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# SUSTAINABLE FOOD CONSUMPTION FACTORS: THE CASE OF ORGANIC FOODS

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**ABSTRACT:** The consumption of sustainable and organic food is a topic that has attracted the attention of researchers in recent years. This is due to more environmentally and public health-responsible consumption trends. Therefore, this study aimed to identify the theoretical factors that influence the consumption of sustainable and organic food consumption in Medellin. For this, the values-beliefs-norms model was used, including health values, health awareness, beliefs about healthy eating, and trust in food based on the normative activation model. In this sense, 124 people from the city of Medellin were surveyed. The results were analyzed based on a Structural Equation Model. The findings showed that sustainable food consumption was positively affected mainly by social norms, followed by trust in sustainable food. Also, the role of factors such as ascription of responsibility, awareness of consequences, and beliefs in healthy eating was highlighted. Finally, a gap was found between the ascription of responsibility versus awareness of the consequences, reflecting feelings of powerlessness among people. The findings of this study offer valuable practical implications for producers, marketers, and local governments, promoting policies and practices that encourage more conscious and environmentally friendly consumption.

***Keywords:*** sustainable food, organic food, public health, environmental care, environmental awareness, consumer behavior.

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## INTRODUCTION

Currently, global entities such as the United Nations are promoting sustainable consumption and production, motivated by the Sustainable Development Goals of the 2030 Agenda, to generate a positive impact on the environment. Food consumption is a determining factor in sustainability from economic, social, and environmental perspectives (Azzurra et al., 2019). The term "sustainability" is not new and gained great importance in the United Nations Agenda 21, which aims to promote consumption patterns that reduce negative environmental impact and, at the same time, meet the basic needs of humanity, such as food (Vittersø & Tangeland, 2015).

Thus, sustainable food consumption is gaining ground in the environmental policy agenda of countries, as a function of sustainable development that requires changes in people's behavior toward more responsible consumption (Seyfang, 2007). This is because consumer behavior is considered a key indicator for success in developing sustainable production systems. As explained by Feil et al. (2020), understanding this phenomenon is fundamental, as it is considered a mechanism to guide the development of more successful products. At the same time, sustainability is extended from corporate or governmental discourse to understand how it is incorporated into consumer behaviors and attitudes.

Sustainable food consumption is crucial due to its impact on the environment, individual and public health benefits, social cohesion, and economy (Reisch et al., 2013). Generally, environmentally friendly products are characterized by their microbiological soundness and the absence of additives and chemicals (Lazaroiu et al., 2019). In addition, consumers are increasingly aware of environmental degradation and the scarcity of natural resources, which increases their concern for food safety (Vega-Zamora et al., 2019). In that sense, organic food can contribute to a more sustainable food supply system (Azzurra et al., 2019).

Today, consumers tend to opt for high-quality food products, which must comply with two important dimensions: food safety and sustainability. Greater prominence is given to green foods that contain fewer chemical residues, due to the growing concern about the risks that pesticides, insecticides, fungicides, and herbicides used in food production pose to health and the environment (Ueasangkomsate & Santiteerakul, 2016). In this context, organic foods

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stand out for meeting these characteristics, thanks to the implementation of sustainable patterns of food consumption and production (Scalvedi & Saba, 2018).

Research such as that by Azzurra et al. (2019) argues that sustainable food consumption can be the result of deliberate or unconscious actions by consumers to purchase sustainable products. This aims to balance consumption and reduce waste, thereby minimizing its environmental impact and contributing to the local economy through socially responsible choices. In addition, these behaviors include sustainable diets that should incorporate a large proportion of organic, local, and minimally processed products. These choices are motivated by health concerns, both in terms of nutrition and sanitary quality, while also promoting more environmentally friendly habits (Lacour et al., 2018).

As explained by Shashi et al. (2015), foods considered unsafe contain bacteria, viruses, parasites, or harmful chemicals that can cause more than 200 diseases when consumed, even leading to death, especially in children. In addition, the production and consumption of these contaminated foods generate serious ecological problems, such as climate change, air and water pollution, scarcity of natural resources, soil degradation, and loss of habitats and biodiversity. In this context, organic foods could be a solution, as they are more sustainable than conventional foods. This is because it does not use synthetic fertilizers or pesticides, promotes crop and livestock diversification, and tends to have more nutritious compositions. Environmentally, it is characterized by greater energy efficiency, better soil quality, and greater plant and animal diversity (Baudry et al., 2019).

In recent years, there has been a growing trend toward the consumption of sustainable foods, especially those from organic agriculture. This trend not only seeks to preserve the environment but also to improve public health, bringing significant benefits to the economy and social cohesion of rural areas (Annunziata and Vecchio, 2016). Therefore, it is crucial to understand consumers' motivations regarding their preferences for sustainable and organic products to analyze organic food purchasing practices (Azzurra et al., 2019). Furthermore, it is essential to study the behavioral factors that lead people to make these purchasing decisions, especially in the context of emerging economies, given the growing concern for improving the quality of life (Wang et al., 2019).

