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Factors Influencing the Purchase Intention towards Sustainable Food Consumption

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Abstract

This study aims to observe the effect of health consciousness, economic and environmental factors on consumers' purchase intention toward sustainable food consumption. The study also explores the mediating role of consumer attitude between these factors and purchase intention. Therefore, an online questionnaire survey was conducted amongst random consumers to test these relationships. The data was collected by distributing an online questionnaire through convenience sampling technique and, a sample of 220 respondents was chosen. The collected data was analyzed using SPSS and PROCESS Hayes. These two statistical tools aided in carrying out the reliability analysis, correlation and regression analysis on the sample data. Moreover, PROCESS Macro Model 4 (mediation) was used to test the hypotheses. The results supported the hypotheses, indicating that Consumer Attitude positively and significantly mediates the relationship between health consciousness, economic factors, environmental factors, and purchase intention. The current study contributes to the existing literature regarding factors influencing sustainable food consumption. It also has theoretical implication and practical implications for marketers and manufacturers operating in the food industry. Insightful conclusions have been drawn that can be implemented by marketers to significantly increase consumers' intention to purchase sustainable food by creating awareness regarding items that appeal to consumers who fit the criteria; consumers who are health conscious, consumers who are price conscious and most important, people who are concerned about environmental factors.

Keywords: Sustainable food consumption, purchase intention, consumer attitude, health consciousness, economic factors, environmental factors

1. Introduction

Sustainability refers to the ability to maintain an ecological balance to avoid the depletion of the planet's natural resources. It is a concept that is gaining growing popularity in the current day and age, and one of the most important reasons why that is happening is because of the global population's quick and easy access to information. According to Ifeanyichukwu & Nwaizugbo (2020), in light of an increasing global population, the topic of sustainability is significant from an environmental and economic standpoint since it encompasses issues relating to profit, the environment, and people. Now that awareness is just a tap away for billions of people, they are learning more and more about the correlation of, primarily, anything to the environment. Every decision made by any individual ultimately leaves an impact on the environment. The factor that makes it more crucial in the present day is one's consciousness towards their actions as a result of this awareness.

Similarly, consumers have become more mindful of their purchases (Atiq et al., 2022; Mukhtar et al., 2021; Rukh et al., 2021; Yasir et al., 2021) and how those purchase decisions will reflect back on the environment, especially regarding food. Because sustainable food intake is a notion that is broader than just opting to purchase organic food products. Sustainable food consumption entails a range of elements, of which the environment is one example (Barr & Gilg, 2006). When it comes to sustainability, several other elements also become a part of the conversation that directly or indirectly affect the environment. As Strien & Koender (2012) state, consumers are faced with tough choices as they transition towards a healthier and sustainable lifestyle due to conflicting interests.

From a consumer's perspective, sustainable food consumption is about being conscious of the products one purchases, the effect of their packaging on the environment, the possible disposal options once consumed, and more. Apart from the consumers' motivation to adopt sustainable food consumption patterns gained by environmental factors, they have started becoming more mindful about what is being consumed by them and how it is going to affect their physical health. This aspect specifically refers to sustaining one's own health and physical well-being through food consumption. Consumers have become quite knowledgeable regarding the procurement and contents of a particular food product and how it influences their body. Customers who purchase organic products are more conscious of how their diet affects their health, and as a result, they value healthy, natural goods and are more inclined to make healthier food choices (Schifferstein & Ophuis, 1998; Senturk & Ali, 2021; Ali, 2018; Audi et al., 2021; Ali, 2022).

While these aspects greatly determine one's approach toward sustainable food intake, a consumer's purchase intention and attitude are also significantly dependent upon economic factors. Being aware of sustainable food products that positively affect the environment and one's well-being is useless if those products are unaffordable or if their price costs are greater than their perceived value. The substantiating awareness of sustainable food consumption sheds light onto a key concept of the *consumer utility theory* that states that consumers tend to maximize the utility of a product they purchase (sustainable food products, in this case), so its value equals the price they paid. Under the same context, this research will focus on sustainable food consumption with regard to changing consumer attitudes as we progress as responsible, socially aware, and sustainable societies. The changes in consumer attitude are fueled by environmental factors, health consciousness and/or economic factors (Ifeanyichukwu & Nwaizugbo, 2020). Eventually, this new attitude

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or consumer behavior is ultimately reflected in the purchase intentions of buyers. This study aims to determine the influence of the factors leading to a shift in consumer attitudes and, as a result, purchase intention toward sustainable food consumption.

Regarding sustainable food consumption, individual or health-related (egoistic) and environmental or animal welfare (altruistic) reasons are the two major types that are the subject of the current study (Ali, 2015; Gomiero et al., 2021; Vittersø et al., 2020; Audi et al., 2022). However, the latest studies have also emphasized the importance of social and ethical motives in sustainable food consumption (Thøgersen et al., 2020; Zhu et al., 2021; Ali, 2022). Despite these efforts, we still do not fully grasp the role of the motivations that drive consumer attitudes and buying intentions toward sustainable food consumption (Ali & Reehman, 2015; Arshad & Ali., 2016; Ali & Bibi, 2017; Wang et al., 2022; Ali, 2022).

By defining the roles of health consciousness, environmental considerations, and economic factors in predicting consumer attitude and purchase intention, this study helps to fully grasp the major elements that influence the purchase of sustainable food products. We pay particular attention to it to better understand the role of health consciousness in determining consumer attitudes and purchasing intentions towards sustainable food consumption. We also make an effort to define how economic and environmental factors influence customer attitudes and buying intentions. As a result, we concurrently model attitudes toward intentions, environmental and economic concerns, as well as health consciousness.

