

Original Article

Food safety, consumption behavior, and personal values: an integrative review

Segurança alimentar, comportamento de consumo e valores pessoais:
uma revisão integrativa

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ABSTRACT

Purpose: To map in international literature how personal values have been addressed in the context of consumer behavior in relation to food safety.

Design/methodology/approach: An integrative review was employed as the research method using the Web of Science and Scopus scientific databases. Nineteen empirical articles were selected and classified into five analysis categories: i) cultural context; ii) risk perception and willingness to pay; iii) sustainable consumption; iv) animal welfare; and v) differences among sociodemographic profiles.

Findings: The studies focus on identifying personal values that influence attitudes and behaviors related to food safety in food consumption. They seek to understand how these values, reflected in consumer concerns about food safety, affect the categorization of foods as healthy/safe.

Practical implications: The understanding of the factors that interfere with consumer relationships is crucial in the context of food safety, as it allows for the enhancement of communication strategies and policies targeted toward the consuming public.

Originality/value: This study provides an integrative framework based on the analyzed literature and suggests future research perspectives to advance knowledge on the subject.

Keywords: Food safety; Consumer behavior; Personal values

RESUMO

Propósito: Analisar a produção científica internacional sobre valores pessoais como guias para o comportamento em relação à segurança alimentar.

Desenho/metodologia/abordagem: Foi empregada uma revisão integrativa como método de pesquisa, utilizando as bases de dados científicas *Web of Science* e *Scopus*. Dezenove artigos empíricos

foram selecionados e classificados em cinco categorias de análise: i) contexto cultural; ii) percepção de risco e disposição para pagar; iii) consumo sustentável; iv) bem-estar animal; e v) diferenças entre perfis sociodemográficos.

Resultados: Os estudos concentram-se na identificação de valores pessoais que influenciam atitudes e comportamentos relacionados à segurança alimentar no consumo de alimentos. Eles buscam entender como esses valores, refletidos nas preocupações dos consumidores com a segurança alimentar, afetam a categorização dos alimentos como saudáveis/seguros.

Implicações práticas: A compreensão dos fatores que interferem nas relações do consumidor é crucial no contexto da segurança alimentar, pois permite o aprimoramento de estratégias de comunicação e políticas direcionadas ao público consumidor.

Originalidade/valor: Este estudo fornece um quadro integrativo com base na literatura analisada e sugere perspectivas de pesquisa futura para avançar o conhecimento sobre o assunto.

Palavras-chave: Segurança alimentar; Comportamento do consumidor; Valores pessoais

1 INTRODUCTION

Observation of consumer behavior trends reveals changes in eating habits in recent years, mainly due to the Covid-19 pandemic (Marinković & Lazarević, 2021). The increasing awareness of health, evidenced by the rise in life expectancy and healthcare costs, has led to the pursuit of foods that not only fulfill their basic nutritional function but also have proven positive effects on health (Wawrzyniak, 2023). This shift in consumer preferences consequently leads to a greater interest in knowledge about food quality and safety (Severová, 2021). Recently, there has been an increase in consumer concerns about food safety due to intense media attention and growing awareness of the importance of this issue (Siwach, 2022; Thomas & Feng, 2021; Lam et al., 2020). Consumers are changing their food acquisition patterns due to concerns about food safety (Liguori et al., 2022).

Food safety is a key issue for the food industry, public health, and the economy of all countries. Foodborne diseases cause profound impacts on health systems and are related to a lack of knowledge about food safety and unsafe food handling practices (Yemane & Tamene, 2022; Sayuti et al., 2020). Thus, the planning of preventive measures to eliminate risks requires the observation of consumer

behavior by evaluating consumers' knowledge, judgments, and practices related to food safety (Bolek, 2020).

Solomon (2015) understands that consumers are influenced by psychological, personal, social, and cultural factors. Characterized by a set of essential values, the reality of the society in which the individual is embedded becomes a determinant for directing their consumption behavior. Thus, products end up acquiring meaning as instruments for achieving goals linked to values considered relevant to the consumer in their social context.

The way choices regarding consumption are made is related to consumers' personal values. The analysis of the influences of subjective values in the context of consumption preferences has a long history in psychology. As they represent feelings about the importance attributed to each possibility, they create motivations for determining specific lifestyles, experiences, and attitudes (Feather, 1995).

Schwartz (2007) defines value as a desired goal in a given situation that varies in importance and serves as a guide for decision-making. The author defines the main characteristics common to all values: i) they relate to goals desired by individuals; ii) they form motivational constructs; iii) they function as criteria for evaluation and selection in diverse contexts; iv) they establish a prioritization order.

According to Vilas Boas, Sette, and Brito (2006), the social function of values can be understood from two main dimensions. The set of beliefs that guide people's behavior is inserted into the cognitive dimension of personal values. This is considered the highest level of cognition that influences the perception, evaluation, and choices of individuals. The motivational dimension, on the other hand, comprises aspects linked to individual or collective interests and desires. From this perspective, values are responsible for guiding people's behavior, and their ways of thinking, acting, and feeling, leading to a specific priority order.

Understanding the individual factors that affect food safety behavior is essential for promoting changes in current food systems, aiming to better meet consumers'

needs (Luu, Tran & Truong, 2023). There is a gap in the understanding of the role and approach of personal values in the context of consumption behavior related to food safety in the literature. Although there are mentions of the influence of values on food choices and consumer behavior direction, there is still a need for a more detailed and comprehensive analysis of how these specific values influence food preferences, especially regarding food safety.

Given this, the research problem proposed is: How have personal values been addressed in the international literature in the context of consumer behavior regarding food safety? Given this question, this research aims to map in international literature how personal values have been addressed in the context of consumer behavior in relation to food safety. Adopting the integrative review as a method, 19 relevant articles were selected from Web of Science and Scopus databases. The review focused on the theoretical parameters guiding existing research, identifying the field as emerging due to the limited number of works combining food safety and personal values.

Consumer behavior is one of the most expressive and interesting fields for researchers. One of the great challenges for marketing professionals is to analyze and understand the consumer, their attitudes, and motivations when they are in situations involving purchase and consumption decisions. In this sense, the study of personal values – admitted as cognitive patterns that serve as guidance for consumers – can be an important tool in the task of grasping and proposing strategies to deal with the stimuli that drive different types of behaviors (Vilas Boas et al., 2005).

This study contributes to the theoretical framework by presenting how integrating personal values into existing models of food safety behavior enriches our understanding of the factors influencing consumer behavior. It bridges the gap between theory and practice by highlighting the role of personal values in shaping food safety behavior.

In terms of practical contributions, this study demonstrates the value of tailoring educational campaigns to different consumer segments based on their personal

values. By emphasizing the importance of food safety and providing practical tips on safe food handling and preparation, these campaigns can be more effective.

Additionally, this study provides policymakers with valuable insights into the values driving food safety behaviors, which can inform the creation of policies that address these underlying values. This can lead to the development of regulations and standards that not only enforce food safety practices but also align with consumers' values and motivations.