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This study aims to broaden the understanding of the factors that influence the consumption decision of sustainable and organic foods in the context of an emerging economy. In recent years, the consumption of these products has increased in both developed and emerging economies (Wang et al., 2019). However, most studies on behavioral factors have been conducted in developed countries, leaving a gap in the literature concerning emerging economies (Marrero et al., 2022). This study seeks to fill that gap by providing a perspective from an emerging economy in Latin America. Therefore, the general objective of this study is to identify the theoretical factors that influence the consumption of sustainable and organic food in the city of Medellin, Colombia. This study brings up the case of traditional sweets in the city of Medellin, which are considered to fall within the spectrum of sustainable foods.

The findings of this research are expected to have a significant theoretical and practical impact. Theoretically, they will contribute to a better understanding of the factors that motivate consumers in emerging economies to choose sustainable and organic products. Practically, the results can be used to develop effective strategies for organizations that produce and market these products. These strategies could include more targeted marketing campaigns, improvements in product distribution and accessibility, and policies that encourage the adoption of sustainable practices.

In addition, the study aims to identify the motivations and barriers faced by consumers in emerging economies when deciding to purchase sustainable and organic products. Understanding these dynamics is crucial for designing interventions that not only promote the consumption of these products but also improve the quality of life of consumers and contribute to the sustainable development of the region.

## DEVELOPMENT

Previous studies have contributed to the debate on consumers' food purchasing practices in relation to sustainability, based on consumers' level of concern for food sustainability and sustainable lifestyles. In this context, researchers have analyzed the factors that influence the adoption of organic foods (Filippini et al., 2018). Azzurra et al. (2019) found that, in order

to increase the consumption of organic foods, it is necessary to communicate the environmental, social, and health benefits associated with the production and consumption of these foods, focusing on young consumers as key actors in the transition to more sustainable food systems.

Studies such as that by Wang et al. (2019) explored factors such as subjective norms, personal attitude, and perceived behavioral control, and their influence on the intention to purchase organic foods, based on the Theory of Planned Behavior (TPB), in the context of emerging economies in Africa (Kenya and Tanzania). Similarly, Zayed et al. (2022) conducted a study on the factors affecting organic food consumption, also based on the theory of planned behavior and previous literature on food consumption in a developing economy in Africa (Egypt). The findings of these studies indicated that the intention to purchase organic food is influenced by consumer attitudes, concern for the environment, and health consciousness.

Similar studies have been conducted in developed countries such as Hungary. For example, Nagy-Pércsi and Fogarassy (2019) investigated the motivations for purchasing organic food related to attitude, identifying four types of consumers: health-conscious, disappointed, safe and free food consumers, and price-quality comparers. In addition, they found that product branding or labeling is not as important to organic food consumers as initially thought. For their part, Chekima et al. (2017) determined the factors that influence organic food consumption, focusing on those who already consume these products rather than those who are only considering purchasing them. The results indicated that specific attitudes toward the product and future orientation are key factors in reducing the gap between attitude and behavior.

In the Latin American context, studies such as that by Marrero et al. (2022) have focused on characterizing the environmental impacts of current food consumption patterns in South America, Central America, and the Caribbean. For example, Molinillo et al. (2020) examined the factors influencing the purchase of organic food by millennials in Brazil and Spain. The findings showed that product characteristics and consumer concerns improve millennials' health awareness and increase their social awareness, which, in turn, increases their willingness to pay a higher price and their frequency of purchasing organic foods.

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In Colombia, studies have been conducted on low-impact sustainable consumption behavior and the convergence and divergence of this type of behavior in the country. The findings indicate the existence of two consumer profiles with different levels of awareness about sustainable consumption. One profile focuses on quality of life and the preservation of resources for future generations, while the other is related to caring for the environment, although these consumers are less involved and influenced by economic variables (Guzmán Rincón et al., 2021).

Recently, in Peru, the intrinsic and extrinsic factors that influence consumers to purchase organic products have been identified, in addition to determining the barriers that sometimes prevent millennial university students from buying these types of products (Carrión-Bósquez et al., 2024). Factors influencing loyalty to healthy food brands have also been evaluated (García-Salirrosas et al., 2022), as well as factors affecting the decision to purchase organic products. The results showed that future purchasing decisions for organic products are mainly influenced by factors such as health and quality (Higuchi and Avadi, 2015).

**Research model and hypotheses**

Some theories used to understand behavior towards sustainable and organic products include the TPB developed by Ajzen (1991). This theory is based on the premise that people's behavior is based on deliberative processes, such as the contemplation of the results of a specific action, and seeks to understand the decision to carry out (or not) a certain behavior. TPB has been employed in several studies to understand and predict consumers' motivation to purchase organic food (Scalco et al., 2017), as well as to analyze purchase intentions for organic vegetables (Loera et al., 2022).

