

Thriving on a sustainable future led by plant-based food diets - An exploratory study from South Asia to identify factors that drive their purchase intention

Author 1: Dr. Anjali Chopra (Associate Professor, KJ Somaiya Institute of Management, India)

Author 2: Jennifer Jagose (MBA Student, KJ Somaiya Institute of Management, India)

Abstract

Due to the escalating worldwide environmental challenges such as pollution, global warming, and environmental degradation, environmentally sustainable consumption behaviour has become extremely crucial today. Plant-based products are growing in popularity as customers are becoming more aware of the impact of their food choices on the environment. The present study investigates consumer preferences and values for plant-based products in India to identify the key factors that determine the intention to purchase plant-based products. The sample size was 310. An extended theory of planned behaviour was utilised with additional constructs - social value, health benefits, and epistemic value. Environmental attitude was the most important factor followed by health benefits and epistemic value. Social value positively influenced health benefits indicating that initially consumers tried plant-based food to fit in and gain approval from peers. On realising the positive impact of plant-based food on their health, their intention to purchase was further increased. Epistemic value was also important indicating that respondents sought information actively when it came to plant-based food. The findings will help marketers focus on the right value proposition rather than focusing on stereotypical communication of promoting products that are against animal cruelty.

Keywords: Sustainable consumption, Plant-based food, Environment conscious consumer, SDG3

1. Introduction

Recent research on consumer behaviour (Pinkse & Bohnsack 2021, Han 2021 and Buerke et al., 2017) has shown that increasingly consumers are concerned about the environment. Due to the escalating worldwide environmental challenges such as pollution, global warming and environmental degradation, environmentally sustainable consumption behaviour has been an essential topic in the consumer market and research (Lee et al., 2010; Suki & Suki, 2015; Verma & Chandra, 2018). While the Sustainable Development Goals (SDGs) are seen as an overarching global agenda for goal-setting that every nation is supposed to accomplish, SDG 3 seeks to ensure healthy lives and promote well-being through sustainable food systems (Fanzo, 2019). Today due to their concern for the environment, more and more consumers are showing a strong desire to buy plant-based products and are willing to pay a premium (Diamantopoulos et al., 2003). Plant-based food consists of consuming foods from plants, like fruits, vegetables, grains, legumes, nuts, and seeds. Consumption of animal products like meat, dairy, eggs, and even honey are reduced or excluded (Turner et al., 2015). Plant-based products are growing in popularity as customers are becoming more aware of the impact of their food choices on the environment. Changing consumer behaviour, innovation, and investors are the three favourable factors for plant-based products (Nielsen, 2021). A growing number of consumers are prioritizing health, wellness, and social issues, which translates into more thoughtful purchasing decisions. The year 2020 was a big year for plant-based products (SPIN, 2020). Sales of plant-based products were already growing before COVID-19, but after the pandemic, that growth surged even more.

In the South Asian context, environment consciousness and sustainability are still a nascent concept. Few studies (Chawla 2022, Guha & Gupta, 2020, Arora et al., 2020) are based on market readiness of Indian consumers for plant-based products. There is a substantial dilemma in the minds of Indian consumers, hindering them from shifting towards plant-based products. Resistance towards plant-based diet stems from notions like one would have to give up on their favourite food or snacks, food will be bland, plant-based diet lacks sufficient nutrition, and eating out options are restricted. Consumers opting for plant-based diet cite reasons like health benefits, ethical considerations, reduced carbon footprint to name a few (Hwang et al., 2020). Few studies on acceptance of plant-based meat suggest that people who meat eat are more likely to consumer plant based meat(Bryant et al., 2019). This study focuses on plant-based diet as opposed to plant-based meat, to understand reasons why people are trying to reduce consumption of meat products. The unnatural texture of plant-based meat has resulted in limited adoption of the same, however finding natural alternatives to meat like soy products, jackfruit, tofu, and including more seeds in the diet is seeing a rising trend (Mayo clinic 2022). Hence, understanding the influence of various factors on consumption of plant-based products among Indian consumers is essential. This study aims to investigate consumer preferences and values for plant-based products using the extended theory of planned behaviour (Ajzen, 1985). Environmental attitude, social value and its impact on health benefits, epistemic values are the key determinants of purchase of plant-based food. Health and fitness influencers, sports celebrities etc. have an influence on consumers to increase plant-based food. Top athlete Novak Djokovic switched to plant-based food debunking popular myth that plant-based diet is low on protein (Emily, 2022). The present research provides specific insights to marketers of plant-based food so that the right customer base is suitably targeted. Rather than focusing on ethical aspects of animal protein, communicating health benefits of plant based diet would find higher acceptance among the target audience.