2 THEORETICAL BACKGROUND

2.1 Food safety and consumer behavior

The Food and Agriculture Organization of the United Nations (FAO) defines food security as a circumstance in which all people have physical, social, and economic access to safe, nutritious food in sufficient quantity to ensure a healthy life and meet dietary needs and food preferences (FAO, 2009). As a vital element for existence, food plays a central role in countries' strategic policies. The inclusion of food security in these discussions contributes to improving the quality of processes in terms of economic outcomes with social equity, environmental sustainability, and cultural appreciation (Maluf, 2009).

According to Braga (2004), the concept of food security refers to the understanding of food as a human right that should be ensured by the state, implying the permanent guarantee of basic quality food in sufficient quantity without compromising access to other essential needs. In a different context, the term also relates to healthy eating practices within the scope of integral human development.

Considered a fundamental right of all consumers, food security is controlled by governments through the establishment of laws, regulations, and standards. Food security systems have undergone a period of transformation, becoming more stringent,

given the increasing demand for safer food. Consequently, policymakers need to seek strategies to improve the sector's performance in terms of safety (Wongprawmas & Canavari, 2017).

Grunert (2005) states that, in a narrow sense, food safety is understood as the opposite of food risk, meaning the probability of not contracting an illness due to the consumption of a particular food. In a broader sense, food safety also encompasses the nutritional qualities of food as well as greater concerns regarding the properties of unknown foods. Furthermore, food safety can be viewed from an objective perspective, based on the evaluation of scientists and experts regarding the risk of consuming certain foods, or subjective, concerning the perception present in the consumer's mind (Grunert, 2005).

Safe foods are those that do not harm the consumer when prepared and/or consumed according to the food's intended purpose. Food safety and quality play a fundamental role in maintaining the consumer's health, the final link in the food chain (Sameen et al., 2022). The contemporary approach to food safety considers that it applies to all segments of food production. In other words, as commonly stated, food safety is applied "from farm to table" (Janjić et al., 2017).

According to Lakner et al. (2021), discussions about consumer behavior of foods in relation to food safety have developed rapidly in recent decades and a significant amount of knowledge has been accumulated in this interdisciplinary field. The authors state that food safety, consumer behavior, and sustainability are intrinsically linked and will continue to inspire a broad spectrum of research in the coming decades. Food safety is closely linked to the system food management and directly impacts consumer behavior; while one keeps consumers safe, the other keeps them satisfied (Nie et al., 2021).

Consumers increasingly seek guarantees in terms of quality and safety of food, which has been driven, at least partially, by several incidents of food safety issues, such as food contamination and adulteration, food recalls, products, occurrences of

food poisoning, and legal infractions (Soon, Brazier & Wallace, 2020). It is common for consumers to look for information that helps to obtain a healthier diet, as well as knowing the origin and environment, ethical and technological conditions under which the food was produced. They are interested in transparency, traceability, and even more advanced food safety considerations that involve appropriate technology and regulation in the supply chain (Shahidi, 2021).

According to Grunert (2005), food safety has a significant presence in public debate, food policy, and research. In the literature, the author identified three main research streams: i) demand for quality and safety: examines to what extent certain quality and/or safety improvements correspond to consumer preferences; ii) supply of quality and safety: evaluates changes in the organization of agricultural and food production caused by quality and safety issues; and iii) consumer perception of quality and safety: deals with how consumers perceive these attributes and how it influences their purchasing decisions. This article focuses on this last research line, more specifically on the relationship between consumers' personal values and their behavior regarding food safety.

2.2 Personal values as predictors of behaviors in food consumption

The formation of markets is characterized, firstly, by understanding the needs and desires of society. The demand for a particular product arises due to either the explicit market need arising from the unavailability of the product, or it may also emerge as a potential need requiring stimulation for its consumption. Hence, social, cultural, and personal factors are substantial for formulating marketing strategies as they can determine various buying behaviors (Vilas Boas et al., 2005).

Consumption results from a set of symbols created by the association with brands, products, or services combined with new ways of thinking, acting, and relating within social groups. This behavior influences not only people's consumption practices but also their personal values and priorities. Thus, consumers are more likely to buy

brands and products whose values are similar to their own. This pursuit involves, besides constructing an identity, defining a sense of belonging to specific groups. The influence of consumer culture goes beyond purchase stimuli; in other words, consumption is often more related to representativeness and symbolism than to the use value itself (Zafaneli, Troccoli & Scatolino, 2016).

Rokeach (1968) defines value as a lasting belief that a particular mode of conduct is personally and socially preferable to other models. Termed as such, a value is a pattern or criterion used in various everyday situations in our lives: it is a standard that tells us how to act or which attitudes to take; it is a standard we use to justify behaviors, morally judge, and compare ourselves to others.

Considered a cross-culturally valid classification system for values research, Schwartz's theory of values defines 19 distinct personal values: Self-Direction in Thought and Action; Stimulation; Hedonism; Achievement; Power Domination and Power over Resources; Personal and Social Security; Tradition; Conformity to Rules and Interpersonal Conformity; Benevolence Dependence and Care; Commitment; Universalism Nature and Universalism Tolerance; Face; and Humility (Schwartz, 2017).

Values and attitudes are closely related behavioral elements; therefore, the relationships between them should be analyzed jointly. According to Rokeach (1968), attitude can be understood as an organization of various beliefs directed towards a specific object or situation, predisposing the individual to respond in a preferential manner. Values, on the other hand, go beyond specific objects and situations, being linked to modes of conduct and final states of existence.

For Barcellos et al. (2015), values are related to social norms or rules of behavior reflecting an internal reference on what is considered good, important, desirable, etc. Attitudes, on the other hand, are determined by a combination of personal values and general outlooks. Based on the so-called value-attitude-behavior chain, Homer and Kahle (1988) explain that values, in their internal and external dimensions, significantly influence the formation of attitudinal trends, which can lead to specific behaviors.

The literature indicates significant cultural differences in food consumption behaviors and attitudes toward food safety and environmental sustainability. For example, Perrea et al. (2014) and Zhou et al. (2013) highlight the influence of collectivist values on Chinese consumers' attitudes toward green foods, contrasting with Western findings where collectivist values often correlate with skepticism towards technological advancements in food. Tsakiridou et al. (2007) illustrate differences between German and Greek consumers regarding GMO foods, with enjoyment of life and risk-taking influencing purchase intentions differently.

Risk perception significantly impacts consumer behavior and willingness to pay for food products. Barrena and Sánchez (2010) identify that food safety concerns and hedonic values influence consumers' choices between beef and rice in Spain. Fitzsimmons and Cicia (2018) demonstrate that self-transcendence values correlate with a higher willingness to pay for ethical and organic food attributes in Italy and Germany.

Sustainable consumption patterns are driven by personal values and environmental concerns. Worsley et al. (2015) show that Australian consumers with universalist values are more likely to support environmental food policies and pro-environmental purchasing behaviors. Van Huy et al. (2019) identify three segments of organic food consumers in Vietnam, highlighting differences in health concerns and attitudes towards local and organic foods.