Another theory that has gained much interest from researchers is the values-beliefs-norm (VBN) theory to augment the explanation of pro-environmental intentions and behavior and has been used in studies such as that of Koklic et al. (2019) to explain the interaction between past consumption, attitudes, and personal norms in the purchase of organic food. The study by Yang et al. (2023) also used this theory to explore why people consume organic food and the variety of factors that lead to this consumption behavior.

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This theory, proposed by Schwartz (1977), is based on the Normative Activation Model (NAM), which includes factors such as values, belief structures, and norms of individuals that support and sustain the environment and society through their pro-environmental and social behaviors. As Yang et al. (2023) explain, in the context of organic and sustainable food consumption, they seek to understand factors such as health values, health motivation, beliefs about healthy eating, awareness of consequences, ascription of responsibility, personal norms, and trust in organic food. This framework proposes the following hypotheses:

H1. Health values positively influence belief in healthy eating.

H2. Health motivation positively influences belief in healthy eating.

H3. Belief in healthy eating positively influences awareness of consequences.

H4. Awareness of consequences positively influences attribution of responsibility.

H5. Belief in healthy eating positively influences personal norms.

H6. Awareness of consequences positively influences personal norms.

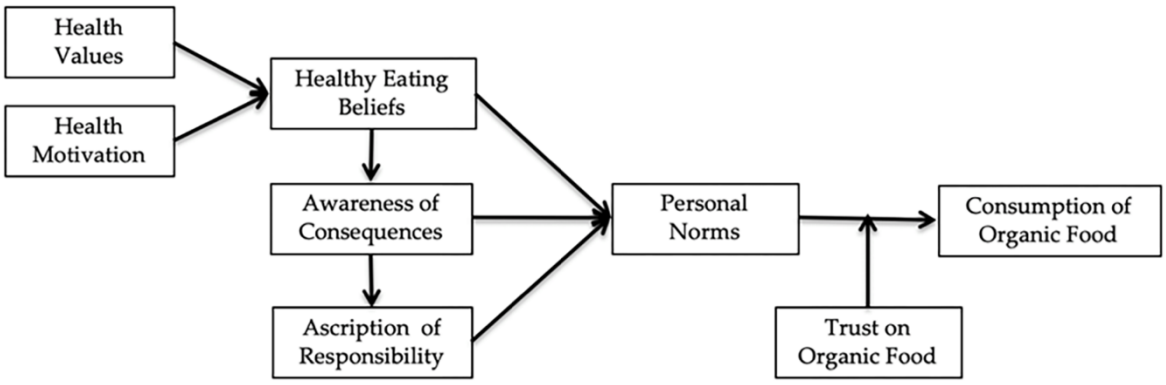
H7. Attribution of responsibility positively influences personal norms.

H8. Personal norms positively influence the consumption of organic foods.

H9. Trust in organic foods positively influences the consumption of organic foods.

**Figure 1**

*Study model and research hypotheses*

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## METHODOLOGY

This study was conducted to identify the theoretical factors that influence the consumption of sustainable and organic products in the city of Medellin, Colombia. For this purpose, a quantitative method of correlational scope was used. The target population consisted of young people from Medellín, and a non-probabilistic convenience sampling was used, resulting in a total of 124 respondents.

**Table 1**

*Sociodemographic information of the sample*

| Variable | Indicators | Percentage |
|---|---|---|
| Age range | 18 to 24 | 32% |
| | 25 to 34 | 44% |
| | 35 to 44 | 18% |
| | 45 to 54 | 3% |
| | 55 to 64 | 2% |
| | 65 and over | 1% |
| Gender | Female | 62% |
| | Male | 38% |
| Educational level | Basic | 11% |
| | Doctorate | 2% |
| | Specialist | 2% |
| | Student | 1% |
| | Master's | 1% |
| | Professional | 31% |
| | Technician | 22% |
| | Technologist | 31% |
| Socioeconomic stratum | Low-low | 3% |
| | Low | 21% |
| | Medium | 49% |
| | Medium-high | 22% |
| | High | 4% |
| How much more would you be willing to pay for sustainable/organic food? | 10.000 COP | 37% |
| | 15.000 COP | 21% |
| | 20.000 COP | 9% |
| | 5.000 COP | 33% |
| | Hardly ever | 24% |

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| | | |
|---|---|---|
| How often do you consume sustainable/organic products? | Almost every day | 9% |
| | Never | 14% |
| | Occasionally | 52% |
| | Every day | 2% |
| How often do you purchase sustainable/organic products? | Monthly | 31% |
| | Never | 31% |
| | Occasionally | 5% |
| | Biweekly | 26% |
| | Weekly | 5% |

*Note.* Own elaboration.