2. Literature Review

Sustainable development goals

The Sustainable Development Goals (SDGs), which serve as the primary global framework for measuring progress toward sustainable development over the next 15 years, contain ambitious targets for food security, nutrition, health and wellbeing, climatic stability and sustainable consumption (Fanzo, 2019). Rethinking food production and consumption practices based on traditional knowledge results in high social and cultural food values, which can increase farmers' productivity, aid in sustainability, and enhance local producers' access to larger markets (Duurzaam Ondernemen, 2019). An effective approach towards sustainability is the adoption of a plant-based diet. Being a healthier option, the plant-based diet would enhance general health and well-being (Bhatia et al., 2021), thus playing an essential role in accomplishing the goals set forth by the Sustainable Development Goal 3 (Plant-based food association, 2021). The single biggest strategy to lessen one's influence on the environment, including greenhouse emissions, eutrophication, global acidification, and water use, is undoubtedly the adoption of a plant-based diet (United Nations Development Programme, 2020). However, motivating people to switch to plant-based meals is a challenge because many people have a psychological attachment to meat (Graça et al., 2015) and believe that eating meat is too socially acceptable, naturally occurring, and hedonistically satisfying to give up (Piazza et al., 2015).

Changing Consumer behaviour towards food

Nowadays, there has been a paradigm shift in how people approach and consume food. People have recently started paying more attention to what they eat for two major reasons: to maintain a healthy lifestyle and to contribute towards making the planet more sustainable (Sharma, 2022).

(ET HealthWorld, 2022) Most non-vegetarian food enthusiasts eat meat because it gives them the freedom to sample and savour a variety of delights. Furthermore, non-vegetarians frequently find plant-based or vegetarian food bland since it lacks the zingy, tangy, and lip-smacking flavour and texture of meat products. However, there has been a substantial change in consumer behaviour during the past few years. Generation X and millennials are getting more selective about the products, brands, and food they consume. Customers today consciously choose products that have no adverse effects on the environment, from choosing organic and naturally cultivated herbs and spices to food items. The growing acceptance of plant-based meat is one of the most obvious signs of this fundamental shift in consumer behaviour. (Bloomberg LP, 2021) Intelligence analysis predicted that this growth will multiply fivefold by 2030 based on the present sales and profit status of plant-based meat and dairy alternatives as well as the rising demand for sustainable products.

Most of the literature review was largely focused on American and European countries with little focus on South Asian countries, with most of the food-related literature being focused on organic food.

The present research focuses on plant based diet and proposes a conceptual model of sustainable plant-based product consumption.

3. Theoretical Framework

As postulated by (Ajzen, 1991), the Theory of Planned Behavior (TPB) is being used to understand consumers' behavioral intentions. TPB comprises three variables, i.e., attitude, subjective norm, and perceived behavioral control. It suggests that intentions result from an

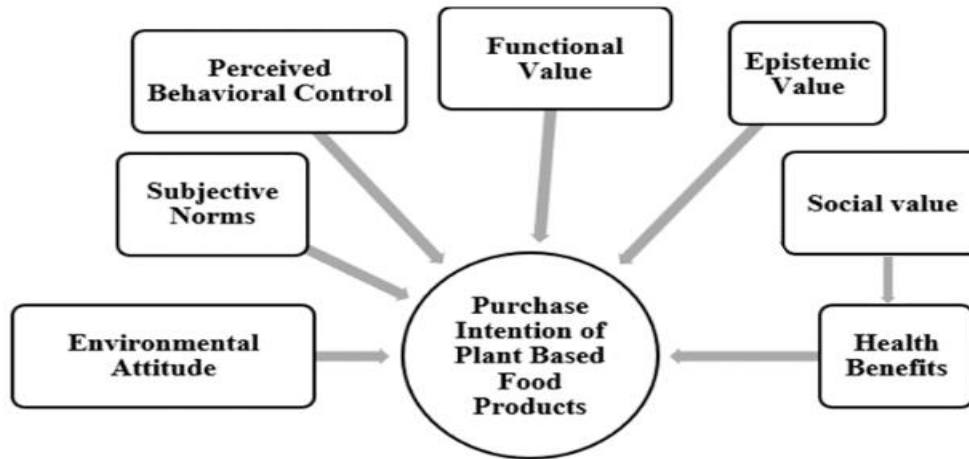
individual's attitudes and a person's perception of behavior under society's influence defines the subjective norms (Nekmahmud & Fekete-Farkas, 2020; Verma & Chandra, 2018) . Consumption values, refer to consumers' overall evaluations of the usefulness of the goods and services they purchase and use (Hanninen & Karjaluo, 2017; Sheth et al., 1991). The theory of Consumption Values has been used by researchers to characterize a variety of product or service consumption (Ramkissoon et al., 2009; Tanrikulu, 2021) and consists of five consumption values—functional value (price and quality), social value, emotional value, epistemic value, and conditional value.