Considering the pace at which food consumption trends are shifting to a more sustainable consumer approach, research needs to continue in this respect to analyze where these evolving consumer lifestyle choices will lead in the future and to scale their impact on the food production industry.

Figure 1 below shows all the proposed relationships of variables studied during this research.

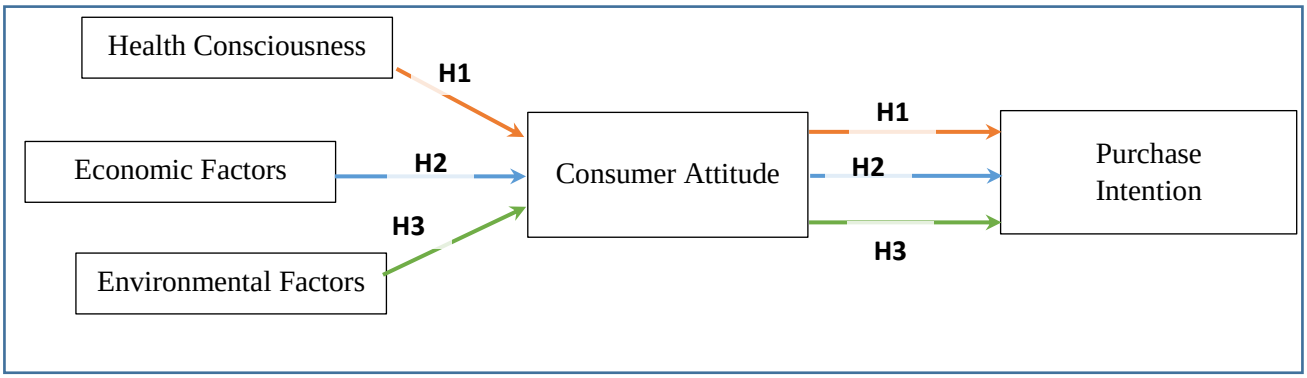

Figure 1: Theoretical Framework

2. Literature Review and Hypothesis Development

2.1. Consumer Attitude as a Mediator between Health Consciousness and Purchase Intention

In order to better understand the connections between eating sustainably produced food, being health conscious, and the mediating effect of attitude towards sustainable food, Cho & Lee (2019) performed a study. The study focused on Korean consumers, and the findings showed a link between sustainable food consumption and health consciousness. Additionally, in the association between health consciousness and intake of sustainable foods, attitude towards sustainable food had a mediation function. This implies that people who are conscious of their well-being possess a greater likelihood to have a favorable attitude towards sustainable food and, consequently, are more likely to engage in sustainable food consumption behavior. This study by Cho & Lee (2019) offers proof that consumer attitudes toward sustainable food may be favorably influenced by health consciousness, which can also affect consumer behavior toward sustainable food consumption.

The research by Holzner (2017) supports the idea that consumer attitudes toward the consumption of sustainably produced food and health consciousness are positively correlated. According to the findings, those who are more concerned about their health are more inclined to favour ecologically friendly food options. This result is in line with earlier studies that emphasize the significance of individual values and beliefs in influencing consumer behaviour toward sustainable consumption. The study also emphasizes how outside influences, such as the accessibility and availability of sustainable food alternatives influence consumer attitudes and behaviour. This means that initiatives to encourage sustainable food consumption should also take into account the larger cultural and institutional environment in which consumers make their food decisions, in addition to concentrating on individual-level variables.

Hypothesis 1

H1: *Health consciousness will have a positive and significant effect on purchase intention towards sustainable food consumption when mediated by consumer attitude.*

2.2. Consumer Attitude as a Mediator between Economic Factors and Purchase Intention

A study by Hallström & Persson's (2017) revealed that consumption of sustainable food was positively connected with income, with households with greater disposable income being more inclined to purchase sustainable food products. The study also found that costs had a bad impact on people's intake of sustainable foods, suggesting that for certain customers, the cost of purchasing sustainable foods can be a deterrent. The study findings show an association between income and consumption of sustainable foods, lend credence to the idea that people with greater socioeconomic standing may be more likely to spend money on ecologically friendly goods. This is probably because people with greater incomes have more money available to spend on upscale goods, particularly those that bear labels for environmental sustainability. The study's findings also imply that encouraging sustainable food consumption habits requires that the cost of sustainable food items be taken into consideration. In conclusion, the findings of the research paper emphasize the significance of income and cost in influencing consumer attitudes towards the intent to purchase of sustainable foods.

According to the research by Reisch et al. (2013), people with more incomes are more inclined to purchase organic and ecologically friendly products because they can afford them, are better educated, are more socially responsible, and have access to sustainable food alternatives. The survey found that those with greater disposable incomes are more probable than people with lower incomes to buy organic and environmentally friendly items due to a number of reasons. First, compared to conventional items, organic and environmentally friendly goods are sometimes more expensive. Because they have more discretionary income, people with higher incomes may afford to buy these things at a premium price. Second, people with greater incomes typically have better levels of education, which may have an impact on how they feel about consuming sustainable foods. People who have higher education are frequently more aware of the possible environmental and health benefits of organic and environmentally friendly products and are thus more willing to buy them. Additionally, higher income levels frequently translate into a stronger feeling of civic duty and environmental awareness. Higher income earners are more inclined to give ethical and environmental factors greater weight when making judgements about what to buy. Furthermore, those with greater incomes are more likely to reside in cities, where access to sustainable food sources is frequently easier to come by.