Attitudes toward animal welfare are influenced by personal values and knowledge. Cembalo et al. (2016) reveal that self-transcendence values are strongly associated with positive attitudes toward animal welfare across five European countries. Sonoda et al. (2018) find that Japanese consumers who value openness to change and security are more likely to prefer beef with animal welfare and environmental labels.

Aligned with personal values, sociodemographic factors play a crucial role in shaping food-related attitudes and behaviors. Aydin et al. (2022) show that Australian parents' preferences for food and nutrition education topics are influenced by their

personal values and educational levels. Worsley et al. (2013) identify gender differences in how food safety concerns impact eating and physical activity habits in Australia.

3 METHODOLOGICAL PROCEDURES

This study is characterized as an integrative review, which, according to Torraco (2016), is a type of research that generates new knowledge from the review and integrated analysis of the literature on a specific topic. This method is applied with the objective of reviewing, updating, criticizing, synthesizing, and, potentially, reconceptualizing the investigated topic. The study can present a temporal, methodological, or conceptual/thematic structure.

In integrative reviews, two types of topics are usually addressed: mature topics – those that have experienced rapid growth in the literature but have not been synthesized and updated for a long period – and emergent topics – which involve incipient discussions and may present contradictions not yet addressed in the literature. In summary, an integrated view of the literature can contribute to resolving inconsistencies, expanding existing knowledge, and outlining new perspectives (Torraco, 2016).

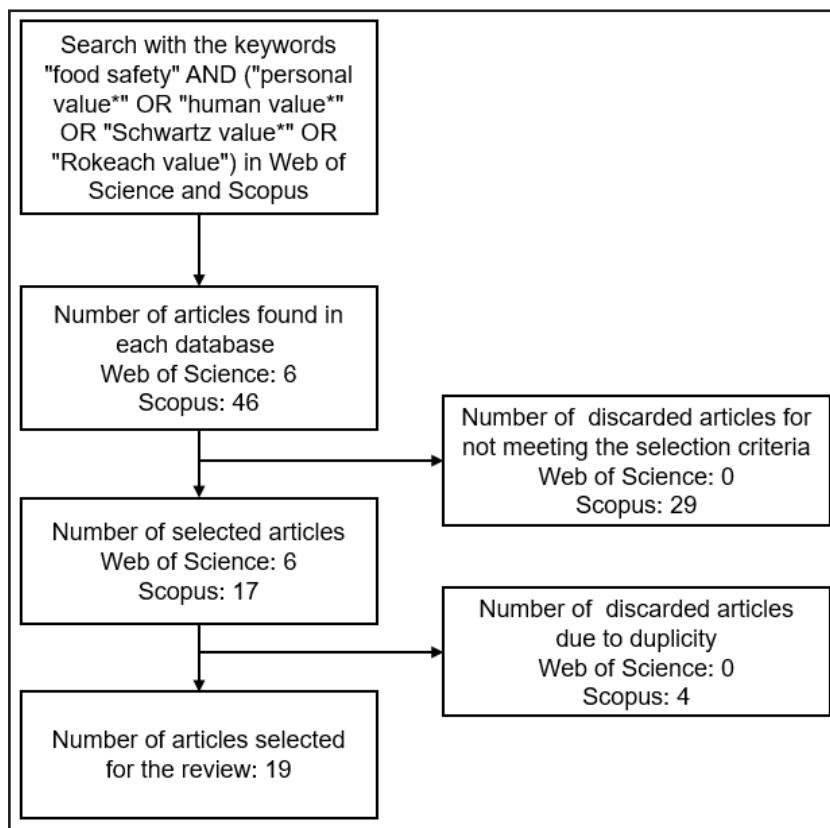
This proposed integrative review aimed to map in international literature how personal values have been addressed in the context of consumer behavior in relation to food safety. It is a conceptual review, as it focused on studying the theoretical parameters that guide the research already conducted. Food safety and consumer behavior are topics that have reached a certain level of maturity in the literature; however, when associated with personal values, the number of published works becomes significantly reduced, characterizing the investigated field as an emerging topic.

To search for relevant studies, the scientific databases Web of Science and Scopus were selected due to their restrictive nature, including quality criteria and high-impact academic journals (Zhu & Liu, 2020). The search was conducted in November 2023. Keywords were searched in the title, abstract, and subject areas of articles, without establishing a time limit for the search.

In Web of Science, the search code used was: (TS = ("food safety" AND ("personal value*" OR "human value*" OR "Schwartz value*" OR "Rokeach value*")), returning 6 results. In Scopus, the code (TITLE-ABS ("personal value*" OR "human value*" OR "Schwartz value*" OR "Rokeach value*") AND ("food safety")) AND (LIMIT-TO (DOCTYPE, "ar")) was used, resulting in 52 documents.

After reading the 52 articles, those that did not address personal values or food safety as the main subject or only included the keywords in the references were discarded. Following these selection criteria, 19 articles met the research question. These works were published between 2007 and 2022. Four articles were found duplicated and were only counted in the Web of Science database. The diagram presented in Figure 1 illustrates the steps followed to select the articles that comprised the research corpus.

Figure 1 – Stages of article selection for the review



Source: Created by authors

After the selection of articles, these were meticulously analyzed, and their key information was extracted. Finally, a synthesis of knowledge was developed (Torraco, 2016).

4 ANALYSIS AND INTERPRETATION OF RESULTS

This section addresses the categorized analysis of the selected studies, providing an overview of the international scientific production concerning research that references personal values as guides for behavior in choices related to food safety. Additionally, it presents a synthesis of knowledge and an integrative framework produced from the literature analysis.

4.1 Categorization and analysis of the literature

Table 1 displays the main information about the selected studies: title, authors, journal, year of publication, and the category in which they were classified for analysis in this research. Five central categories were identified: i) cultural context; ii) risk perception and willingness to pay; iii) sustainable consumption; iv) animal welfare; and v) differences among sociodemographic profiles. These categories emerged organically from the data analysis. Based on the analysis of the articles, patterns, recurring themes and similarities between the studies were identified.

