

FOOD CHOICES AND SUSTAINABLE CONSUMPTION PATTERN

Author

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Abstract

This study investigates consumer perceptions and behaviours related to food choices and waste in India, integrating individual dietary habits with broader social awareness and potential policy solutions. Through a survey of Indian youth, the research examines preferences for locally sourced and seasonal food, attitudes towards waste reduction, and influences on consumption patterns. The findings reveal a strong preference for local and sustainable food sources, supported by a notable emphasis on seasonal fruits, vegetables, and home cooking. While respondents generally acknowledge the social impact of food waste and express a willingness to adopt waste-reducing practices, challenges related to taste, storage, and habits persist. Interestingly, the influence of food advertisements appears limited, contrasting with studies emphasizing their persuasive power. The study also shows a strong family and cultural influence on food choices and food preservation methods. Results indicate that proper storage does not indicate less wastage of food and income, class and traditions are stronger factors. The study underscores the importance of multifaceted approaches to promoting sustainable food practices, including education, policy interventions, and public awareness campaigns, to foster a more conscious and responsible consumer base.

Keywords: Waste Reduction, Primary Data, Consumer Behaviour

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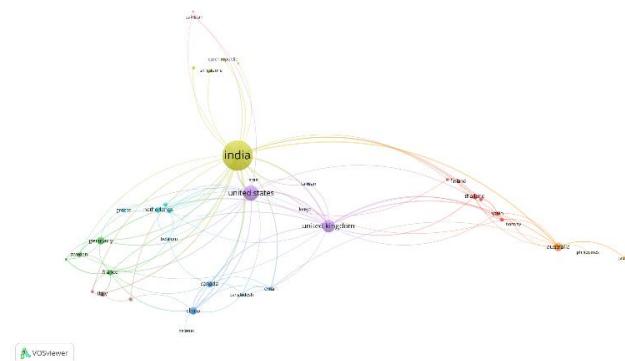
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Introduction

Sustainable consumption ensures basic needs are met while minimizing resource use, waste, and pollution to protect future generations. It requires shifting from conventional to eco-friendly, socially responsible consumption patterns and is closely linked to sustainable development, aiming to decouple economic growth from environmental harm. Key influences include awareness, socio-demographics, cultural norms, policies, marketing, psychology, and economics. Food wastage significantly impacts sustainability, contributing to greenhouse gas emissions, resource depletion, and economic losses. Consumer choices, driven by awareness, pricing, and convenience, play a crucial role in reducing waste. Policies, private initiatives, education, and media influence sustainable consumption habits. India's approach aligns with Sustainable Development Goal 12 (SDG 12), focusing on a circular economy, sustainable diets, and green consumerism. While Indian diets have a lower environmental impact, they lack essential nutrients, requiring dietary shifts for sustainability. Green consumer behaviour is shaped by environmental concerns and social values, though price sensitivity remains high. India's rapid economic growth challenges sustainability, demanding systemic solutions for responsible consumption and production. Globalization influences energy demand, but financial development offers opportunities for sustainability. Balancing economic growth with sustainability remains complex, yet India's policy focus and collaborative efforts highlight its commitment to a greener future.

Literature Review

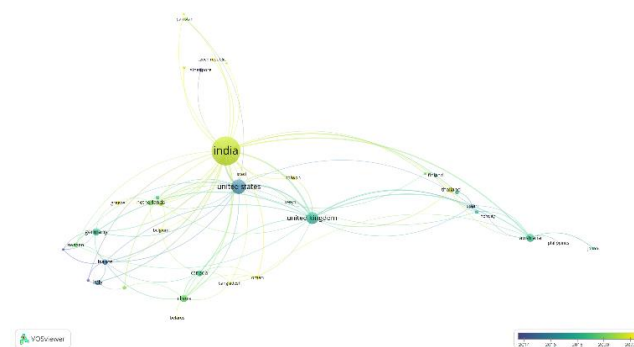
Image 1: Results of VOSviewer showing network visualization of co-author and country



Source: Authors own generated using scopus database

This network visualization displays country collaborations. Node size indicates prominence, and connecting lines show partnerships. Countries like India, United States and United Kingdom have strong connections, while Belarus, Japan and Vietnam appear more isolated. Clusters suggest regional cooperation, with some countries forming distinct groups like India, Australia, Germany and China.