An environmental attitude (EA) is a "cognitive and emotive judgment of the target of environmental preservation" (Sebastian, 2003, p.21). Subjective Norm (SN) denotes the perceived social pressure experienced by a person to perform certain actions or behaviors (Ajzen and Fishbein, 1980) . The perceived ease or difficulty of carrying out a specific behavior is known as perceived behavioral control (PBC) (Ajzen, 1991; Ajzen and Fishbein, 1980) ^[21]. Functional value (FV) is the perceived usefulness derived from an alternative's capability for the functional, utilitarian, or physical performance of a product (Sheth et al. 1991, p. 160) . Price and quality, together, make up the two aspects of functional value (Sweeney & Soutar, 2001) and are identified as the key determinants of consumer purchasing decisions (D'Souza et al., 2007; Nekmahmud, 2022). Social value (SV) relates to self-image and the perceived utility of goods or services (Sheth et al. 1991) . The epistemic value (EpV) is the perceived utility derived from an alternative's ability to pique interest, offer novelty, and satiate a thirst for knowledge (Sheth et al., 1991, p. 162) . The main drivers for adopting a plant-based diet have been identified as the health benefits of a plant-based diet, specifically the decrease in body fat and obesity rates, the increased presence of vital nutritional components, and lowered risk factors for diseases (Fehér et al., 2020) Functional value (FV) emphasises performance and functionality as well as the financial gain or utility that a good or service offers (Zainuddin et al., 2013). All modern definitions of health acknowledge that health value (HV) goes beyond the absence of disease and denotes a person's full ability for self-realization and self-fulfilment. Health is the relative state in which one is able to function properly physically, socially and mentally (Svalastog et al., 2017).

The result of these components is Purchase intention of plant based foods. An individual's attitude often influences their behaviour, even though it is mediated by purpose (Limbu et al., 2012; Leonidou et al., 2011; Ajzen and Fishbein, 1980). As a result, an individual's favourable impression triggers purchasing intent; but negative intent reduces the possibility of the act (Punyatoya, 2015).

Based on the above-mentioned literature and theoretical background, a hypothesized conceptual model of sustainable plant-based product consumption is proposed.

Figure 1 - Conceptual Model



H1: Environmental Attitude has a positive influence on Intention to Purchase Plant-Based Food

H2: Subjective norms have been positively associated with the Intention to Purchase Plant-Based Food

H3: Perceived behavioural control has a negative influence on Intention to Purchase Plant-Based Food

H4: Functional value (quality) has a positive influence on the Intention to Purchase Plant-Based Food

H5: Epistemic value has a positive influence on the Intention to Purchase Plant-Based Food

H6: Social value has a positive influence on Health value

H7: Health benefits have a positive influence on Intention to Purchase Plant-Based Food

Research Methodology

The target group belonged to the age group 21-55 years with a higher sample among the younger age group. This is because research has shown that shift towards plant-based food is higher among the younger age group. The sample size achieved was 310. In order to understand the purchase intention driving the consumption of plant-based foods, in-depth interviews were conducted among early adopters. The reasons stated were that plant-based products were environment friendly, which helped reduce the carbon footprint and helped preserve natural resources. Further, they opined that novel information regarding plant-based foods should be widely available to encourage purchase decisions. Interestingly health benefits were another major reason. Post Covid 19, awareness of the impact of the environment on people's health coupled with a preference for locally available plant-based food and organic

food were cited as main drivers. Health benefits lowered risk factors for diseases (Fehér et al., 2020) and was added as an extension to the theory of planned behavior framework. Post the in-depth interviews, questionnaire design and pilot study were conducted. The reliability of all items exceeded 0.700, indicating acceptable reliability of the seven constructs – Environmental attitude, subjective norms, perceived behavioural control, functional value, social value, epistemic value and health benefits.