Hypothesis 2

H2: *Economic factors will have a positive and significant effect on purchase intention towards sustainable food consumption when mediated by consumer attitude.*

2.3. Consumer Attitude as a Mediator between Environmental Factors and Purchase Intention

In another study, Verain et al. (2015) investigate the mediating function of consumer attitude in sustainable food consumption. The authors contend that consumer product choice, which in turn affects consumption of sustainable foods, is greatly influenced by attitudes towards sustainability. The study discovered that attitudes towards sustainability are positively correlated with consumption of sustainable foods and product preferences, and that product preferences act as a mediator between attitudes and sustainable food preferences. This paper lends credence to the idea that attitudes of consumers towards sustainability mediate the link between environmental conditions and intentions to buy sustainably produced food.

The Yulianti et al. (2017) paper investigates the factors that influence young Indonesian consumers' intentions to make green purchases. With purchase intention serving as the dependent variable, the study examines the relationships between a number of variables, such as environmental concern, product knowledge, and perceived behavioral control. According to the study, environmental awareness, product familiarity, and perceived behavioral control all significantly increase the likelihood that consumers would make green purchases. Because it sheds light on customers' intents to engage in sustainable consumption behavior, the paper justifies the inclusion of purchase intention as a dependent variable. The study's emphasis on Indonesia's youth underscores the significance of comprehending the variables influencing sustainable purchasing behavior in developing economies.

Hypothesis 3

H3: *Environmental factors will have a positive and significant effect on purchase intention towards sustainable food consumption when mediated by consumer attitude.*

3. Methods

3.1. Procedures and Participants

Data for this study was gathered from consumers in the city of Lahore. This research was intended for those individuals who have at least completed 12 years of formal education to ensure legitimate responses from reliable candidates who understand the concept of sustainability. Therefore, the population comprises of students, graduates, working professionals and so on. The research followed a non-experimental, and quantitative design. Since it is a correlational research, the study setting was non-contrived with research being conducted in natural environment to ensure honest and accurate responses. This research was cross-sectional as the data collected and used was sourced from multiple individuals at one point in time. Using non-probability convenience sampling, our sample size comprised of 220 respondents. The unit of analysis used is the individual. Separate responses were gathered by each respondent as one participant represents a single consumer in the market.

Research questionnaire were made available online via a link accessible to the respondents using one of the latest questionnaire tool; Google Forms. This method of data collection ensured least interference by the researcher in this

process. The entities of the respondents remained hidden to maintain confidentiality and to minimize the risk of biased responses. The majority of the participants were female (87.3%), and only a small proportion identified as male (12.3%), with one participant (0.5%) preferred not to say. Most of the respondents were between the ages of 18-23 years old (81.8%), with a smaller proportion in the 24-29 years old range (13.2%) and an even smaller number in the 30-39 years old (3.2%) and 40-49 years old (0.9%) ranges. Only 0.9% of the participants were 50 years old or above. Regarding the participants' education level, most had completed 13-16 years of education (69.5%), while only 10.9% had completed 12 years of education. A smaller proportion had completed 17-18 years of education (14.1%) or more than 18 years of education (5.5%). In terms of marital status, the majority of participants were single (92.7%), while only 6.8% were married, and 0.5% were widowed. The employment status of the participants was predominantly students (82.7%), while 14.5% were employed/self-employed, and only 2.7% were homemakers. In terms of monthly household income, most participants reported a monthly income between Rs.100,000 to Rs.250,000 (44.1%), with 25% reporting a monthly income lower than Rs.100,000, and 30.9% reporting a monthly income of greater than Rs.250,000.

3.2. Measures

3.2.1. Health consciousness

Health Consciousness was measured using a 6-item scale that was developed by Michaelidou & M. Hassan, (2008). A sample item is, "I'm very self-conscious about my health." Respondents rated their response on 1-5 Likert-type scale ranging from strongly disagree to strongly agree.

3.2.2. Economic factors

Economic factors were determined using a 4-item scale designed by Ifeanyichukwu & Nwaizugbo, (2020). A sample item is, "My income determines what I eat." Using a Likert-type scale ranging from (1) strongly disagree to (5) strongly agree, helped measure this construct meticulously.

3.2.3. Environmental factors

Environmental factors were quantified by using a 5-item scale prepared by Ifeanyichukwu & Nwaizugbo, (2020). A sample item is "I buy and eat foods that the package can be recycled". This set measured using a 1-5 Likert-type scale where (1) strongly disagree and (5) strongly agree.

3.2.4. Consumer attitude

Consumer Attitude were determined using a 4-item scale crafted by Ifeanyichukwu & Nwaizugbo, (2020). A sample item is "My past experiences influence my consumption behaviour". Respondents weighed their response on 1-5 Likert-type scale, ranging from strongly disagree (1) to strongly agree (5).

3.2.5. Purchase intention

Purchase intention were determined using a 3-item scale developed by Michaelidou & Hassan, (2008). A sample item from this set is, "I want to purchase organic food produce within the next fortnight." A 5-point Likert-type scale with options of responses varying between (1) strongly disagree to (5) strongly agree was used.

4. Results

4.1. Data Analysis Approach

The empirical data were statistically analyzed using a two-step procedure as performed by researchers (Afroze et al., 2021; Ashfaq & Abid, 2022). First, descriptive analysis, correlational analysis, reliability, and validity of the measure were examined by using SPSS. Second, our proposed mediation model (hypotheses) was tested using Hayes's techniques. PROCESS Macros is the best and recommended technique to test the indirect and conditional effect.