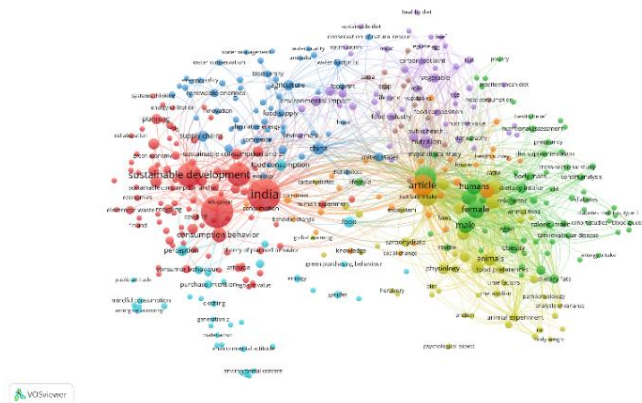
Image 2: Results of VOSviewer showing overlay visualization of co-author and country



Source : Authors own generated using scopus database

This network map visualizes country collaborations over time, indicated by colour gradients from purple (2014) to yellow (2022). Node sizes represent prominence. Key collaborators are India, United States and United Kingdom. Belarus, Japan and Vietnam remain more isolated, and there's visible temporal growth in connections, particularly for some of the emerging clusters, India having recent collaborations.

Image 3: Results of VOSviewer showing network visualization of co-occurrence and keywords



Source: Authors own generated using scopus database

This network visualization shows the interconnections of research keywords related to sustainable consumption. Node size indicates keyword frequency, with "india", "sustainable development", "sustainable consumption" and "sustainability" being prominent. The connecting lines (links) indicate co-occurrence of terms within the publications, with thicker lines implying stronger relationships. The size and colour of the circles represent the strength of association and cluster membership.

Objectives

1. To assess the extent to which Indian consumers prioritize locally sourced and seasonal food products in their dietary choices.
2. To examine individual attitudes and behaviours towards food waste reduction practices among Indian consumers, including meal planning, leftover utilization, and proper food storage.
3. To evaluate the perceived importance of sustainable food production among Indian consumers and identify factors influencing their consumption behaviours, such as advertisements and social influence.

Methodology

Scopus database was used to search relevant documents using keywords like "Sustainable Consumption" or "Dietary Choices" and "India" or "Diet Choices". VOS viewer's relevance lies in its ability to visualize and analyse the relationships between these keywords and other terms within the literature. By generating network maps of co-occurring keywords, VOS viewer helps identify key research clusters, emerging trends, and influential authors, guiding a more focused and comprehensive literature review. This facilitates identifying relevant research papers, establishing connections between concepts, and discovering gaps in existing knowledge. The questionnaire method effectively captures diverse perspectives on food choices and waste, offering quantifiable data across various demographics. Graphic representation, through histograms and grouped bar charts, visually summarizes complex response patterns, enhancing understanding and highlighting key trends in consumer behaviour and attitudes towards sustainable food consumption. This combination allows for both broad analysis and targeted insights. The data collection was made with the help of Google Forms from 20th December 2024 to 14th January 2025. The sample size was 81 and all of them being youth with age less than 24 years old. Data collection from youth is essential as they represent future consumers and decision-makers. Understanding their food choices and attitudes towards sustainability is crucial for developing effective interventions and policies to promote long-term sustainable consumption patterns, influencing future generations' behaviours.

Demographic Profile

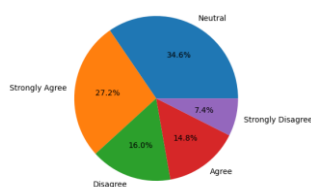
The data was collected with the help of Google Forms. Most of the respondents were Male (75.3%). Though the Google Form was circulated everywhere, mostly males volunteered and took initiative to fill the form, while females might have opted out due to disinterest, time constraints, or other priorities. Most of the respondents belonged to 5 states – Bihar (38.27%), Odisha (13.58%), West Bengal (13.58%), Uttar Pradesh (8.64%) and Jharkhand (7.4%).