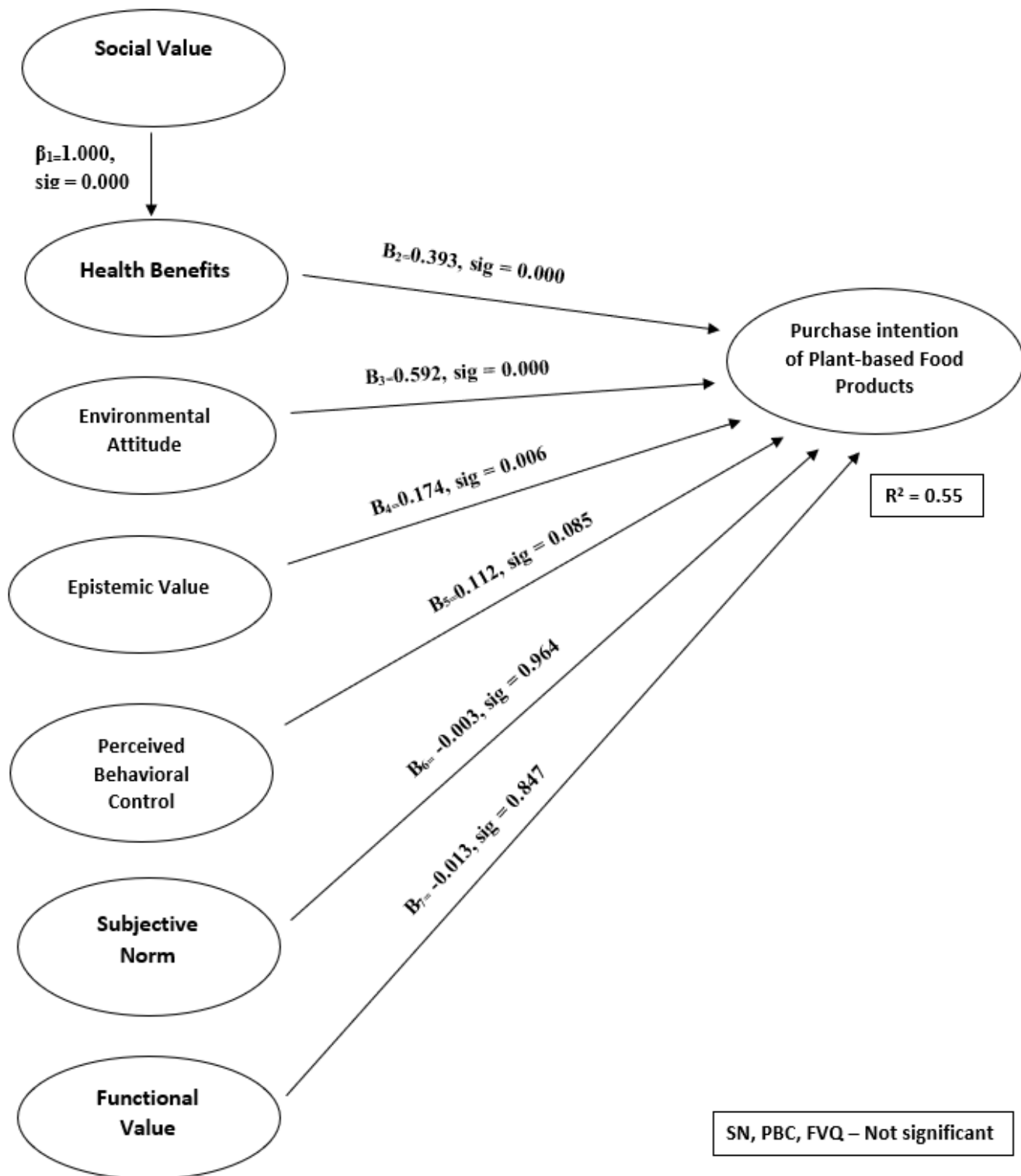
The questionnaire had three parts namely (1): socio-demographic characteristics (e.g., gender, age, education level, and current citizenship/residence/nationality); (2) questions relating to awareness and reasons for preferring plant-based foods; (3) factors influencing purchase intention. The demographic data included nominal and ordinal scales whereas the rest of the questions were 5-point Likert scales ranging from “strongly agree” to “strongly disagree” (1 = strongly agree and 5 = strongly disagree).

Convenience sampling was used for the survey. Participants were explained the concept of plant-based foods before administering the questionnaire since the awareness of such a diet is limited within certain segments of society. The participants were further asked whether they were considering or had purchased alternative food like organic food, plant-based food, locally sourced food etc. If they answered yes, they were given access to further questions. The data collection period was between February to April 2022. Due to the Omicron variant of Covid 19, a self-administered questionnaire was distributed to a group of respondents using a convenience sampling method over the twelve-week duration. A Google form was used to conduct an online survey through email and social messaging platforms. To avoid biased results, 365 responses were collected, incomplete and irrelevant responses were excluded, and 310 valid questionnaires were used for further analysis.