The majority of the study participants were in the 18-34 age range and were female. In terms of educational level, most had technical, technological or professional training. The participants were mostly from the lower, middle and upper-middle socioeconomic strata. They were asked how much they would be willing to pay additionally for a sustainable-organic product, and most of them answered between 10,000 and 15,000 COP. In addition, they were asked about the frequency with which they consumed sustainable and organic food; more than half of the respondents indicated that they did so occasionally, while others stated that they did so rarely. We also asked how often they buy these foods, and most responded that they do so on a monthly or biweekly basis, although some mentioned that they never do so.

The instrument was constructed based on the study by Yang et al. (2023). From this basis, a survey was designed that begins with an introduction about the aim of the research. Participants were informed by means of an informed consent that the survey is anonymous, and participation is voluntary, without any type of remuneration. Finally, it was communicated that the data collected would be used exclusively for academic purposes. This data collection instrument was approved by the ethics committee of the Institución Universitaria Escolme.

**Table 2**

*Study factors and indicators*

| Factor | Indicator | Description |
|---|---|---|
| Health values | HV1 | Nothing matters more to me than my health. |

| | | |
|---|---|---|
| | HV2 | Good health is the most important thing for a happy life. |
| | HV3 | Nothing is more important than good health. |
| Health motivation | HM1 | I take all necessary measures to eat healthy foods |
| | HM2 | I have good knowledge of how to prevent health problems |
| | HM3 | I am confident that I can maintain my health |
| | HM4 | Prevention is the best strategy for staying healthy |
| Healthy eating beliefs | HE1 | I believe that eating lots of vegetables, fruits, and whole grains is good for my health. |
| | HE2 | I believe that eating organic foods can reduce the risk of cancer. |
| | HE3 | I believe that eating organic foods can improve gut health. |
| | HE4 | I believe that eating organic foods can improve diabetes management. |
| | HE5 | I believe that eating organic foods can prevent many health problems. |
| Awareness of consequences | AC1 | Managing personal health can improve an individual's quality of life |
| | AC2 | Healthy eating practices can reduce negative consequences for personal health |
| | AC3 | Health problems can be reduced by managing one's diet |
| | AC4 | Minor health problems can lead to serious health problems |
| Ascription of responsability | AR1 | I believe it is important to take responsibility for personal health |
| | AR2 | I feel that taking responsibility for personal healthcare can help promote a healthy society |
| | AR3 | Taking personal responsibility for healthcare to promote personal well-being |
| | AR4 | Everyone should take responsibility for their personal health |
| Personal norms | PN1 | People like me should do everything possible to eat organic food |
| | PN2 | I feel compelled to consider the environment and nature in my food consumption behaviors |
| | PN3 | I feel morally obligated to consume organic products, regardless of what others do |
| | PN4 | I feel personally compelled to promote organic food and organic food production methods |

| | | |
|---|---|---|
| Trust on sustainable food | TOF1 | The environmental performance of organic foods is generally reliable |
| | TOF2 | Organic foods are generally reliable |
| | TOF3 | Organic foods meet my expectations |
| | TOF4 | Organic production methods deliver on their promises of environmental protection |
| Consumption of sustainable food | OFC1 | I frequently consume organic foods |
| | OFC2 | I intentionally purchase organic foods grown in an energy-efficient environment |
| | OFC3 | I often pay a higher price for organic foods |
| | OFC4 | I set a positive example by consuming organic foods for my community |

*Note*. Adapted from Yang et al. (2023b).

## RESULTS

For the analysis of results, a Structural Equation Model was applied, which, according to Sarstedt et al. (2014), allows researchers to simultaneously examine a series of interrelated dependence relationships between a set of constructs represented by several variables. The Partial Least Squares (PLS-SEM) approach was used, a technique based on an iterative process that maximizes the explained variance of endogenous constructs (F. Hair Jr et al., 2014). For this purpose, the statistical software SmartPLS 4, one of the most widely used for this type of analysis, was used (Wong, 2013).

### Analysis of the measurement model

The analysis begins with the quality of the measurement model based on its validity and reliability. For this, the analysis starts with the external loadings or factor loadings that define the validity of the latent variables. The literature suggests that the values of the factor loadings should be greater than 0.5 and eliminate those indicators with lower factor loadings (W. M. A. W. Afthanorhan, 2013). For this case, 0.6 was used as the minimum value, and those indicators that did not meet the criterion were eliminated: AC4, AR2, AR4, HEB1, HM1, HM2, and PN2. The results of the cross-loadings can be seen in Table 3.