4.2. Measurement Validation

In this study, Cronbach's alpha was used to assess the reliability and internal consistency among the items of each construct, including Health Consciousness, Economic Factors, Environmental Factors, Consumer Attitude, and Purchase Intention (Akbar et al., 2021). Cronbach (1951) suggests that a scale's items should have a value that is either equal to or, greater than 0.7 in order to ensure reliability and internal consistency of the constructs. Furthermore, Kline (1998) advocates that an alpha value which is either equal to 0.90 or greater, can be classified as "excellent," an alpha value close to 0.80 is "very good," and an alpha value approximately 0.70 is "adequate."

Table 1: Reliability of Scales

Scales	No. of items	Cronbach's α value	Level of Reliability
1. Health Consciousness	6	0.88	Very Good
2. Economic Factors	4	0.76	Adequate
3. Environmental Factors	5	0.71	Adequate
4. Consumer Attitude	4	0.72	Adequate
5. Purchase Intention	3	0.88	Very Good

Table 1 presents reliability of the five scales in this study. First scale, Health Consciousness, has six items and an alpha value of 0.88, which depicts a "very good" reliability. The second scale, Economic Factors, has four items and a value of 0.76 as alpha, meaning an "adequate" reliability level. Moreover, Environmental Factors, has five items with an alpha value of 0.71, which also means "adequate" reliability. Moving on to fourth scale, Consumer Attitude, has four items with

alpha value of 0.72, indicating "adequate" reliability level. Finally, the fifth scale, Purchase Intention, has three items and an alpha value of 0.88, indicating a "very good" reliability among items.

Overall, the Cronbach's alpha values for all five scales fall within the acceptable range, representing a satisfactory level of reliability. The Health Consciousness and Purchase Intention scales have comparatively high reliability coefficients, indicating that they are good measures of the constructs they represent. Whereas, the reliability coefficients for the Economic Factors, Environmental Factors, and Consumer Attitude scales are somewhat lower but still acceptable and satisfactory. Nevertheless, the reliability coefficients for all scales are within the acceptable range and, indicate that the scales are reliable measures of the constructs they represent.

4.3. Correlation Matrix

Table 2 shows the correlation matrix of variables studied in this research, which gives an understanding of the relationships between them. The table displays the Pearson correlation coefficient (r) among the five variables below. A perfect positive correlation is shown by 1, whereas -1 is a perfect negative correlation, and 0 means no correlation (Pearson, 1895).

Table 2: Correlation Matrix of Variables

Variables	1	2	3	4	5
1. Health Consciousness	1				
2. Economic Factors	0.326**	1			
3. Environmental Factors	0.475**	0.250**	1		
4. Consumer Attitude	0.395**	0.383**	0.323**	1	
5. Purchase Intention	0.302**	0.118	0.346**	0.240**	1

*n = 220 **. Correlation is significant at the 0.01 level (2-tailed).*

Table 2 above shows Health Consciousness has a positive and significant correlation with Economic Factors ($r = 0.326$, $p < 0.01$) and Environmental Factors ($r = 0.475$, $p < 0.01$), indicating that health-conscious individuals have more chances to consider Economic and Environmental factors as well while making purchasing decisions. Moreover, Consumer Attitude and Health Consciousness also have a positive and significant correlation ($r = 0.395$, $p < 0.01$), Economic Factors ($r = 0.383$, $p < 0.01$), and Environmental Factors ($r = 0.323$, $p < 0.01$), which suggests that individuals with a positive attitude towards consumption are more likely to be health-conscious and consider economic and environmental factors in their purchasing decisions.

Moreover, Purchase Intention shows positive and significant correlation with Environmental Factors ($r = 0.346$, $p < 0.01$), indicating environmentally conscious individuals have higher intention to purchase environmentally friendly products. Finally, Economic Factors and Environmental Factors ($r = 0.250$, $p < 0.01$) also have positive significant results, indicating that individuals who consider economic factors in their purchasing decisions are also likely to consider environmental factors.

4.4. Regression Analysis and Hypotheses Testing

The regression analysis of our research model was done using SPSS Process Macro (model 4, Preacher and Hayes, 2008). We analysed those results in line with our proposed hypotheses. The outcomes of our data are shown in Table 3, Table 4, and Table 5 below. To enhance the robustness of the findings, a 2000 bootstrap resampling procedure was also performed. The confidence level that was used was set at 90%. This analysis aimed to investigate the extent to which each independent variable, namely health consciousness, economic factors, and environmental factors have an impact on the dependent variable, purchase intention towards sustainable food consumption with the mediating role of consumer attitude.

Model 1 Summary

This model shows consumer attitude as a mediator and health consciousness as an independent variable and the outcomes are presented in Table 3. The direct effect model reveals health consciousness has positive significant effect on purchase intention ($\beta = 0.282$, $p = 0.001$). Moreover, the direct effect of consumer attitude and purchase intention is also significant and positive ($\beta = 0.209$, $p = 0.042$). The total effect model further supports the positive and significant link amongst health consciousness and purchase intention ($\beta = 0.346$, $p = 0.000$). Additionally, in the indirect effect model, a 2000 bootstrap resampling was performed to test the significance of health consciousness on purchase intention through the mediation of consumer attitude. Hence, Sobel test result reveals that indirect effect is significant ($z = 1.923$, $p = 0.055$), and also, the bootstrap analysis yields a similar result (LLCI = 0.013, ULCI = 0.138). These findings suggest that consumer attitude mediates relation among health consciousness and purchase intention towards sustainable consumption of food.