Table 1 – Characterization of the selected articles

(Continued)

| Title | Authors | Journal | Publication year | Category |
|---|---|------------------|------------------|---|
| Essential food and nutrition knowledge and skills for primary school children: Australian parents' opinions | Gozde Aydin, Claire Margerison, Anthony Worsley, Alison Booth | Health Education | 2022 | Differences among sociodemographic profiles |

Table 1 – Characterization of the selected articles

(Continued)

| Title | Authors | Journal | Publication year | Category |
|--|--|--------------------------|------------------|--|
| Personality traits, basic individual values and GMO risk perception of twitter users | Nathaniel Whittingham, Andreas Boecker, Alexandra Grygorczyk | Journal of Risk Research | 2019 | Risk perception and willingness to pay |
| Motivations for Industry Stakeholders in China, Vietnam, Thailand and Malaysia to Improve Livestock Welfare | Michelle Sinclair, Zulkifli Idrus, Duong van Nhiem, Suporn Katawatin, Brendon Todd, Georgette Leah Burns, Clive J. C. Phillips | Animals | 2019 | Animal welfare |
| Effective Segmentation of Organic Food Consumers in Vietnam Using Food-Related Lifestyles | Le Van Huy, Mai Thi Thao Chi, Antonio Lobo, Ninh Nguyen, Phan Hoang Long | Sustainability | 2019 | Sustainable consumption |
| How do human values influence the beef preferences of consumer segments regarding animal welfare and environmentally friendly production? | Yuta Sonoda, Kazato Oishia, Yosuke Chomeib, Hiroyuki Hirookaa | Meat Science | 2018 | Animal welfare |
| Household food providers' attitudes to the regulation of food marketing and government promotion of healthy foods in five countries in the Asia Pacific region | Anthony Worsley, Wei Wang, Judhiastuty Februhartanty, Stacey Ridley | British Food Journal | 2018 | Cultural context |

Table 1 – Characterization of the selected articles

(Continued)

| Title | Authors | Journal | Publication year | Category |
|--|---|--|-------------------------|---|
| Different Tubers for Different Consumers: Heterogeneity in Human Values and Willingness to Pay for Social Outcomes of Potato Credence Attributes | Jill Fitzsimmons, Gianni Cicia | Food System Dynamics | 2018 | Risk perception and willingness to pay |
| Sociodemographic Factors Differentiating the Consumer and the Motivations for Functional Food Consumption | Artur Kraus, Azzurra Annunziata, Riccardo Vecchio | Journal of the American College of Nutrition | 2017 | Differences among sociodemographic profiles |
| Determinants of Individual Attitudes Toward Animal Welfare-Friendly Food Products | Luigi Cembalo, Francesco Caracciolo, Alessia Lombardi, Teresa Del Giudice | Journal of Agricultural and Environmental Ethics | 2016 | Animal welfare |
| Food concerns and support for environmental food policies and purchasing | Anthony Worsley, Wei Wang, Melissa Burton | Appetite | 2015 | Sustainable consumption |
| The role of personal values in Chinese consumers' food consumption decisions. A case study of healthy drinks | Pui Yee Lee, Karen Lusk, Miranda Miroso, Indrawati Oey | Appetite | 2014 | Cultural context |

Table 1 – Characterization of the selected articles

(Continued)

| Title | Authors | Journal | Publication year | Category |
|---|---|---|-------------------------|---|
| Testing and validation of a hierarchical values-attitudes model in the context of green food in China | Toula Perrea, Klaus G. Grunert, Athanasios Krystallis, Yanfeng Zhou, Guang Huang, Yue Hue | Asia Pacific Journal of Marketing and Logistics | 2014 | Cultural context |
| Organic as a Heuristic Cue: What Spanish Consumers Mean by Organic Foods | Manuela Vega-Zamora, Francisco José Torres-Ruiz, Eva Maria Murgado-Armenteros, Manuel Parras-Rosa | Psychology and Marketing | 2014 | Sustainable consumption |
| Gender differences in the influence of food safety and health concerns on dietary and physical activity habits | Anthony Worsley, Wei Wang, Wendy Hunter | Food Policy | 2013 | Differences among sociodemographic profiles |
| The moderating role of human values in planned behavior: the case of Chinese consumers' intention to buy organic food | Yanfeng Zhou, John Thøgersen, Yajing Ruan, Guang Huang | Journal of Consumer Marketing | 2013 | Cultural context |
| Differences in Consumer Abstraction Levels as a Function of Risk Perception | Ramo Barrena, Mercedes Sánchez | Journal of Agricultural Economics | 2010 | Risk perception and willingness to pay |
| Organic Food Quality and Safety Perception Throughout Europe | Simona Naspetti, Raffaele Zanolli | Journal of Food Products Marketing | 2009 | Cultural context |

Table 1 – Characterization of the selected articles

| (Conclusion) | | | | |
|--|--|--|------------------|---|
| Title | Authors | Journal | Publication year | Category |
| Food Values | Jayson Lusk, Brian Briggeman | American Journal of Agricultural Economics | 2009 | Risk perception and willingness to pay |
| Consumers' Acceptance and Willingness to Buy GM Food | Efthimia Tsakiridou, Asterios Tsioumanis, George Papastefanou, Konstadinos Mattas | Journal of Food Products Marketing | 2007 | Cultural context |

Source: Research data

The listed articles were published in a wide variety of journals, including food education, environmental ethics, marketing, nutrition, and animal science journals. This demonstrates the interdisciplinarity of the area of consumer behavior in relation to food. Some authors published more than one article on the list. Anthony Worsley, for example, appears in four articles, published between 2013 and 2022. In three of these papers, Wei Wang collaborated with Worsley, focusing on food marketing regulations, healthy food promotion, and consumer motivations.

The years of publication of articles show a distribution over the last decade, with a concentration of publications between 2013 and 2019. This may reflect a growing academic interest in topics such as food risk perception, sustainable consumption and consumer behavior, reflecting changes in global social and political concerns.

Two of the articles were published in *Appetite*, in 2014 and 2015. This is an international research journal specializing in cultural, social, psychological, sensory and physiological influences on the selection and intake of foods and drinks. The *Journal of Food Products Marketing* is also mentioned twice in the articles listed, in 2007 and 2009. This journal publishes research on food marketing knowledge and experiences,

food marketing systems, their challenges and solutions, and food marketing theory and practice. Furthermore, it can be observed that the selected journals for publication vary in specialization, such as the “Journal of Risk Research” for risk perception studies, “Animals” for animal welfare, and “Sustainability” for sustainable consumption.

Regarding the countries of origin for the studies, there is significant diversity, including contributions from Australia, China, Vietnam, Thailand, and Malaysia, among others. This suggests a global approach in studies of food consumption and risk perceptions, reflecting common global concerns and distinct cultural contexts influencing consumer attitudes. In summary, the articles reveal a dynamic and interdisciplinary research field, exploring contemporary issues crucial to public health, sustainability, and food ethics.

The following topics refer to the analysis categories. Discussions regarding each article are presented, indicating the context in which they were empirically investigated, the methodology employed, and the main results and conclusions.

4.1.1 Cultural context

Evidence from Western-originated research has identified a strong presence of consumer collectivist values, general environmental attitudes, and specific attitudes towards green foods in models of values and attitudes. Conversely, in Eastern cultures, it is postulated that green foods are perceived by consumers as safer to consume, thus being more related to values such as health and reliability. In this context, Perrea et al. (2014) aimed to verify if attitudes towards food in a model of values and attitudes in China are determined as established in previous Western research.

They utilized a questionnaire that included items from Schwartz’s Values Survey (QPV) in addition to addressing the sociodemographic characteristics of the interviewees. Data collection focused on six major Chinese cities, involving a total of 479 participants, equally distributed among the six cities. The results validated past findings from the Western context. However, a relevant discovery was that collectivist

values also influenced attitudes related to technological progress, which in turn influenced attitudes towards green foods along with environmental attitudes. This finding contrasts with Western findings, which associate collectivist values more with a more critical stance towards technology.