**Table 3**

*Cross-loading*

| | Awareness of consequences | Ascription of responsibility | Consumption of sustainable food | Healthy eating beliefs | Health motivation | Health values | Personal norms | Trust on sustainable food |
|---|---|---|---|---|---|---|---|---|
| **AC1** | 0.801 | 0.468 | 0.157 | 0.397 | 0.346 | 0.441 | 0.247 | 0.234 |
| **AC2** | 0.812 | 0.455 | 0.143 | 0.380 | 0.356 | 0.501 | 0.226 | 0.293 |
| **AC3** | 0.718 | 0.387 | 0.205 | 0.217 | 0.204 | 0.390 | 0.282 | 0.315 |
| **AR1** | 0.499 | 0.696 | 0.132 | 0.274 | 0.074 | 0.332 | 0.106 | 0.185 |
| **AR3** | 0.406 | 0.856 | 0.388 | 0.446 | 0.281 | 0.416 | 0.517 | 0.498 |
| **COF1** | 0.092 | 0.197 | 0.730 | 0.318 | 0.295 | 0.160 | 0.361 | 0.293 |
| **COF2** | 0.187 | 0.227 | 0.822 | 0.261 | 0.304 | 0.219 | 0.524 | 0.452 |
| **COF3** | 0.172 | 0.286 | 0.606 | 0.200 | 0.074 | 0.236 | 0.407 | 0.321 |
| **COF4** | 0.148 | 0.307 | 0.709 | 0.280 | 0.232 | 0.267 | 0.546 | 0.402 |
| **HEB2** | 0.337 | 0.254 | 0.249 | 0.775 | 0.476 | 0.269 | 0.324 | 0.422 |
| **HEB3** | 0.412 | 0.371 | 0.295 | 0.837 | 0.493 | 0.442 | 0.335 | 0.405 |
| **HEB4** | 0.267 | 0.491 | 0.393 | 0.731 | 0.363 | 0.428 | 0.490 | 0.512 |
| **HEB5** | 0.298 | 0.311 | 0.147 | 0.689 | 0.328 | 0.320 | 0.251 | 0.236 |
| **HM3** | 0.203 | 0.167 | 0.297 | 0.440 | 0.792 | 0.286 | 0.276 | 0.388 |
| **HM4** | 0.420 | 0.220 | 0.199 | 0.422 | 0.771 | 0.342 | 0.162 | 0.317 |
| **HV1** | 0.479 | 0.328 | 0.207 | 0.344 | 0.326 | 0.771 | 0.181 | 0.237 |
| **HV2** | 0.289 | 0.506 | 0.312 | 0.360 | 0.247 | 0.759 | 0.328 | 0.286 |
| **HV3** | 0.568 | 0.322 | 0.223 | 0.437 | 0.367 | 0.833 | 0.247 | 0.307 |
| **PN1** | 0.303 | 0.454 | 0.288 | 0.475 | 0.159 | 0.265 | 0.686 | 0.360 |
| **PN3** | 0.219 | 0.256 | 0.525 | 0.296 | 0.205 | 0.166 | 0.796 | 0.380 |
| **PN4** | 0.226 | 0.313 | 0.651 | 0.325 | 0.272 | 0.297 | 0.815 | 0.529 |
| **TOF1** | 0.225 | 0.304 | 0.312 | 0.475 | 0.445 | 0.235 | 0.373 | 0.780 |
| **TOF2** | 0.419 | 0.380 | 0.262 | 0.375 | 0.315 | 0.282 | 0.454 | 0.784 |
| **TOF3** | 0.194 | 0.392 | 0.499 | 0.328 | 0.268 | 0.306 | 0.368 | 0.788 |
| **TOF4** | 0.344 | 0.393 | 0.487 | 0.513 | 0.430 | 0.292 | 0.577 | 0.838 |

*Note.* The highlighted values reflect the correlation of the indicators with their respective latent variables. Own elaboration based on SmartPLS 4.

The convergent validity of the model reflects the correspondence between the indicators and their respective latent variables. This validity is assessed by examining the external loadings of the indicators to determine the average variance extracted (AVE) of each construct. It is essential that the latent variable score includes at least 50% of the variance of the variable, so the AVE must be greater than 0.5 (Hair Jr. et al., 2017). To assess the reliability of the

latent variables, composite reliability, which measures internal consistency, was used. According to Hair et al. (2019) higher values generally indicate higher levels of reliability. Therefore, values between 0.7 and 0.9 are considered acceptable. Higher values generally indicate higher levels of reliability. Therefore, values between 0.7 and 0.9 are considered acceptable (Valls Martínez et al., 2021). The results are presented in Table 4.