Table 3
Results of Simple Mediation Model Regressing Consumer Attitude as a Mediator and Health Consciousness as an Independent Variable

Direct Effect Model						
Predictor	Outcome=M (Consumer Attitude)					
	β	SE	t	p	LLCI	ULCI
Constant	2.699	0.180	14.981	0.000	2.401	2.997
Health Consciousness	0.308	0.049	6.348	0.000	0.228	0.389
Direct Effect Model						
Predictor	Outcome=Y (Purchase Intention)					
	β	SE	t	p	LLCI	ULCI
Constant	1.391	0.387	3.590	0.000	0.751	2.031
X (Health Consciousness)	0.282	0.080	3.526	0.001	0.150	0.414
M (Consumer Attitude)	0.209	0.102	2.042	0.042	0.040	0.378
Total Effect Model						
Predictor	Outcome= Y (Purchase Intention)					
	β	SE	t	p	LLCI	ULCI
Constant	1.955	0.274	7.135	0.000	1.502	2.407
X (Health Consciousness)	0.346	0.074	4.683	0.000	0.224	0.468
Indirect Effect and Significance Using the Normal Distribution						
	Value	SE	LLCI	ULCI	Z	p
Sobel	0.064	0.034	0.013	0.138	1.923	0.055
Bootstrap Results for Indirect Effect of X on Y						
			M	SE	LLCI	ULCI
Effect			0.064	0.037	0.013	0.138

Note: n = 220; β = Unstandardized Regression Coefficient; SE = Standard Error; Bootstrap Sample Size = 2000; LL = Lower Limit; CI = Confidence Interval; UL = Upper Limit

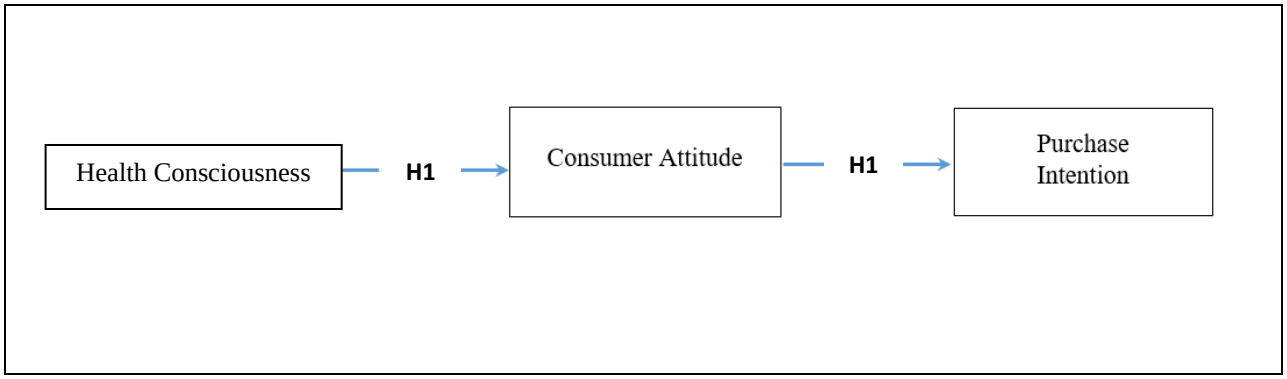

Figure 2. Mediation Model 1 for Hypotheses 1

Hypothesis 1

The results of Table 3 show that health consciousness significantly affects purchase intention (β = 0.282, p = 0.001) when consumer attitude is included as a mediator. Additionally, the total effect model also shows a significant positive link between the independent and dependent variable towards sustainable food consumption (β = 0.346, p = 0.000), indicating that consumer attitude mediates this relationship. These findings suggest that the effect of health consciousness on purchase intention towards sustainable consumption is mediated by consumer attitude hence supporting hypothesis 1.

Model 2 summary

Table 4 presents outcome of consumer attitude as a mediator and economic factors as an independent variable. The direct effect model shows that economic factors have significant positive effect on consumer attitude (β = 0.278, p < 0.001). Moreover, the direct effect model for purchase intention shows that consumer attitude have significant and positive impact on purchase intention (β = 0.334, p < 0.01). The total effect model shows that economic factors have a positive effect on purchase intention, (β = 0.125, p = 0.082). Indirect effect of economic factors onto purchase intention via consumer attitude is significant, both through the Sobel test (z = 2.806, p = 0.005) and bootstrap results (M = 0.093, SE = 0.034).

Table 4
Results of Simple Mediation Model Regressing Consumer Attitude as a Mediator and Economic Factors as an Independent Variable

Direct Effect Model						
Predictor	Outcome=M (Consumer Attitude)					
	B	SE	t	p	LLCI	ULCI
Constant	2.814	0.168	16.720	0.000	2.536	3.092
Economic Factors	0.278	0.045	6.123	0.000	0.203	0.353
Direct Effect Model						
Predictor	Outcome=Y (Purchase Intention)					
	B	SE	t	p	LLCI	ULCI
Constant	1.815	0.392	4.627	0.000	1.167	2.463
X (Economic Factors)	0.032	0.076	0.423	0.673	-0.093	0.157
M (Consumer Attitude)	0.334	0.105	3.199	0.002	0.162	0.507
Total Effect Model						
Predictor	Outcome= Y (Purchase Intention)					
	B	SE	t	p	LLCI	ULCI
Constant	2.756	0.265	10.394	0.000	2.318	3.194
X (Economic Factors)	0.125	0.071	1.747	0.082	0.007	0.243
Indirect Effect and Significance Using the Normal Distribution						
	Value	SE	LLCI	ULCI	Z	P
Sobel	0.093	0.033	0.044	0.159	2.806	0.005
Bootstrap Results for Indirect Effect of X on Y						
			M	SE	LLCI	ULCI
Effect			0.093	0.034	0.044	0.159