Data Analysis

Demographic information was summarized using univariate analysis. The sample composition was as follows- 21-25 years– 56%, 26-35 years-19%, 35+ years - 25%. Females comprised 56% of the sample and males were 44%. 42% of the sample were non-vegetarians, 32% were vegetarians, 14% were egg-eaters while 12% were respondents who wanted to reduce their consumption of non-vegetarian foods. After reading the concept of plant-based foods, 32% of the respondents had actually tried plant-based food products, while 43% had heard of it and had seen the products at malls or on e-commerce platforms, with only 25% having a lesser understanding of the concept. The awareness regarding mock meats and plant-based milk products were the highest among the respondents, as compared to plant-based eggs and milk alternatives. Interestingly, 53% of the respondents had a positive perception towards the pricing of plant-based food products, finding them worth the amount, despite being slightly higher priced.

Figure 2 – Structural Equation Modelling



Model analysis

The proposed model structure was tested using a two-stage structural equation modelling (SEM) (Moser 2015). A confirmatory factor analysis (CFA) was first performed to assess the measurement model's validity and reliability. The whole structural model was computed in the second stage to assess the general model fit and the hypothesized relationships. The maximum

likelihood algorithm with AMOS 24 was used to estimate the measurement model and structural model (Moser 2015).

The final CFA model demonstrated an acceptable overall fit, with the following indices (Hair et al., 2014)^[31]. CMIN/df=1.914; ≤ 2.0 (or 3.0 or even 5.0) considered acceptable; CFI = 0.90 CFI > 0.90 considered average, > 0.95 considered good; GFI = 0.88 GFI > 0.90 considered good; TLI = 0.89 TLI > 0.90 good, > 0.95 = very good; RMSEA = 0.075 RMSEA ≤ 0.08 considered good. Testing of hypotheses was based upon standardized regression coefficients, p-values, and the squared multiple correlation, which represents the proportion of the dependent variable's variance that can be explained by the explanatory factors (Byrne 2016).

With reference to Figure 2, the regression weights reveal the following.

1. Environment Attitude → Purchase intention of plant based food (std. regression weight = 0.592, significance 0.000)
2. Perceived Behavioural Control → Purchase intention of plant based food (std. regression weight = 0.112, significance 0.085)
3. Subjective Norm → Purchase intention of plant based food (std. regression weight = 0.003, significance (0.964)
4. Health benefits → Purchase intention of plant based food (std. regression weight = 0.393, significance 0.000)
5. Social Value → Health benefits of plant based food (std. regression weight = 0.98, significance 0.00)
6. Epistemic Value → Purchase intention of plant based food (std. regression weight = 0.174, significance 0.006)
7. Functional Value → Purchase intention of plant based food (std. regression weight = 0.013, significance 0.847)

The overall R square for the model was 55%.

Environmental attitude was the most important factor followed by health benefits and epistemic value. Social value positively influenced health benefits indicating that initially consumers tried plant-based food to fit into the trend and gain approval from peers. However, once they adopted plant-based food they realized the health benefits of better digestion, lesser hormonal issues etc. A plant-based diet is linked to a number of health advantages. They typically contain more fibre, vitamins, minerals, and antioxidants while having lower levels of saturated fat and cholesterol. According to research, a well-planned plant-based diet can lower the chance of developing chronic conditions like type 2 diabetes, heart disease, some types of cancer, and obesity. Additionally, it might aid in managing weight, enhance digestion, and advance general wellbeing.

Key Findings

Brands must focus on few key messages in order to persuade consumers to reduce their meat consumption and opt for plant based food. Showing animal cruelty and the adverse effect on animals has little to no impact on regular meat eaters. But focusing on the impact on the environment, providing information on the sourcing of the food, promoting plant based products through the right influencers and identifying health benefits would have a higher impact. Large tracts of land are needed for grazing animals and cultivating feed crops in animal agriculture. Deforestation and biodiversity loss are impacted by the clearing of land for cattle agriculture. Because plants need less room to generate the same quantity of calories and nutrients, they are a more efficient use of land. Plant-based diets aid in the preservation of forests and the protection of ecosystems by lowering the demand for animal products. The

