents preferred organic food items over conventional ones when both options were available (Fig. 1B). Data from the questionnaire were analyzed using Spearman's rank correlation (Zar, 2005). Among the factors influencing consumer choices, product packaging ranked lowest in significance, while the brand of organic products emerged as a key determinant in the purchasing decision. The following factors showed a positive correlation with the preference for organic food items compared to their conventional counterparts (as indicated by values of Spearman's rank correlation coefficient): Longer shelf life < availability of organic products < authenticity < awareness of

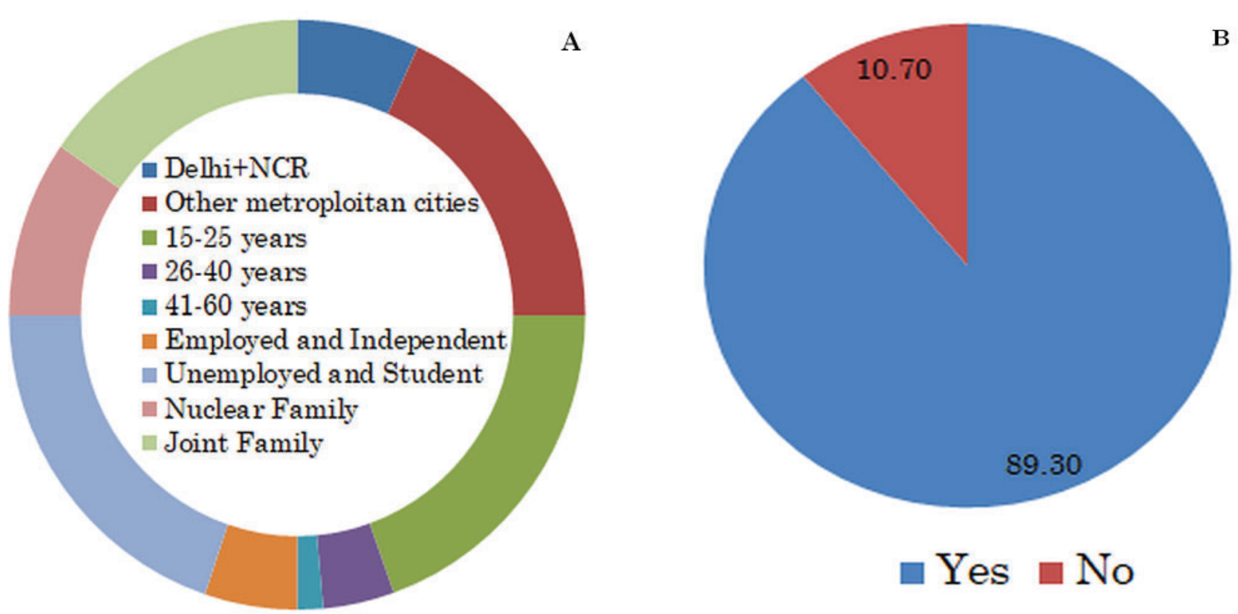

Figure 1. (A) Responses of different categories (age groups, area of residence, employment status of the respondents and their family structure, (B) Preference of respondents for organic food items over conventional items

Table 2. Chi square analysis for Socio-demographic profile of respondents

Socio-demographic factor	Chi-square value	Degrees of freedom	p-value
Age group	0.249	2	0.8829
Area	0.4092	1	0.5224
Employment status	0.2047	3	0.9768
Type of family	0.02028	1	0.8868

organic products < fat content (percentage) < value for money < environmental consideration < brand (Fig. 2). Conversely, the purchase of organic products was negatively correlated with various factors, including the perception that organic items are pricier than conventional options, concerns about the quicker spoilage of organic items regardless of farming practices, issues related to seasonal availability, the negative environmental impacts of conventional food production, and perceptions of freshness and packaging (Fig. 2). Notably, fruits and vegetables