Given the increasing demand for environmentally and personally safe food products and the growing organic food market in China, Zhou et al. (2013) studied the role of personal values as moderators of antecedents of consumers' "green" purchase intentions. The authors applied the Theory of Planned Behavior (Hauser, 2013; Ajzen, 2005) in their study, which postulates that a person's values influence specific outcomes by forming an attitude toward behavior.

Data collection took place in Guangzhou, involving 479 participants. The instrument used to collect data was Schwartz's Values Survey (QPV). As a result, it was indicated that self-transcendence values moderate the relationship between two antecedents and behavioral intentions: attitude toward purchasing organic food and perceived behavioral control. The stronger influence of these values indicates that Chinese consumers are oriented towards pro-environmental behavior, i.e., they purchase organic foods that benefit the environment and society (Zhou et al., 2013).

Similarly, Tsakiridou et al. (2007) proposed an investigation based on the Theory of Planned Behavior. The study sought to understand the influences of personal values, beliefs, attitudes, socioeconomic characteristics, and cultural backgrounds on the level of consumer acceptance and, consequently, the purchase intention regarding genetically modified foods.

The research was conducted with 433 respondents, simultaneously in Germany and Greece. Comparing the estimated models between German and Greek consumers, noticeable similarities and differences were recorded. For example, regarding the influence of personal values, the inclination towards "enjoyment of life" negatively affects the purchase intention of consumers in both countries, although it is significant

only for German consumers. Risk-taking is a value with a positive effect on the purchasing willingness of both German and Greek consumers while being ambitious is a value that positively influences only Greek consumers (Tsakiridou et al., 2007).

Cultural differences between Chinese and Western consumers make entering the Chinese market a challenge. Lack of knowledge about Chinese consumers' values is a major barrier to marketing foreign food products in China. Therefore, Lee et al. (2014) investigated the connections between attributes, consequences, and personal values associated with decisions on healthy beverage consumption in the Chinese market. Healthy beverages were classified as those capable of providing health benefits.

Using focus groups and the laddering technique through questionnaires were employed across six different companies, obtaining 570 responses. As a result, four of Schwartz's personal values were identified that influence Chinese consumers' decisions on consuming healthy beverages: security, hedonism, benevolence, and self-direction. Food safety was the primary concern of Chinese consumers in choosing healthy beverages. It was also found that Chinese consumers seek a tasty and nutritious beverage with good value for money (Lee et al., 2014).

Though becoming increasingly aware of organic food consumption, consumers still express concerns about the quality and food safety of these products. Thus, Naspetti and Zanolli (2009) investigated quality and food safety issues from the analysis of consumer value structures of organic food, aiming to identify intercultural differences. Adopting the laddering technique, 792 interviews were conducted in eight European countries involving consumers and non-consumers of organic products.

Results indicated that quality dimensions are among the most important aspects in any food purchase, including organic ones. Regarding safety, consumers conceive it as a unique value and not as an attribute of organic foods. At the attribute level, safety is linked to the benefit of "trust." At the value level, safety proved to be a peripheral value for most product categories in all countries, except for fruits and vegetables. A

small set of values is shared by all countries in all product categories, including “well-being,” “self-satisfaction,” and “health,” while all others depend on culture and product. Such heterogeneity reflects the distinct development of the organic market in Europe (Naspetti & Zanolli, 2009).

Worsley et al. (2018) sought to understand the attitudes of middle-class family food providers toward regulating food marketing and promoting healthy eating practices. The research involved 3,925 respondents from Indonesia, Melbourne, Shanghai, Singapore, and Vietnam. Findings showed broad support for regulating food marketing and government initiatives to encourage healthy food consumption. These attitudes are more strongly associated with personal values and the respondents' country of residence and, to a lesser extent, their demographic characteristics. Overall, two groups were identified: those holding personal values of an egalitarian or tradition-security-conformity nature – who disapproved of food marketing but supported government health promotion campaigns – and those with stronger hedonistic values who held opposing views.

4.1.2 Risk perception and willingness to pay

The effect of risk perception on consumer behavior has been demonstrated in previous studies. Barrena and Sánchez (2010) investigated the factors influencing consumers' purchase decisions (cognitive structures) by comparing two foods with different levels of perceived risk: beef and rice. Beef faced issues that led to a loss of consumer trust, whereas rice, although also associated with food safety concerns, is generally perceived by consumers as a safe product.

They employed the means-end methodology and laddering technique to collect data from 62 domestic food buyers in the Spanish region of Navarra. The results indicated that hedonic components of the foods played a predominant role in the cognitive structures of choice for both foods, alongside factors like ease of preparation and being perceived as traditional dishes. Concerning consumer-perceived risk,

significant differences were identified, with more food safety issues highlighted in the case of the product associated with higher risk. The presence of labels and quality brands, particularly in beef, was notably emphasized by consumers as a form of assurance for food safety (Barrena & Sánchez, 2010).

Whittingham, Boecker, and Grygorczyk (2019) investigated how personality traits and personal values affect perceptions of safety regarding genetically modified (GM) foods. They processed publicly available data from 522 Twitter accounts discussing the safety of GM foods. Their findings revealed that both values and personality traits influence attitudes. However, depending on the subject, one or the other was considered dominant. In the case of perceptions regarding GM foods, personality traits proved more influential than values in explaining attitudes, substantially moderating the effect of individual values on risk perception.

Fitzsimmons and Cicia (2018) explored heterogeneity in consumers' personal values and willingness to pay for social outcomes related to belief attributes that could have positive social impacts on early potato purchases. Characteristics such as production in specific territorial districts, freshness, sustainable cultivation methods, increasing competition with potatoes from other countries, and ethical certifications made the product an interesting case to test this relationship in modern markets. Data collection involved the application of the QPV (Willingness to Pay Questionnaire). The research was conducted online by a professional marketing company and involved a sample of 1,009 German consumers and 1,004 Italians.

Their results not only confirmed the relationship between personal values and food choices but also indicated a clear influence of personal values on willingness to pay for extrinsic belief attributes. Italian and German consumers expressing self-transcendence values showed a higher willingness to pay for attributes like Organic and Ethical Certification, demonstrating concern for others' well-being. On the other hand, consumers expressing conservation values had an increased willingness to pay

for attributes like Italian/German origin but a reduced willingness to pay for newer concepts like Ethical Certification, showing order, self-restraint, preservation of the past, and resistance to change (Fitzsimmons & Cicia, 2018).

Lusk and Briggeman (2009) aimed to identify consumers' food value systems – people's beliefs about the preference for outcomes of food purchase and consumption along a continuum of relative importance. The work also investigated the validity of the measured values by analyzing their relation to stated and revealed preferences for organic foods. The study sought to determine if consumers were willing to pay more for organic foods compared to conventional foods assuming they were the same brand. Using the better-worse scaling method due to disparities in measurement scales causing difficulties in interpersonal and intercultural comparisons, the authors surveyed 176 consumers from different regions of the United States via a questionnaire sent by mail.