communication strategy must consist of the process and novel information regarding the products and locations it is available at. Health benefits are something consumers are constantly seeking in the food products they consume; hence brands must highlight this. While meat substitutes have a poor offtake due to their artificial texture and flavoring, the movement towards plant-based food is growing. The consumption of almond milk, jackfruit, avocado, and kombucha are increasing rapidly. Plant based food offers wider variety in terms of fruits, legumes, seeds, new age super grains like quinoa and amaranth, meat substitute like beetroot burgers, jackfruit biryani, soya chunks etc. As social value increases so does health value. Thus, highlighting the influential role that celebrities and trends have on people, leads to higher health value awareness for plant-based foods. While celebrities have contributed to popularising and promoting the advantages of plant-based eating, realizing the health benefits of plant based food results in wider purchase intention.

Brands must focus on making their products available at restaurants and cafes and can probably launch marketing campaigns highlighting the collaboration of plant-based food brands with their regular cafes to increase brand awareness.

Implications

The present research is useful for marketers to understand the preference level for plant-based consumers amongst Indian consumers. India's unique culinary traditions, religious beliefs, and cultural practises are strongly ingrained in plant-based eating, giving it a significant cultural significance. Many of India's colourful and diverse festivals are related to vegetarian or plant-based cuisine. For instance, many individuals observe fasts and only eat vegetarian food during Navratri, a nine-night Hindu celebration. Global exposure to Netflix, amazon Prime, travel abroad and influence of western celebrities has resulted in the younger generation adopting a modern lifestyle. Meat consumption and alcohol, which were not consumed openly, are now part of mainstream consumption in restaurants and public places. In this dynamic context, it is interesting to note how a small but growing base of consumers are searching for better and more authentic cuisines for taste, experimentation, and better health. Covid made people realise the importance of food and a healthy lifestyle. Staying at home with parents and grandparents initiated young Indians into traditional cooking methods, seeking home remedies for cough and cold and creating fusion food by blending modern and traditional food. Avocado, Quinoa, Aamranth, Soya Bean nuggets etc. along with jackfruit, beetroot etc. helped Indians expand their food choices. Thus, consumers are looking at better alternatives to meat rather than meat substitutes, hence positioning brands as meat substitutes will not work. Rather upon identifying the key factors that drive the intention to purchase, marketers and brands must focus on highlighting the impact of plant-based foods on the environment to promote the consumption of plant-based food. The communication strategy must entail information on the production process and the locations they are available at. Social approval and fitting into trends lead to a high health value that in turn leads to a strong behavioral intention to consume plant-based foods. Health benefits are something consumers are constantly seeking in the food products they consume; hence brands must highlight this. It is essential that brands focus on making their products available at restaurants and cafes and launch marketing campaigns promoting the collaboration of plant-based food brands with their regular cafes to increase brand awareness. Through the present research, key propositions and different customer segments to be targeted will be identified to increase the adoption and purchase of plant-based products. Plant-based diets can improve health outcomes, reduce the environmental impact of food production, and promote food security and nutrition. Thus, the consumption of plant-based foods can contribute significantly to achieving SDG 3.

The future scope of the study lies in conducting a consumption value gap analysis for plant-based food products. Further, cross-country and gender-based studies to understand factors

affecting purchase intentions with respect to plant-based food products. Lastly, a comparison of metro vs non-metro cities to understand factors affecting consumption and purchase intention of plant-based food products can be another scope of research.

Limitations of the Study

The present study has a few limitations which must be mentioned. India is a diverse nation with a wide range of regional preferences, cultural practices, and eating habits. Results from one location might not accurately represent the attitudes and actions of people in other places. Cultural norms and the social desirability bias may have an impact on respondents' responses. Respondents may feel under pressure to declare adherence to plant-based diets in a culture where vegetarianism is prevalent, even if their real consumption varies. India has many regional and cultural variations. Across cultures and geographical areas, there can be substantial differences in attitudes, beliefs, and behaviours regarding plant-based foods. This study doesn't take these variations into account and hence future studies focusing on regional differences would be an area of interest. This study was concentrated on urban Indian customers. A follow up study can focus on differences between urban and rural consumers.