Results

A significant majority (74.07%) expressed a preference for locally grown produce and sourced food. Reflecting a commitment to sustainability, over 70% (71.6%) consider it important that their food is produced sustainably. Dietarily, a strong proportion (79.01%) make a point to prioritize seasonal fruits and vegetables. Regularly eating home-cooked meals is the norm for approximately 72% (71.6%) of respondents. Showing a tendency towards planning, 59.26% proactively plan their meals to cut down on potential food waste. A high percentage, 71.6%, indicated they avoid discarding leftover food. To maintain food quality, most of the respondents (76.54%) focus on correct food storage. Nearly 52% (51.85%) acknowledged being influenced by food promotions and advertising. A considerable majority (77.78%) displayed a willingness to experiment with recipes to use leftovers. When eating out, most respondents (83.95%) strive to finish their entire order, while 57% (56.79%) reported to buying fruits and vegetables in bulk from local markets. The great majority of respondents (88.89%) diligently check the expiry dates before purchasing. Around 79% of those surveyed (79.01%) stated they use a refrigerator for storing perishable items. Roughly two-thirds (66.67%) make an effort to freeze leftovers and excess produce to prevent waste. Neighbourly sharing is a habit for over half of the participants (56.79%), who give excess food to neighbours. Food choices for a substantial number (60.49%) of respondents are influenced by friends and family. Most of the respondents (86.42%) see food waste as a major problem in India. Over 72% (72.84%) acknowledged that wasting food is socially unacceptable. The vast majority (83.95%) link food waste reduction to improved food security. Edible parts of produce are usually consumed, as reported by 71.6%. And 68% (67.9%) mentioned discouraging others from food wastage. 67% (66.67%) consider individuals have a strong role to play in minimizing food waste. Majority of respondents (66.67%) believe that Reducing food waste is important for addressing food insecurity in India. More than half of participants (58.02%) recognize food waste as an ethical problem.

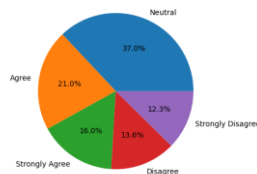
A very few respondents waste food due to the following reasons: leftovers not used (18.52%), cooked too much (22.22%), didn't like the taste (24.69%), spoilage due to improper storage (38.27%), expired before consumption (45.68%). Most of the respondents (56.79%) don't carry their own containers to take leftovers from restaurants/events. Most of the respondents support these measures for helping in reducing food waste in India: education in schools/colleges (59.26%), better food storage infrastructure (56.79%), public awareness campaigns (55.56%), government regulations (51.85%), community composting initiatives (50.62%), smaller portion sizes in restaurants (29.63%).

Use of Traditional Indian Food Preservation Methods



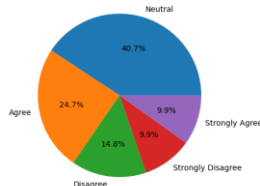
Respondents had a mixed view on the use of traditional preservation methods like pickling and drying.

Discussion of food sustainability with family and friends



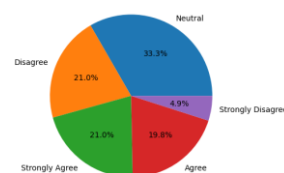
Respondents had a mixed view on the discussion of food sustainability and waste reduction with family and friends.

Frequency of eating at restaurants or ordering takeaway/delivery food

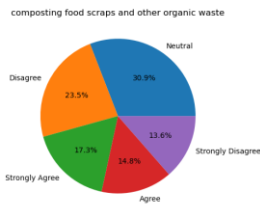


Respondents had a mixed view on the frequency of eating at restaurants or ordering takeaway/delivery food.