The results revealed that, on average, safety was the most important food value for consumers. Nutrition, taste, and price were the next most relevant elements. Convenience and appearance held intermediate importance, while values like fairness, tradition, and origin were among the least important. Individuals for whom price was more critical declared a lower willingness to pay for organic foods than those for whom price was less critical. Furthermore, a strong relationship was found between naturalness and willingness to pay (Lusk & Briggeman, 2009).

4.1.3 Sustainable consumption

Worsley, Wang, and Burton (2015) start from the assumption that many consumers seem to be concerned about the impacts of food production on environmental sustainability, evident from the increasing demand for environmentally friendly food products. The article examines consumer opinions on food policy options and their predisposition to purchase pro-environmental

foods, along with their demographic, educational, and cognitive backgrounds, including food concerns and personal values of universalism. The assumed hypothesis is that consumers identifying with such values tend to support environmental policies and exhibit intentions to buy natural foods.

With a sample of 2204 Australian consumers who responded to a questionnaire, it was found that respondents with strong universalist values are more concerned about these issues than those with lower scores associated with universalism. Consequently, it was possible to conclude that, acting as mediators of food concerns, universalist values, along with perceptions of personal control and personal external influence, are related to pro-environmental food purchase backgrounds, as well as food environmental policies and food safety issues (Worsley, Wang & Burton, 2015).

Vega-Zamora et al. (2014) analyze the meaning and interpretations of the term “organic” and how they are integrated to explain consumption behavior. According to the literature reviewed by the authors, as organic foods can only be distinguished from conventional foods by the label, this word carries meanings compatible with consumer values. To conduct the research, the focus group technique was adopted with 32 participants from the cities of Madrid and Seville.

The main conclusion of the study is that the word “organic” plays an evocative role for consumers, as they attribute to it a set of characteristics that confer superiority to organic products over conventional ones. Consumers consider these foods better, even if they cannot explain why. It is assumed, then, that there is an internal construction of the meaning of the word “organic” in the minds of these individuals, albeit with different interpretations of the term. A lower value was attributed to the role organic foods play in preserving the natural and social environment compared to individualistic values such as health, safety, reliability, quality, and taste (Vega-Zamora et al., 2014).

Van Huy et al. (2019) employed the food-related lifestyles (FRL) approach to segment organic food consumers in Vietnam, a country where concerns about food

safety and quality are growing. The FRL model was chosen as it provides a better understanding of how consumers use food and its culinary aspects to achieve certain values in their lives. Data were obtained from 203 organic food consumers through a questionnaire containing descriptive variables and psychographic variables used for segmentation according to the FRL approach.

The research resulted in the construction of a customized FRL scale composed of five dimensions: innovation/novelty; attention to healthy foods; love for cooking; convenience; and love for local and organic foods. Additionally, through cluster analysis, three market segments were identified: "Conservatives," "Trendsetters," and "Unengaged." Conservatives care about the health aspects of food and prefer natural products. Trendsetters are interested in healthy foods, enjoy cooking, and hold a positive attitude toward organic foods and local food products. Unengaged individuals, on the other hand, show no concerns about food issues and exhibit lower consumption of organic foods (Van Huy et al., 2019).

4.1.4 Animal welfare

Considering that animal welfare involves social and human values, ethical concerns, and moral considerations, Cembalo et al. (2016) aimed to identify personal values that characterize individual attitudes toward animal welfare. They conducted a study with 2500 nationally representative individuals from five countries: Belgium, Denmark, Germany, Poland, and Greece. The Values Profile Questionnaire (VPQ) was employed for data collection.

In assessing the connection between personal values and attitudes toward animal welfare, the results showed that values related to self-transcendence (benevolence and universalism) are strongly associated with general attitudes toward animal welfare, especially those related to food choices. On the other hand, values related to self-enhancement and conservatism (power, achievement, and tradition) are considerably associated with less sensitivity toward animal welfare attitudes. Furthermore, there

were indications that a determinant of animal welfare in food choices is potentially associated with individual concerns regarding food safety issues (Cembalo et al., 2016).

According to Sinclair et al. (2019), the livestock industry is arguably the stakeholder with the greatest ability to make significant choices that impact animal welfare. For this reason, the authors investigated the motivations and perceived barriers by leaders in this industry for improving animal welfare. Eleven focus group sessions with 139 participants were conducted in Vietnam, Malaysia, Thailand, and China.

The results revealed a connection between knowledge and personal values, suggesting that they can influence each other. Specifically in Thailand, for instance, there were personal values toward animals (reducing suffering), but often a lack of necessary knowledge to provide better animal welfare. Approval of laws and policies was pointed out as important motivators for improving animal welfare. Food safety was raised as a potential motivational factor, and financial benefit emerged as a highly significant factor reported in all countries (Sinclair et al., 2019).

Considering that animal welfare and environmental impacts have been emphasized in sustainable livestock production, Sonoda et al. (2018) evaluated the impacts of animal welfare and ecological labels on beef purchasing decisions in Japan. Additionally, they investigated how human values influence beef consumer segments with information on animal welfare and environmentally friendly production. To collect data, the VPQ was applied, resulting in 846 responses.

Nearly 90% of consumers showed interest and willingness to purchase labeled beef. Consumer segments that exhibited positive preferences for such labeling were positively affected by openness to change and security but negatively impacted by self-enhancement. Therefore, it is understood that consumers who adhere to openness to change and security prioritize animal welfare and environmentally friendly labels, whereas those who adhere to self-enhancement assign less importance to labeled beef (Sonoda et al., 2018).

4.1.5 Differences among sociodemographic profiles

Aydin et al. (2022) aimed to identify the key aspects of Food and Nutrition Education (FNE) that parents consider essential to be taught in primary schools in Australia to enhance the current status of FNE in the school curriculum. Additionally, the research sought to understand how parents' demographic characteristics and personal values relate to the importance assigned to these topics. The study utilized an online cross-sectional survey administered via the Qualtrics platform, and eligible participants were Australian residents and parents/caregivers of children enrolled in primary schools in the country. Participants answered questions about the importance of 17 FNE topics and provided suggestions to improve food education. Furthermore, their personal values were assessed. Participants' demographic data were also collected to understand potential associations with their views on FNE.

Factor analysis identified three main components of FNE, highlighting parents' preference for information on health and nutrition as the most prominent, followed by topics related to food origins and environmental sustainability, and finally, food safety and preparation. Personal values, such as universalism-nature and hedonism, emerged as significant predictors of parents' scores on these components, indicating that parents with values more inclined towards universalism-nature tend to value FNE topics more, while hedonists place greater emphasis on food safety and preparation. Moreover, demographic factors such as educational level and primary language spoken at home also influenced parents' views on FNE topics, with university-educated parents demonstrating less importance attributed to food safety and preparation (Aydin et al., 2022).

Worsley, Wang, and Hunter's study (2013) had three objectives: i) to identify the role of food safety concerns as potential mediators between demographics, body weight, personal values, and eating and physical activity habits; ii) to examine whether items measured food safety concerns and eating and physical activity habits similarly

in gender groups; and iii) to assess whether the relationships between predictor variables, food safety issues, and eating and physical activity habits were the same among gender groups.