Note: n = 220; β = Unstandardized Regression Coefficient; SE = Standard Error; Bootstrap Sample Size = 2000; LL = Lower Limit; CI = Confidence Interval; UL = Upper Limit

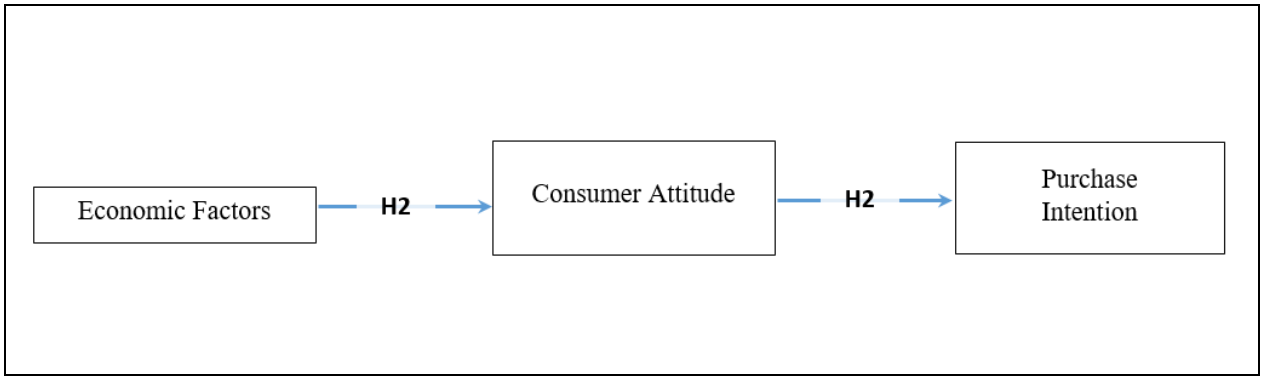

Figure 3. Mediation Model 2 for Hypotheses 2

Hypothesis 2

The results of Table show that economic factors having significant positive effect on consumer attitude (β = 0.278, p < 0.001). In addition, the total effect model shows that economic factors have the proposed effect on purchase intention when mediated by consumer attitude (β = 0.459, p < 0.001). Indirect effect of economic factors and purchase intention through consumer attitude is also significant (z = 2.806, p = 0.005), and the bootstrap results confirm this finding (effect = 0.093, SE = 0.034). Therefore, the results support the proposed hypothesis.

Model 3 Summary

Table 5 shows the results of consumer attitude as a mediator and environmental factors as an independent variable. The direct effect model indicates that environmental factors significantly and positively impact consumer attitude (β=0.293, p<0.001). The direct effect model also shows that environmental factors and consumer attitude both have the proposed effects on purchase intention (β=0.399, p<0.001 and β=0.209, p=0.033, respectively). The total effect model shows that environmental factors have positive significant effect on purchase intention (β=0.461, p<0.001). The Sobel test shows the indirect impact of environmental factors on purchase intention through consumer attitude is also significant (z=1.652, p=0.061).

Table 5
Results of Simple Mediation Model Regressing Consumer Attitude as a Mediator and Environmental Factors as an Independent Variable

Direct Effect Model						
Predictor	Outcome=M (Consumer Attitude)					
	β	SE	t	p	LLCI	ULCI
Constant	2.817	0.202	13.916	0.000	2.483	3.151
Environmental Factors	0.293	0.058	5.033	0.000	0.197	0.390
Direct Effect Model						
Predictor	Outcome=Y (Purchase Intention)					
	β	SE	t	p	LLCI	ULCI
Constant	1.048	0.401	2.615	0.010	0.386	1.710
X (Environmental Factors)	0.399	0.089	4.503	0.000	0.253	0.546
M (Consumer Attitude)	0.209	0.098	2.146	0.033	0.048	0.371
Total Effect Model						
Predictor	Outcome= Y (Purchase Intention)					
	β	SE	t	p	LLCI	ULCI
Constant	1.638	0.294	5.571	0.000	1.152	2.124
X (Environmental Factors)	0.461	0.085	5.444	0.000	0.321	0.601
Indirect Effect and Significance Using the Normal Distribution						
	Value	SE	LLCI	ULCI	Z	p
Sobel	0.061	0.032	0.122	1.942	1.652	0.061
Bootstrap Results for Indirect Effect of X on Y						
			M	SE	LLCI	ULCI
Effect			0.061	0.034	0.017	0.128

Note: n = 220; β = Unstandardized Regression Coefficient; SE = Standard Error; Bootstrap Sample Size = 2000; LL = Lower Limit; CI = Confidence Interval; UL = Upper Limit