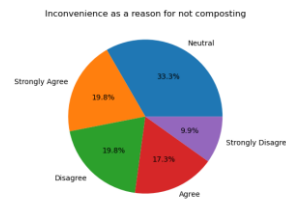
throwing away spoiled produce



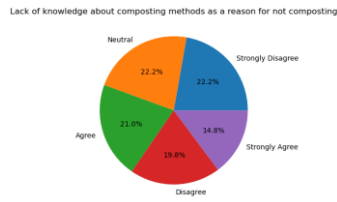
Respondents had a mixed view on composting food scraps and other organic waste.



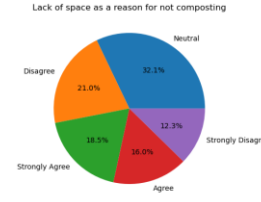
Respondents had a mixed view on throwing away spoiled produce.



Respondents had a mixed view on 'Inconvenience' as a reason for not composting.



Respondents had a mixed view on the 'lack of knowledge about composting methods' as a reason for not composting.



Respondents had a mixed view on the 'lack of space' as a reason for not composting.

Findings

The survey results reveal a strong inclination toward sustainable and conscientious food practices among respondents. A significant majority prioritize locally sourced and sustainably produced food, with a marked emphasis on seasonal produce and home-cooked meals. While a proactive approach to waste reduction is evident through meal planning and avoidance of discarding leftovers, a considerable segment also acknowledges the influence of food promotions, highlighting a potential area for intervention. Practical measures like proper food storage, expiry date checks, and freezing leftovers are widely adopted. Social factors also play a role, with family and friends impacting food choices and a general awareness of food waste as a serious issue with ethical and food security implications. Though some respondents actively share excess food, the mixed views on composting and the mixed views on the usage of traditional preservation methods like pickling and drying suggest areas where knowledge or convenience might be barriers. The effectiveness and acceptance of different waste reduction measures varied, with government regulations and public awareness campaigns being ranked lower. In essence, the findings showcase a population that is largely aware of the problem of food waste and is, to varying degrees, actively engaged in sustainable consumption practices. This demonstrates a promising foundation for further interventions aimed at promoting wider adoption of environmentally and ethically sound food choices.

Conclusion

This study offers a comprehensive overview of consumer perceptions and behaviours related to food choices and waste, integrating individual dietary habits with broader social awareness and potential policy solutions. By examining both personal practices and perceived societal interventions, the research provides a nuanced understanding of the complex factors driving sustainable food consumption patterns.

The findings reveal a clear preference for local and sustainable food sources, coupled with active efforts to reduce household food waste, though challenges related to taste and storage persist. Furthermore, the survey underscores a widespread recognition of food waste as a social issue and identifies a diverse set of potentially effective strategies for promoting more sustainable practices.

The survey data reveals a complex interplay of sustainable food practices and potential barriers among respondents. Aligning with previous research, a strong preference for locally sourced and sustainable food (Lizcano-Prada et al., 2024) is evident, echoing the heightened consumer awareness of ethical and environmental considerations in food choices (Rasool et al., 2021). Similarly, the emphasis on home-cooked meals and meal planning aligns with studies highlighting their positive impact on dietary quality and waste reduction (Van Rooijen et al., 2024). However, in contrast to these positive trends, a notable influence of food promotions (Revoredo-Giha et al., 2018) and a mixed adoption of composting practices suggest areas of concern, potentially influenced by factors like price (Bósquez et al., 2022) and time constraints (Kan et al., 2010). Also, in contrast to common sustainability and food reduction behaviour research, social pressures seem to be limited (Attiq et al., 2021). While a high percentage of respondents link food waste reduction to food security and acknowledge its ethical implications (Brennan & Browne, 2021), the comparatively lower support for smaller portion sizes in restaurants

(Vågsholm et al., 2020) raises questions about the willingness to embrace potentially restrictive measures. Furthermore, the indifference towards composting (Zhao et al., 2022b) highlights a disconnection between values and actions, indicating the necessity for targeted interventions and education programs.

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