The study involved 1095 respondents residing in Victoria, Australia. The results indicated significant differences between genders in how food safety concerns impacted these relationships. For example, concerns associated with eating out habits and engaging in physical activity were observed among women but not among men. Age was also identified as a factor influencing such concerns only in relation to women. The authors concluded that eating and physical activity habits were directly affected by consumers' personal characteristics and values and indirectly by food safety issues (Worsley, Wang & Hunter, 2013).

Kraus, Annunziata, and Vecchio's research (2017) aimed to determine the role of gender, age, and education in evaluating multidimensional criteria for purchasing functional products as well as to pinpoint the most important reasons for purchasing and consuming these foods among consumers of different sociodemographic profiles. The sample consisted of 137 women and 63 men aged between 18 and 60 years. A questionnaire involving quality attributes, healthy properties, functional components, transportation, reasons for purchasing functional foods – including consequences and values – and sociodemographic characteristics were utilized.

Gender, age, and education differentiated the criteria influencing the decision to purchase functional foods. Young men attributed less importance to functional and psychological consequences: healthy eating, conscious choice, health promotion, and safety. Conversely, women, older individuals, and those with university education attributed greater importance to naturalness, nutritional value, freshness, food safety, and quality assurance. Functional components are significantly more critical for women than for men. Young consumers are more open to highly processed high-tech food (Kraus, Annunziata & Vecchio, 2017).

4.2 Knowledge synthesis

Concerns about food safety play a central role in the lives of various consumer segments. However, studies have revealed that sociodemographic factors differentiate motivations for food consumption. Consumer groups significantly differ in evaluating the significance of variables when making food choices. Women, the elderly, and individuals with a university education attribute greater importance to food safety issues.

Higher levels of concern have also been observed in consumers who hold strong universalism values. While many researchers have confirmed this relationship between universalist values and the consumption of healthy and safe foods, some studies question this matter. A significant amount of research has concluded that the motives for consuming this type of food are primarily individualistic, related to health and safe eating, or hedonistic characteristics such as food quality and taste.

Cultural differences are important variables in explaining the relationship between personal values and food consumption. Researchers comparing results from Western and Eastern studies discovered that consumers from both parts are guided by altruistic predispositions and collectivist values. However, while Western consumers tend to criticize technology concerning green foods, Eastern consumers view technological progress as a positive determinant of food safety and environmental preservation in food production.

Studies confirm a strong relationship between consumers' personal values and their food choices regarding willingness to pay for a particular product. It has also been evidenced that, just like personal values, personality traits significantly contribute to explaining attitudes and behaviors. However, depending on the context, one or the other may become more relevant. In the analysis of genetically modified foods, for example, inherent personality characteristics dominated over personal values regarding risk perception.

The Theory of Planned Behavior is an example of an approach that helps better understand the subject. This theory assumes that behavior depends on intention, which

is influenced by the attitude toward the behavior, subjective norms, and perceived behavioral control. These factors, in turn, can be influenced by deeper elements such as beliefs and values. Thus, the Theory of Planned Behavior assumes that attitudes fully mediate the relationship between values and behavior. In other words, values do not directly predict purchasing behavior but rather predict attitudes, indicating a hierarchical organization of value-attitude-behavior (Homer & Kahle, 1988). In the context of this study, for example, the interaction between positive attitudes (formed by personal values), favorable subjective norms (influenced by social and cultural values), and high perceived behavioral control (reinforced by self-discipline values) leads to a strong intention to adopt behaviors linked to food safety.

The demand for environmentally friendly products, such as organic foods, essential for environmental sustainability, is growing. Studies suggest that consumers are motivated to buy organic foods because they perceive them as safer, healthier, tastier, and more environmentally friendly compared to conventional foods. There is a significant correlation between the importance of naturalness (production without the use of modern technologies) and the willingness to pay for organic foods. Thus, it is understood that naturalness is a key motivating factor behind people's preferences for such foods. However, it should be noted that consumers' criteria for choosing organic foods, such as quality and food safety, are eventually complex, vague, and even contradictory. This necessitates further investigation to understand the real needs of these consumers and define practices that consolidate different conceptions of product attributes.

Alongside environmental protection and sustainable development, animal welfare proves to be a globally important social issue for consumers. They are increasingly aware of animal production practices, leading the animal food industry to make its production processes more acceptable. Studies addressing the subject show that animal welfare is a multifaceted construct that includes cognitive and emotional dimensions, capable of influencing consumers' food choices. There is evidence of

consumers' willingness to pay a higher price for animal-derived products obtained from production processes that enhance animal welfare.

Another relevant issue is that in situations involving serious food safety problems, perceived risk predominates when compared to other factors in the cognitive process of food choice. This observation is important for all members of the food chain as well as public and private crisis management agencies. For traders specifically, investing in food labeling attributes, especially those with a higher perception of risk regarding food safety, is fundamental.

Concerns about safety issues can be effective mediators of eating habits, which can generate policy and communication implications. Therefore, knowledge about which product attributes consumers use to achieve desired benefits allows for a clearer specification of product development. By adapting their marketing plans to different value segments, focusing on consumers whose priorities align with their product, companies are likely to evoke favorable attitudes towards purchasing the same.

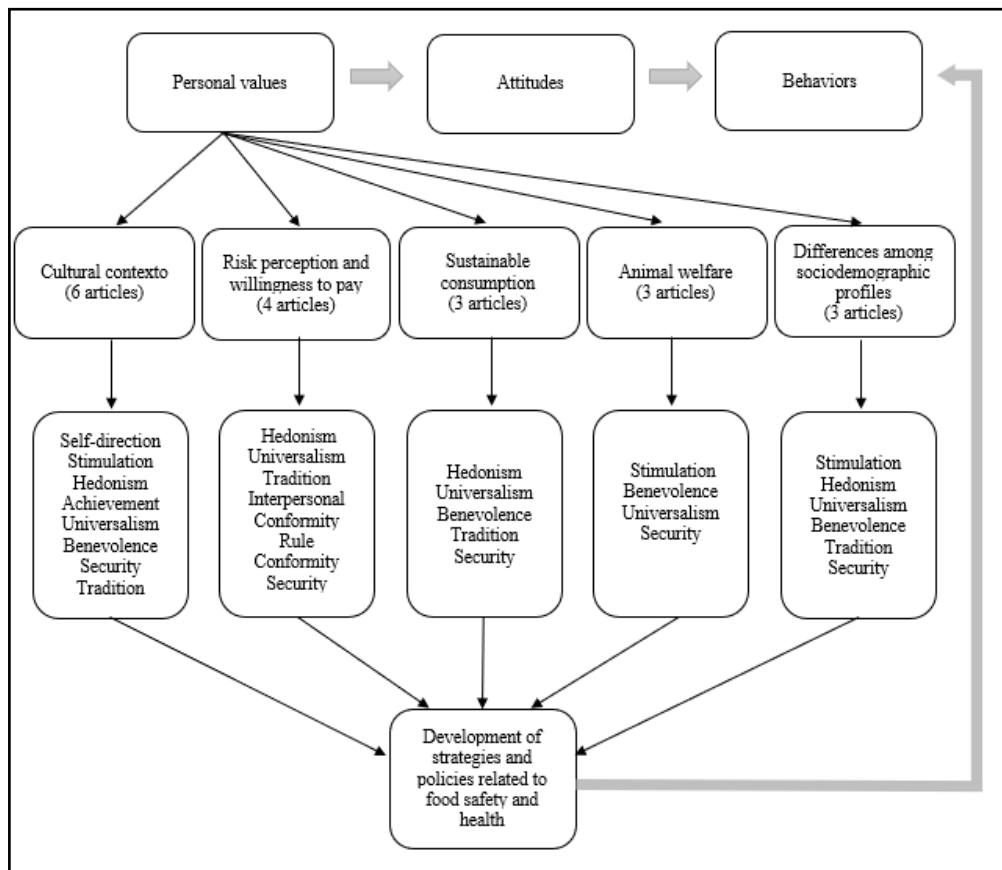
The framework presented in Figure 2 summarizes the main themes identified in the literature and the personal values evidenced in the context of food safety in each discussed subject.