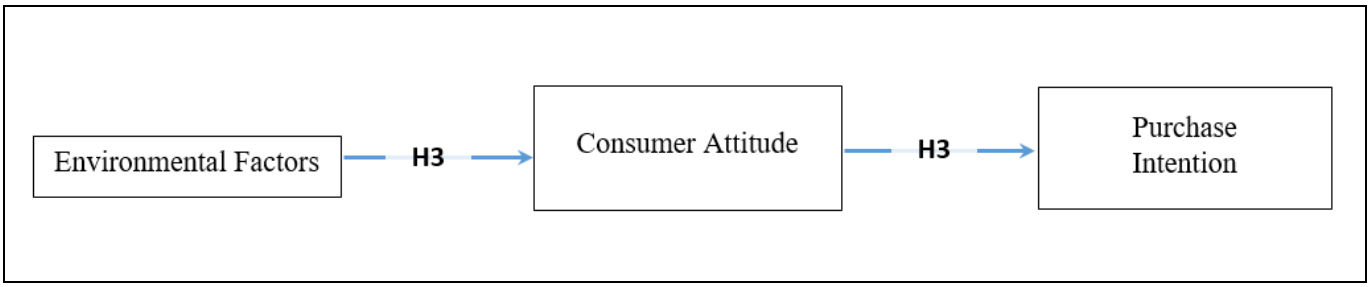

Figure 4. Mediation Model 3 for Hypotheses 3

Hypothesis 3
The results from Table 5 support Hypothesis 3. The direct effect model shows that environmental factors significantly affect purchase intention (β = 0.399, p < 0.001), and the mediation model shows that consumer attitude mediates this relationship (β = 0.209, p = 0.033). Moreover, indirect effect of environmental factors on purchase intention through consumer attitude was is also significant according to the Sobel test (z = 1.652, p = 0.061). Therefore, while environmental factors and consumer attitude both significantly affect purchase intention, results also provide evidence of mediation by consumer attitude between environmental factors and purchase intention.

5. Discussion

This research explored the effects of the variables that can affect the intention to purchase sustainable foods, namely health consciousness, economic factors, and environmental factors, with consumer attitude as a mediator. The statistical tool used in processing this research is Hayes Model 4 of mediation to check the validity of the hypotheses. Regression analysis revealed that the hypotheses statements are also supported by the data collected, which is discussed below in detail. The findings provide support for our hypotheses, highlighting the significant role of health consciousness, economic factors, and environmental factors and consumer attitude in promoting sustainable food consumption.
The results of the study support *hypothesis 1*, which states that health consciousness is positively and significantly related to purchase intention towards sustainable foods consumption when mediated by consumer attitude. These results are

consistent with prior studies indicating that when individuals are more health-conscious, it is more likely for them to possess encouraging outlook for sustainable food consumption, which consequently forms higher intention to purchase sustainable food products (Verain et al., 2015; Wang et al., 2020).

The findings of the research are also consistent with *hypothesis 2*, which states that economic factors are positively and significantly related to purchase intention towards sustainable food consumption through the mediation of consumer attitude (Chen et al., 2013). These findings are consistent with previous studies suggesting that economic factors majorly effect sustainable food consumption behaviors when people have positive approaches to food products that are sustainable (Chen et al., 2013; Grunert et al., 2011; Lee et al., 2019).

Lastly, results also provide support for *hypothesis 3*, which states that environmental factors are positively and significantly related to purchase intention towards sustainable food consumption mediated by consumer attitude. It has been observed in previous literature also, that environmental concerns and attitudes towards sustainability have significantly influenced the tendency of consumers to purchase sustainable food items (Chai et al., 2022; De-Magistris & Gracia, 2021).

6. Conclusion

In conclusion, this study investigates the effects of variables which impact purchase intention towards sustainable food consumption. The results indicate that health-consciousness, economic and environmental factors are critical drivers of consumer attitudes and purchase intentions towards sustainable food, with consumer attitude mediating the relationship between health-consciousness, economic and environmental factors, and purchase intention.

This study was effectively able to describe and explain all the variables and their relationships to one another, as well as how the independent variables and the mediator affected the dependent variable. Numerous prior studies have been cited appropriately to explain these relationships, with prior findings supporting the proposed hypotheses of this study.

Moreover, the study suggests that the theory of planned behavior (Ajzen, 1991), can be extended to include environmental factors as a predictor of purchase intent of consumers when it comes to sustainable foods. Practically, the findings highlight the importance of promoting the health, economic and environmental benefits of sustainable foods to the common people.

Moreover, this study adds to the texts and researches available on sustainability, marketing and consumer attitudes by emphasizing the relevance of the predictor variables namely health-consciousness, environmental and economic factors in influencing the intention of purchase towards sustainable food. The results have significant practical implications for sustainable food producers and marketers who can use these insights to develop targeted marketing strategies that communicate the health benefits, economic and environmental advantages of sustainable food consumption.

6.1. Theoretical Contribution

The outcome of this study extends the theory of planned behavior (TPB) to include environmental factors as a predictor of purchase intention, hence providing theoretical contributions to the literature on sustainable consumption. The TPB suggests that intent of an individual to perform a certain behavior is determined through their attitudes towards that behavior, their perception of social standards, and the control they perceive they have over their behavior. As per the theory, greater the intention of a person to behave a certain way, higher the probability is for them to exhibit that behavior. Thus, the findings suggest, environmental factors have a positive and significant effect on purchase intention towards sustainable consumption when mediated by consumer attitude. This extends the TPB, which says that attitudinal outlook, subjective norm, and preconceived notions of behavioral control are the three vital elements of intentions that are linked to behavior (Ajzen, 1991). The inclusion of environmental factors as a predictor of purchase intention, highlights the importance of incorporating broader contextual factors into the TPB, which is consistent with previous studies (Chan & Lau, 2014).