**Table 4**

*Convergent validity and reliability of the model*

| Factor | Indicator | Outer loadings | VIF | Composite reliability | AVE |
|---|---|---|---|---|---|
| Awareness of consequences | AC1 | 0.801 | 1.316 | 0.755 | 0.609 |
| | AC2 | 0.812 | 1.388 | | |
| | AC3 | 0.718 | 1.264 | | |
| Ascription of responsability | AR1 | 0.696 | 1.053 | 0.821 | 0.606 |
| | AR3 | 0.856 | 1.053 | | |
| Consumption of sustainable food | COF1 | 0.730 | 1.574 | 0.810 | 0.519 |
| | COF2 | 0.822 | 1.672 | | |
| | COF3 | 0.606 | 1.180 | | |
| | COF4 | 0.709 | 1.226 | | |
| Healthy eating beliefs | HEB2 | 0.775 | 1.564 | 0.845 | 0.578 |
| | HEB3 | 0.837 | 1.752 | | |
| | HEB4 | 0.731 | 1.317 | | |
| | HEB5 | 0.689 | 1.356 | | |
| Health motivation | HM3 | 0.792 | 1.052 | 0.759 | 0.611 |
| | HM4 | 0.771 | 1.052 | | |
| Health values | HV1 | 0.771 | 1.378 | 0.831 | 0.622 |
| | HV2 | 0.759 | 1.305 | | |
| | HV3 | 0.833 | 1.404 | | |
| Personal norms | PN1 | 0.686 | 1.186 | 0.811 | 0.589 |
| | PN3 | 0.796 | 1.399 | | |
| | PN4 | 0.815 | 1.330 | | |
| Trust on sustainable food | TOF1 | 0.780 | 1.849 | 0.875 | 0.637 |
| | TOF2 | 0.784 | 2.121 | | |
| | TOF3 | 0.788 | 1.425 | | |
| | TOF4 | 0.838 | 1.882 | | |

*Note.* Outer loading > 0.6; VIF < 3; Composite reliability > 0.7; AVE > 0.5. Prepared internally using SmartPLS 4.

The analysis is strengthened by the discriminant validity of the model, which indicates that a latent variable is empirically unique compared to the other latent variables. That is, each latent variable captures a unique phenomenon not represented by any other latent variable in the model (Hair Jr. et al., 2017). This validity is tested using the Fornell-Larcker criterion, which compares the AVE of the latent variables with the squared correlation between the latent variables, known as the shared variance (A. Afthanorhan et al., 2021; Hair Jr. et al., 2017). In this sense, the joint variance of all latent variables in the model cannot be greater than their AVE (Purwanto & Sudargini, 2021). The results are presented in Table 5, demonstrating that the model is statistically valid and reliable.

**Table 5**

*Fornell-Larcker criterion*

| | Ascription of responsability | Awareness of consequences | Consumption of sustainable food | Health motivation | Health values | Healthy eating beliefs | Personal norms | Trust on sustainable food |
|---|---|---|---|---|---|---|---|---|
| AR | 0.780 | | | | | | | |
| AC | 0.564 | 0.778 | | | | | | |
| COF | 0.356 | 0.212 | 0.721 | | | | | |
| HM | 0.246 | 0.396 | 0.319 | 0.782 | | | | |
| HV | 0.483 | 0.573 | 0.311 | 0.400 | 0.789 | | | |
| HEB | 0.474 | 0.435 | 0.366 | 0.551 | 0.486 | 0.760 | | |
| PN | 0.437 | 0.320 | 0.653 | 0.282 | 0.319 | 0.467 | 0.768 | |
| TOF | 0.465 | 0.355 | 0.522 | 0.452 | 0.353 | 0.528 | 0.560 | 0.798 |

*Note.* The side values reflect the correlation with the latent variables compared to the others. Own elaboration based on SmartPLS 4.

**Structure model analysis**

This analysis includes hypothesis testing and a review of the predictive capacity of the model. For the hypothesis analysis, the following statistics were used: path value, t value and p value. The path value reflects the path coefficient, indicating the direct relationship between the latent variables. The t-value statistic measures the strength of the path, helping to determine whether the observed relationship is statistically significant. For its part, the *p*-value verifies the hypothesis, indicating the probability that the observed results are due to chance (Kock,

2015). The results can be evidenced in Table 6. The results of the analysis show that eight of the nine hypotheses of the model are accepted.