Conclusions

This study emphasizes why reducing meat consumption and embracing plant based food is beneficial at many levels. Firstly Plant-based meals offer a diversity of flavours, textures, and cooking methods thanks to their large selection of fruits, vegetables, grains, legumes, nuts, and seeds. Adopting a plant-based diet opens the door to learning about new culinary techniques, customs, and traditions. Individuals are empowered to make thoughtful decisions in line with their values when they eat a plant-based diet. It promotes a healthier lifestyle, mindful eating, and a feeling of personal well-being. Compared to diets that mainly rely on animal products, plant-based diets have a substantially smaller negative impact on the environment. Agriculture that raises livestock has an adverse impact on natural resources, water pollution, greenhouse gas emissions, and deforestation. By switching to plant-based diets, consumers stand to lessen their impact on the environment, save water and land resources, and fight climate change. Brands need to promote plant based meals differently. Focusing on the benefits of a plant-based diet for health, including how it can help lose weight, manage overall health, and minimise risk of developing chronic diseases is an important hook. Describe the nutritional worth of plant-based foods, including if they include the necessary vitamins, minerals, and antioxidants. Traditional Indian cuisine can use plant-based meals. Highlight well-known plant-based cuisine, convert classic dishes to a plant-based diet, and provide creative plant-based substitutions for popular Indian products and dishes. This fosters acceptance and adoption among Indian customers and fills the knowledge gap. For example, Avocado which is not native to India was initially not popular due to its high price. Soon people realized the health benefits of Avocado and discovered different Indian cuisines like Avocado milkshakes, avocado sev- puri (fried battered chips topped with avocado) etc. Avocado today is ubiquitous found at local fruit shops and sold by vendors to common man everyone aspiring to have a piece of this super food to boost their mornings. By adopting these marketing strategies, brands can successfully encourage Indians to eat more plant-based meals and encourage a positive transition towards more ethical and sustainable eating habits.

References

Ajzen, I., 1985. *From intentions to actions: A theory of planned behavior* (pp. 11-39). Springer Berlin Heidelberg.

Ajzen, I., 1991. The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), pp.179-211.

Ajzen, I. and Fishbein, M., 2005. The influence of attitudes on behavior.

Bhatia, V., Gopi, G. and Behera, P., 2021. Plant-based diet: A solution to the sustainability of life and environment. *Indian Journal of Community and Family Medicine*, 7(1), p.19.

Bloomberg L.P. (2021). Plant-based Foods Market to Hit \$162 Billion in Next Decade, Projects Bloomberg Intelligence | Press | Bloomberg LP. [online] Available at: <https://www.bloomberg.com/company/press/plant-based-foods-market-to-hit-162-billion-in-next-decade-projects-bloomberg-intelligence/> [Accessed 15 Jun. 2023].

Bryant, C., Szejda, K., Parekh, N., Deshpande, V., & Tse, B. (2019). A survey of consumer perceptions of plant-based and clean meat in the USA, India, and China. *Frontiers in Sustainable Food Systems*, 11.

Buerke, A., Straatmann, T., Lin-Hi, N. and Müller, K., 2017. Consumer awareness and sustainability-focused value orientation as motivating factors of responsible consumer behavior. *Review of Managerial Science*, 11, pp.959-991.

Byrne, B.M., 2016. *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. Routledge

Chawla, M. (2022). *Plant-Based Dairy - An Emerging Segment in Sustainability - FFOODS Spectrum - Unleashing the Power of Food Science & Technology*. [online] FFOODS Spectrum - Unleashing the Power of Food Science & Technology. Available at: <https://nuffoodsspectrum.in/2022/09/01/plant-based-dairy-an-emerging-segment-in-sustainability.html> [Accessed 6 August. 2022].

Diamantopoulos, A., Schlegelmilch, B.B., Sinkovics, R.R. and Bohlen, G.M., 2003. Can socio-demographics still play a role in profiling green consumers? A review of the evidence and an empirical investigation. *Journal of Business research*, 56(6), pp.465-480.

Duurzaam Ondernemen. 2019. *Food companies are aligning with SDGs, but need to do more, study finds - Duurzaam Ondernemen*. [online] Duurzaam Ondernemen. Available at: <https://www.duurzaam-ondernemen.nl/food-companies-are-aligning-with-sdgs-but-need-to-do-more-study-finds/> [Accessed 6 August. 2022].

ET HealthWorld (2022). Above and Beyond Meat: The changing consumer behaviour and acceptance of plant-based meat. [online] ETHealthworld.com. Available at: <https://health.economictimes.indiatimes.com/news/industry/above-and-beyond-meat-the-changing-consumer-behaviour-and-acceptance-of-plant-based-meat/92834290> [Accessed 15 Jun. 2023].

F. Hair Jr, J., Sarstedt, M., Hopkins, L. and G. Kuppelwieser, V., 2014. Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. *European business review*, 26(2), pp.106-121.