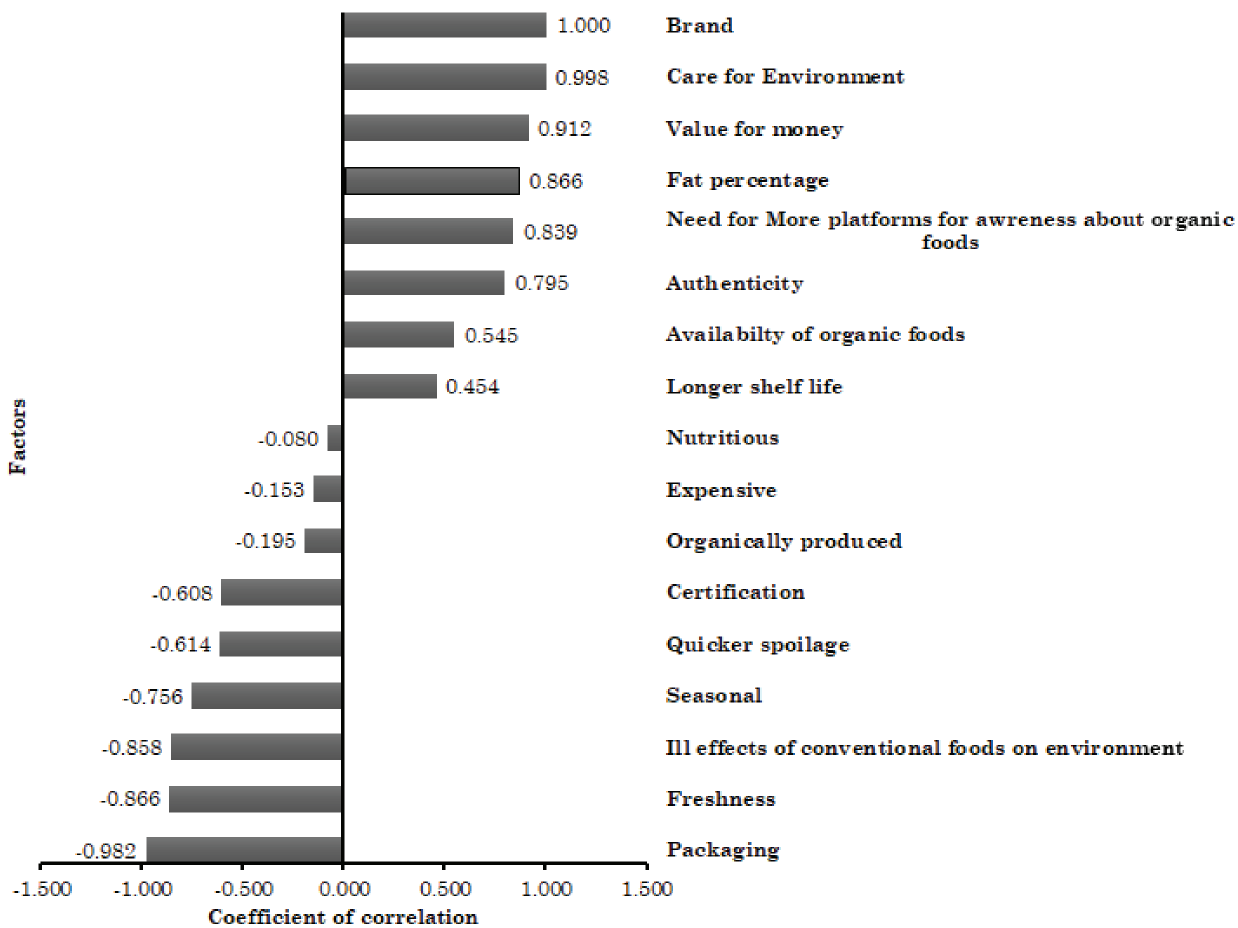

Figure 2. Factors determining preferential purchase of organic food items by consumers

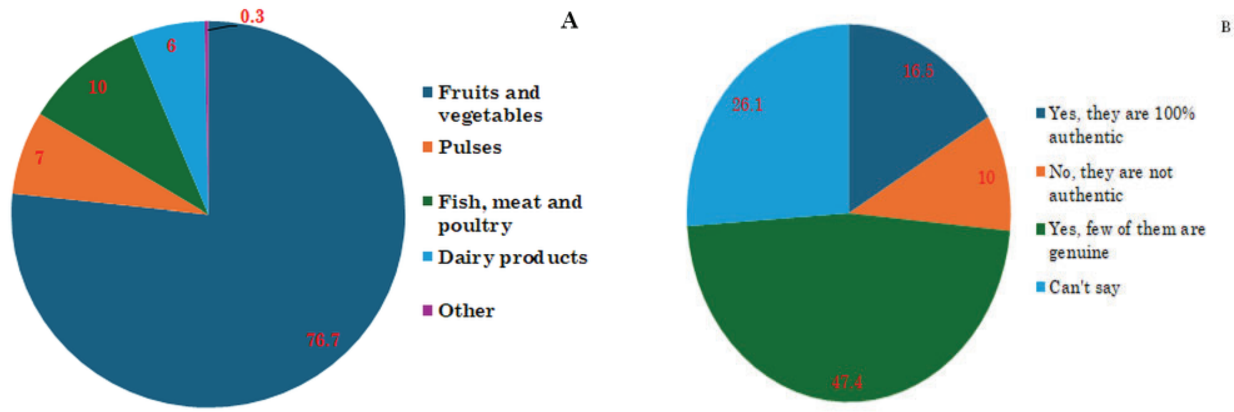

Figure 3. (A) Categories of organic products purchased by respondents; (B) Awareness in consumers for authenticity of organic products purchased by them

comprised a significant portion of the organic products purchased by consumers, many of whom believed that only a select few of the items they bought were truly authentic (Fig. 3A, B).