**Tabla 6**

*Contraste de hipótesis*

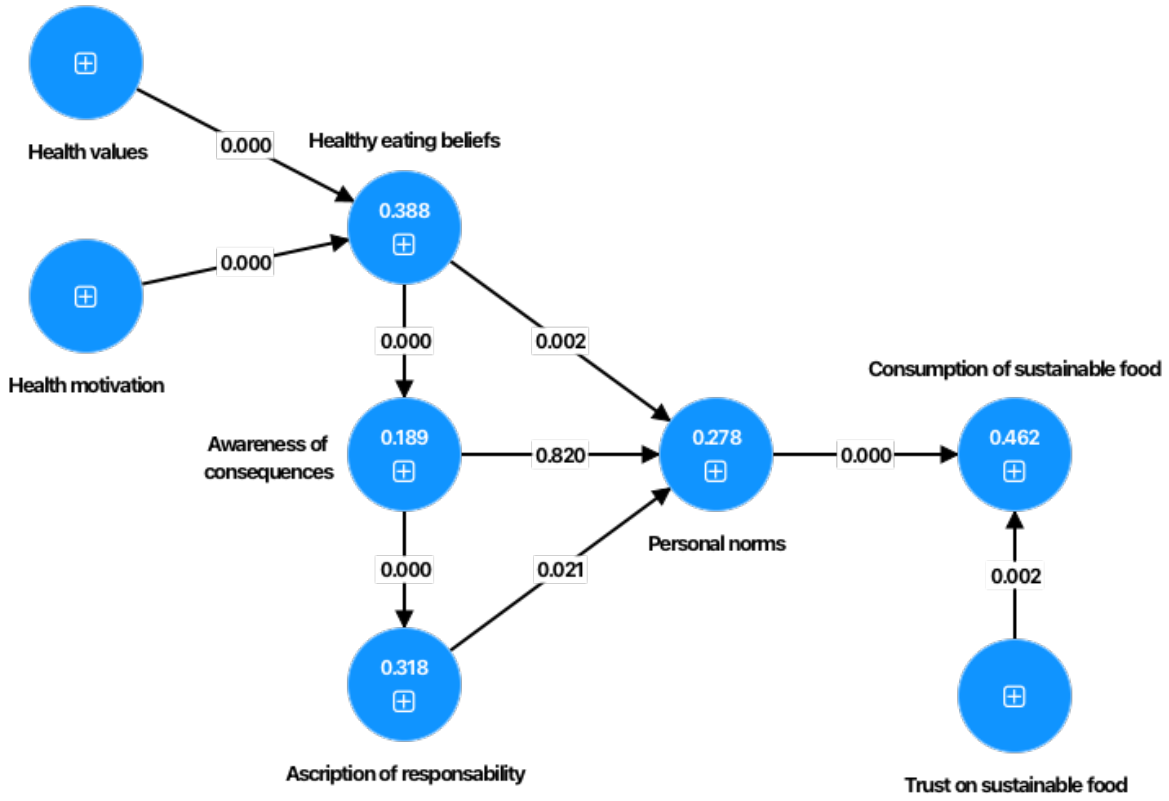
| **Hyphotesis** | **Path values** | **T values** | ***p* values** |
|---|---|---|---|
| Ascription of responsibility → Personal norms | 0.265 | 2.315 | 0.0211 |
| Awareness of consequences → Ascription of responsibility | 0.564 | 4.113 | 0.000 |
| Awareness of consequences → Personal norms | 0.027 | 0.228 | 0.820 |
| Health motivation → Healthy eating beliefs | 0.425 | 5.139 | 0.000 |
| Health values → Healthy eating beliefs | 0.316 | 3.491 | 0.000 |
| Healthy eating beliefs → Awareness of consequences | 0.435 | 4.553 | 0.000 |
| Healthy eating beliefs → Personal norms | 0.329 | 3.089 | 0.002 |
| Personal norms -> Consumption of sustainable food | 0.526 | 6.791 | 0.000 |
| Trust on sustainable food → Consumption of sustainable food | 0.227 | 3.048 | 0.002 |

*Note*. Path > 0, t value > 1.96; *p* value < 0.05. Prepared internally using SmartPLS 4.

The predictive capacity is based on two statistics. The first is the coefficient of determination $R^2$. Experts indicate that the variance explained is better the closer it is to 1. In that sense, an explained variance of 0.72 is considered satisfactory, 0.56 consistent for commitment, and 0.34 for trust (Hair Jr. et al., 2017). The results reflect that for the endogenous variables, healthy eating beliefs and consumption of sustainable food, the predictive capacity is reliable, while the other endogenous variables reflect unsatisfactory behavior (see Figure 2).

**Figure 2**

*Hypothetical relationships and predictive power of the model*




This analysis is strengthened by redundancy with cross-validation $Q^2$. Predictive power indicates that the model can predict data that is not used in the model estimation. The literature states that values greater than 0 for an endogenous variable suggest predictive relevance for the underlying structural model of the respective latent variable. Therefore, benchmark values are: > 0 small, > 0.25 medium and > 0.5 large (Gotthardt & Mezhuyev, 2022). Most variables have a small predictive power, whereas healthy eating beliefs have a medium predictive relevance.

## DISCUSSION OF RESULTS

The results of this study have shown that social norms are the main factor influencing sustainable food consumption. This finding is consistent with that found by Salmivaara et al.

(2021), who analyzed the relative importance of social norms, especially descriptive norms, on sustainable food choice. Social norms have also been shown to have an impact on organic food consumption due to the need for sustainable and environmentally friendly consumption. According to Koklic et al. (2019), sustainability issues in food systems are likely to worsen in the future.

The results also showed that health motivation plays a crucial role in beliefs about healthy eating. These findings are consistent with those of Blanke et al. (2022), who identified health as a key factor in eating behavior. In the study by Marty et al. (2022), health motivations were found to be positively associated with indicators of dietary sustainability, such as nutritional quality, adherence to the EAT-Lancet diet, and consumption of organic and local foods, which is consistent with the results of this study.