Fanzo, J., 2019. Healthy and sustainable diets and food systems: the key to achieving Sustainable Development Goal 2?. *Food ethics*, 4, pp.159-174.

Fehér, A., Gazdecki, M., Véha, M., Szakály, M. and Szakály, Z., 2020. A Comprehensive Review of the Benefits of and the Barriers to the Switch to a Plant-Based Diet. *Sustainability*, 12(10).

Hänninen, N. and Karjaluoto, H., 2017. Environmental values and customer-perceived value in industrial supplier relationships. *Journal of Cleaner Production*, 156, pp.604-613.

Hwang, J., You, J., Moon, J., & Jeong, J. (2020). Factors affecting consumers' alternative meats buying intentions: Plant-based meat alternative and cultured meat. *Sustainability*, 12(14), 5662.

Moser, A.K., 2015. Thinking green, buying green? Drivers of pro-environmental purchasing behavior. *Journal of consumer marketing*.

Nekmahmud, M. and Fekete-Farkas, M., 2020. Why not green marketing? Determinates of consumers' intention to green purchase decision in a new developing nation. *Sustainability*, 12(19), p.7880.

Nekmahmud, M., 2022. Food consumption behavior, food supply chain disruption, and food security crisis during the COVID-19: The mediating effect of food price and food stress. *Journal of Foodservice Business Research*, pp.1-27.

NIQ. 2021. *Growing demand for plant-based proteins*. [online] Available at: <https://nielseniq.com/global/en/insights/analysis/2021/examining-shopper-trends-in-plant-based-proteins-accelerating-growth-across-mainstream-channels/> [Accessed 6 August. 2022].

PBFA (2021). *PBFA urges UN to prioritize plant-based diets* - Plant Based Foods Association. [online] Plant Based Foods Association. Available at: <https://www.plantbasedfoods.org/pbfa-urges-un-to-prioritize-plant-based-diets/> [Accessed 6 August. 2022].

Pinkse, J. and Bohnsack, R., 2021. Sustainable product innovation and changing consumer behavior: Sustainability affordances as triggers of adoption and usage. *Business Strategy and the Environment*, 30(7), pp.3120-3130.

Sheth, J.N., Newman, B.I. and Gross, B.L., 1991. Why we buy what we buy: A theory of consumption values. *Journal of business research*, 22(2), pp.159-170.

SPIN. 2021. '2020 was a breakout year for plant-based foods...' *GFI, PBFA, SPINS, unveil 2020 retail sales data*. [online] [foodnavigator-usa.com](https://www.foodnavigator-usa.com). Available at: <https://www.foodnavigator-usa.com/Article/2021/04/06/2020-was-a-breakout-year-for-plant-based-foods-GFI-PBFA-SPINS-unveil-2020-retail-sales-data> [Accessed 6 August. 2022].

Sweeney, Jillian C., and Geoffrey N. Soutar. "Consumer perceived value: The development of a multiple item scale." *Journal of retailing* 77, no. 2 (2001): 203-220.

Svalastog, A.L., Donev, D., Kristoffersen, N.J. and Gajović, S., 2017. Concepts and definitions of health and health-related values in the knowledge landscapes of the digital society. *Croatian medical journal*, 58(6), p.431.

Tanrikulu, C., 2021. Theory of consumption values in consumer behaviour research: A review and future research agenda. *International Journal of Consumer Studies*, 45(6), pp.1176-1197.

Turner-McGrievy, G. M., Davidson, C. R., Wingard, E. E., Wilcox, S., & Frongillo, E. A. (2015). Comparative effectiveness of plant-based diets for weight loss: a randomized controlled trial of five different diets. *Nutrition*, 31(2), 350-358.

UNDP. (2020). *Changing Your Diet Can Help Meet Sustainable Development Goals | United Nations Development Programme*. [online] Available at: <https://www.undp.org/saudi-arabia/blog/changing-your-diet-can-help-meet-sustainable-development-goals> [Accessed 6 August. 2022].

Verma, V.K. and Chandra, B., 2018. An application of theory of planned behavior to predict young Indian consumers' green hotel visit intention. *Journal of cleaner production*, 172, pp.1152-1162.

Zainuddin, N., Russell-Bennett, R. and Previte, J., 2013. The value of health and wellbeing: an empirical model of value creation in social marketing. *European Journal of Marketing*, 47(9), pp.1504-1524.

Websites

<https://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/in-depth/meatless-meals/art-20048193#:~:text=A%20plant%2Dbased%20diet%20focuses,also%20tend%20to%20weigh%20less.>