Furthermore, this study supports the notion that health consciousness is an important predictor when intending to purchase sustainable items. Thus, results suggest that health consciousness has a positive and significant effect on consumer attitude, which in turn positively influences buying intention. So the work is in line with past research, which suggests health concerns are a key driver of sustainable food consumption (Bogueva et al., 2017; Vermeir et al., 2006).

The study also suggests that economic factors can be a significant predictor of purchase intention towards sustainable food consumption when mediated by consumer attitude. The study's findings extend TPB by including economic factors as a predictor of purchase intention towards sustainable food consumption, which can inform and guide future research in this area.

Overall, these findings help to theoretically comprehend different factors that can influence a consumer's buying intention regarding sustainable food consumption by extending the TPB to include environmental factors as a predictor of purchase intention and highlighting the importance of health consciousness as a driver of sustainable food consumption.

6.2. Practical Implications

Sustainable food producers and marketers can gather useful and practical insights from the findings of this study. First, the findings highlight the importance of health consciousness in shaping consumers' purchase intention towards sustainable food consumption. Sustainable food producers and marketers can use this information to develop targeted marketing strategies that promote the health benefits of sustainable food consumption to young adults (Dagevos et al., 2013). Second, the study highlights the economic and environmental benefits of sustainable food consumption, which

can also be incorporated by sustainable food producers and marketers in their communication and marketing efforts to promote sustainable food consumption (Baker et al., 2020).

Secondly, the study indicates that economic factors have a significant role in forming consumer attitudes and purchase intentions in respect to sustainable food consumption. Sustainable food producers and marketers can use this information to craft unique ways of marketing that highlight economic advantages of sustainable food consumption, such as cost savings in the long term due to improved health and reduced environmental impact. Such strategies could include price promotions, discounts, and bundling of products to encourage consumers to purchase sustainable food products.

Moreover, the study highlights the importance of environmental factors in shaping consumer attitudes and purchase intentions regarding sustainable food. Producers and marketers of sustainable eatables can use this information to design marketing campaigns that shed light on the positive aspects sustainably grown foods have on the environment. For instance, emphasizing the environmental effect of unsustainable production techniques and the positive effects of the consumption of sustainable items on the environment can increase consumer awareness and encourage them to purchase sustainable food products.

Moreover, marketers can use messages that highlight the impact of food production and consumption on the environmental to create a more positive attitude towards sustainable food (Gupta et al., 2018). Finally, sustainable food producers and marketers can use the results of this study to develop targeted marketing strategies that appeal to niches that hold certain values and beliefs about sustainability, as these factors have been found to influence sustainable consumption behavior as well (Barr et al., 2017).

Overall, the practical implications of this study suggest that sustainable food producers and marketers should focus on promoting the health, economic, and environmental benefits of sustainable food consumption to young adults. Food producers and marketers can increase consumer awareness on sustainability by developing targeted marketing strategies that emphasize these benefits, and encourage them to purchase sustainable food products. This could ultimately lead* to a more sustainable food industry and better health outcomes for consumers as well, while also providing opportunities of growth in the sustainable food industry.

6.3. Limitations

After a thorough analysis of our study's findings, we identified some limitations in this research. First of all, the size of the sample was not as big, with only 220 individuals, limiting the study's generalizability. Although the size of the sample was adequate for the statistical analysis techniques used in the study, it may not have been a depiction of the larger audience. Consequently, the study's findings should be read with caution and cannot be generalized to other populations without further research.

Secondly, because the questionnaire was conducted online, biases including social desirability bias and self-selection bias could also possibly affect the study's findings. In an online survey there are chances that some of the respondents are self-selected and with different views and behaviors than those who could not take part in the study. Furthermore, respondents could be more inclined to provide socially desirable responses or to respond in a way that they perceived as acceptable to society, which could be a factor that can influence the study's findings.

Furthermore, the study included a majority of females and participants aged 18-23 years, limiting the sample's representativeness. While the study was not designed to investigate gender or age differences, the lack of diversity in the sample may restrict the findings' generalizability to other populations.

Lastly, the design of the study was cross-sectional, so causal links could not be formed among variables. This study only collected data at one point in time, which means that it is not a causal research. Therefore, the study's findings should only be viewed as direct/indirect relationship rather than forming causal links among variables. Longitudinal studies could be used in the future to study the causal links between health, economic, and environmental factors, on consumer attitude, as well as on the intention of purchase towards sustainable foods.

6.4. Future Direction

To enhance the understanding of sustainable food consumption and consumer behavior, there are several potential avenues for future research. These include:

- Increasing the generalizability of the results by using a bigger sample size to increase diversity.
- Conducting additional research to identify potential factors that mediate and/or moderate the relationship and may impact the variables of interest, such as individual differences in values, social norms, and cultural background.
- Exploring alternative research designs, such as longitudinal or experimental designs, to establish any causal relationships among the variables and to better understand the underlying mechanisms of the relationships.
- Incorporating a mix of online and offline data collection methods to reduce impact of biases that limited the scope of this study and to increase the representativeness of the sample.
- Examining actual purchase behavior and the factors that influence it, in addition to just the purchase intention, so as to have a more detailed understanding of sustainable food consumption and consumer behavior.
- Investigating the impact of the study variables on different types of sustainable food products, as well as the impact of different marketing strategies and interventions on consumer behavior and purchase intentions.

Overall, these future directions could provide valuable insights into sustainable food consumption and help the bodies/organizations make informed decisions. They would also help in creating effective marketing techniques and interventions that encourage sustainable food consumption among a larger and more diverse group of people than present.

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