Similarly, beliefs about healthy eating were found to have a positive effect on awareness of consequences. These findings are consistent with the study by Macdiarmid et al. (2016), which examined public awareness of the environmental impact of food and willingness to reduce consumption, exploring understanding of the link between food, the environment, and climate change. Furthermore, as Baur et al. (2022) point out, although health concerns prevail over environmental concerns, there is a certain degree of awareness among consumers and an overlap in motivations for healthy and sustainable eating.

Likewise, awareness of the consequences had a positive effect on the allocation of responsibility. In this sense, understanding that actions have consequences generates in people a sense of responsibility for the negative effects of not adopting environmentally friendly behaviors, such as consuming unsustainably produced food, which negatively impact the environment (Wang et al., 2022). Similarly, Liobikienė and Juknys (2016) found that people with a strong orientation toward self-transcendence, guided by normative goals, are more aware of environmental issues and are more willing to take responsibility and behave in a more environmentally friendly manner, which is consistent with the findings of the present study.

Personal norms were positively influenced by the assignment of responsibility and beliefs about healthy eating. These results are supported by previous studies, such as that of

Pasquariello et al. (2024), which found that moral norms are directly affected by the attribution of responsibilities, ecological self-identity, and awareness of consequences. Similarly, Yang et al. (2023a) found that beliefs about healthy eating positively influence personal norms and awareness of consequences, recommending that organic food manufacturers develop labels and packaging that highlight the special characteristics of these products. However, personal norms were negatively affected by awareness of consequences. These findings suggest that when people are highly aware of the negative impacts their actions may have on the environment or their health, they may experience dissonance or a sense of helplessness, perceiving that their individual decisions (such as buying organic food) have a limited effect in the face of complex global problems.

The results also showed that health-related values have a positive effect on beliefs about healthy eating. This is supported by the study by Arroyo et al. (2020), who investigated people's values when consuming healthy and organic foods. Their findings identified four different groups based on these values: utilitarian, protective, invigorating, and highly demanding, demonstrating that health values are crucial to people's beliefs about healthy eating.

Finally, the results indicated that trust in sustainable food has a positive effect on its consumption. This finding is supported by Lazaroiu et al. (2019), who emphasize the importance of consumer trust and motivations in organic markets. They showed that most of the factors influencing consumers' attitudes and choices of organic food are related to their trust and perceptions of the nutritional benefits that these products offer.

Therefore, this study has theoretical implications by contributing to the values-beliefs-norms model, incorporating health values, health consciousness, healthy eating beliefs, and trust in organic food as drivers (Yang, Al Mamun, et al., 2023). In this way, this study can serve as a starting point for understanding the phenomenon of sustainable food consumption in other cities in the country and the region. With this in mind, it broadens the understanding of the consumption of sustainable and organic products in a young population within an emerging economy.

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In terms of practical implications, the findings of this study are especially useful for producers and marketers of organic and sustainable products in the city, as they provide insight into consumer behavior and the main consumption factors related to health, trust, and environmental responsibility. In addition, they can be valuable for local governments in designing policies that encourage the consumption of these foods and promote sustainable practices in food production, highlighting consumer concern and public awareness about environmental protection and responsible consumption for health.

The limitations of the study mainly concern the sample, which is restricted to residents of the city of Medellín. This suggests that future studies should expand the scope of the sample to the metropolitan area and nearby municipalities in the Antioquia region of Colombia. In addition, it would be beneficial to conduct studies in other regions of the country to improve the understanding of this phenomenon at the national level. Researchers are also encouraged to deepen their understanding by integrating other theories of consumer behavior.

## CONCLUSIONS

In conclusion, this study found that the factors of social norms and confidence in sustainable foods are positively related to the consumption of sustainable foods, which generates an important input for understanding consumer behavior regarding these products and broadens the existing knowledge about this phenomenon and, in turn, is important for decision-makers in organizations dedicated to the production and marketing of these products in the department of Antioquia.

The findings also highlight the importance of factors such as assigning responsibility to individuals to mitigate actions that may contribute to environmental degradation. Consuming sustainable and organic foods is presented as a “small” action that can help protect the environment and counteract effects such as climate change, with an awareness of the medium- and long-term consequences of pesticide use and soil exploitation for human health. Likewise, factors such as beliefs about healthy eating are highlighted, emphasizing personal motivations to take care of one's health and concern for the quality of the food consumed.

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In conclusion, this study underscores the importance of various factors in the consumption of sustainable and organic foods, highlighting the assignment of responsibility and beliefs about healthy eating. Awareness of long-term environmental and health consequences drives consumers to make more responsible and sustainable choices. In addition, trust in organic foods and personal motivations for health play a crucial role in these choices. These findings not only contribute to the values-beliefs-norms model but also offer valuable practical implications for producers, marketers, and local governments, promoting policies and practices that encourage more conscious and environmentally friendly consumption.

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