Discussion

The survey results can be interpreted through the theory of planned behaviour (Ajzen, 1991), which posits that individuals engage in specific actions driven by their underlying intentions. In this report, it is noted that urban consumers are increasingly purchasing organic foods, a trend that is gaining momentum globally due to a heightened awareness of health and environmental issues (Azlie et al., 2023; Wang et al., 2024). Consumers tend to assume that a brand serves as a guarantee of authenticity regarding organic products. Additionally, Canova et al. (2021) discovered that trust in organic food significantly influences purchase and consumption decisions based on a survey conducted among the Italian population. Nonetheless, the role of branding in fostering trust in organic foods remains underexplored (Nagy et al., 2022).

Consumers strongly prefer purchasing branded organic food items, particularly fruits and vegetables. Their decisions regarding the authenticity of organic products are primarily influenced by brand reputation and certification. A systematic analysis conducted by Nagy et al. (2022) found that brands significantly enhance consumer trust in the authenticity of organic food items. A distinctive finding from their survey involving the urban population of metropolitan cities in India highlighted a concerning lack of awareness among buyers regarding the markers of authenticity for organic foods; many assumed that branded items were organically certified. Similarly, Steffen & Doppler (2019) suggested that branding often instils more trust in consumers than certification alone. This reflects a pressing need for enhanced awareness initiatives (including information about brands and certification) to foster a stronger preference for organic food among consumers. In this survey, urban consumers - predominantly students - demonstrated a notable inclination toward purchasing "branded" organic food items such as fruits and vegetables, underscoring their unawareness of organic foods and their certification process in India. The authors believe that such a lack of awareness among urban consumers could hinder the growth of the organic food sector in India. Furthermore, misleading brand information can ultimately erode consumer trust in organic products.

Certification, which is viewed as an assessment of compliance with organic standards necessary for labelling products as organic, plays a crucial role in establishing consumer trust and ensuring the authenticity of organic items (Nagy et al., 2022). Despite this, India's urban population prioritizes brand reputation over certification regarding organic purchases. This trend is shocking, given that India has a robust certification system and established regulations. The Food Safety and Standards (Organic Foods) Regulations of 2017, enacted under the Food Safety Standards Act (2006), oversee all aspects of organic food through the Food Safety and Standards Authority of India (FSSAI). Two primary certification systems operate in India: the Participatory Guarantee System (PGS-India), administered by the Ministry of Agriculture and Farmer's Welfare, and the National Programme for Organic Production (NPOP), managed by the Ministry of Commerce and Industry. These systems certify organic foods following the regulations outlined in the Food Safety and Standards (Organic Foods) Regulations 2017. The Indian government advises consumers to look for the FSSAI's organic logo (Jaivik Bharat) and the FSSAI logo, along with the license number, on the labels of certified products. Additionally, labels may feature other certifications, such as the India Organic logo (NPOP certification) or the PGS-India Organic logo (PGS-India certification), indicating the type of certification. Notably, direct sales of organic foods by small-scale producers or producer organizations to consumers are exempt from certification requirements in India.

In light of India's prevailing sound and established certification standards, urban consumers are more inclined to seek a recognizable brand than certification to ascertain the authenticity of organic food products. This indicates a pressing need for a strategic shift in policy frameworks to enhance awareness regarding these products. The survey sheds light on one of the key issues facing the organic food market in India's urban sector. Its findings can be extended to other sectors to implement corrective measures that support the growth of organic food and farming, ultimately contributing to sustainable economic development in the nation.

Conclusions

The survey on the organic food market within the urban sector of India's metropolitan cities indicated a notable lack of awareness regarding the authenticity of organic products among the predominantly student population. Organic farming is an important topic in the educational curriculum at both school and college levels nationwide. Enhancing knowledge on this subject at these stages can significantly increase awareness. To achieve this, additional training focused on organic production methods and the marketing and certification aspects should be integrated into the curriculum. This grassroots initiative will educate students and their families about organic foods, shifting the country from being one of the largest producers to becoming a nation of conscious organic food consumers. This transition will provide benefits for both the environment and the economy.

Ethics statement: The survey was conducted with the prior approval and consent of participants for providing responses and they were assured of maintenance of privacy. The study was performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards. The data collected were properly anonymised and informed written consent was taken from participants at the time of original data collection.

Authors' contributions: Priyanka Pandey née Kapoor designed survey questions, wrote the manuscript and supervised the survey work done by Sanchita Kumar and Midhat Imtiyaaz. Samira Chugh, Leisan Judith and Geeta Prakash revised the manuscript. All authors read and approved the manuscript.

Conflicts of interest: Authors declare no conflict of interest.

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