The initial idea is centered around the value-attitude-behavior chain, from which Homer and Kahle (1988) explain that values significantly influence the formation of attitudes, which in turn lead to specific behaviors. Within the context of this study, five main themes stand out in the literature: the similarities and differences between personal values considering the cultural context of consumers; the effects of personal values on risk perception and willingness to pay for certain product attributes; personal values reflected in concerns about sustainability in food consumption; the personal values guiding consumer awareness regarding animal welfare; and perceived value differences among consumers with different demographic profiles.

In Figure 2, personal values, based on Schwartz's classification (2017), that emerged in the corresponding research for each identified theme can be observed.

Assuming personal values as significant influencers in food consumption, these are aspects that should be considered for the development of strategies and policies for food safety and health aimed at impacting consumer purchasing behavior.

Figure 2 – Integrative framework: personal values and food safety



Source: Created by authors

In the context of the presented research, food safety is a recurring concern and is often associated with personal values, reflecting individuals' priorities regarding the food they consume. The pursuit of safety is identified in studies as part of a set of values that guide consumers' food choices. This value is perceived as a determining factor in the decision-making process of purchasing and consuming food, directly influencing consumer attitudes toward food products.

Food safety is inherently linked to various values fundamental to individuals. Trust in the origin and quality of food, as well as the assurance that it is free from

contamination, directly reflects health and well-being values. Furthermore, food safety is often associated with ethical and moral values, such as concern for social justice and equitable access to adequate food. Cultural and traditional values also play a crucial role, impacting food choices and production practices. Food safety, therefore, intertwines with a variety of personal, cultural, ethical, and social values, highlighting the importance of these elements in ensuring safe and nutritious food.

4.3 Suggestions for future research

While some studies have examined the impacts of personal values on risk perception regarding food, there is almost no research addressing personality traits in this regard. It is recommended that future research include personality traits when measuring risk perception across various research areas. Methods such as validated personality trait assessment questionnaires, associated with specific food choice contexts, can be used to analyze these relationships in different demographic groups.

There is an assumption that decisions related to the consumption of genetically modified foods tend to be guided by emotion rather than cognition. Further research involving this hypothesis would be crucial to validate it and possibly explain why personality traits are more important than values in determining the purchasing intentions of these foods. Studies that integrate psychometric analyses of personality traits with choice experiments involving genetically modified foods can be useful in understanding how personality traits shape purchase intentions.

Studying personal values influencing support for environmental policies can be extended to other types of behavior. Future research could investigate, for example, the cognitive architecture underlying support for a variety of food and health policies, such as food marketing to children, food supplement regulations, or health insurance programs.

The results of studies linking personal values to food consumption behavior vary according to the country, culture, and market development situation. Therefore, it

would be interesting to conduct research encompassing different geographic contexts to understand these differences, delve deeper into them, and conduct comparative analyses. Longitudinal studies with representative samples across various cultures could elucidate how cultural differences impact food values and behaviors over time.

Similar to the study on consumer interpretations of the term “organic” and its effects on organic food consumption, other terms that impact meaning construction could be investigated to identify their relationships with consumers’ personal values. Qualitative research methods, such as focus groups and in-depth interviews, could be used to explore such associations.

Another relevant aspect to be explored is the impact of personal values on perceptions regarding the use of technologies employed in food cultivation. Future investigations could include a contextual analysis of technology use in different food production models (conventional, organic, family farming, among others). Additionally, the perceived effects of technologies on quality, food safety, sustainability, and animal welfare can be explored. This would help understand how consumers’ personal values shape their perceptions of the benefits and drawbacks of food technologies concerning specific aspects of food production.

Given the increased consumer interest in local products and food origin labels, further research could attempt to understand which food safety issues consumers consider during purchases and how they could be better addressed to convey the product’s value. This would help identify key aspects influencing purchase decisions, such as trust in local producers, quality certifications, traceability, and transparency in the production chain.

Considering the influence of sociodemographic factors like gender, age, and education on perceptions of food safety, it becomes relevant to verify if food policies and communication aimed at promoting food safety align with the characteristics and personal values of different market segments. Methods like demographic data analysis and opinion surveys can assess the suitability of communication strategies.

Comprehensive studies could include purchase intentions alongside the analysis of personal values, based on the Theory of Planned Behavior, which is an important model used in analyzing food purchase behavior. It is recommended to explore how individual values correlate and influence purchasing intentions for food. For example, investigating if certain values, like environmental concern, health, or tradition, impact attitudes and purchase intentions for organic, processed, and locally sourced, among other foods.

In parallel with the study of personal values, Food-related Lifestyles (FRL) can be investigated in different contexts, aiming to modify or enhance existing scales. Dimensions such as environmental concern and food safety, for instance, could be integrated into current FRL scales. Similarly, it would be valid to analyze if external events (economic changes, health crises, awareness campaigns, among others) impact food choices and food-related lifestyles.

One advantage of identifying values related to food consumption is that these constructs tend to be stable over time. However, even concepts like “culture,” which are considered relatively unchanging, are subject to changes. Therefore, longitudinal studies could be useful in understanding how and when certain food values related, for example, to health concerns, sustainability, and food origin, among others, persist or change in different contexts and periods.

5 FINAL CONSIDERATIONS

This study aimed to synthesize and expand theoretical knowledge about personal values in the context of consumption behavior regarding food safety. This goal was achieved by: i) analyzing and categorizing selected studies; ii) generating knowledge synthesis and a conceptual framework comprising the results presented in the literature; and iii) identifying potential fields for new research development.

The studies analyzed in this research seek to identify personal values that strongly influence the purchase of foods considered healthy/safe. To understand

consumer value systems, the Values Profile Questionnaire (VPQ) and the laddering technique are commonly used, along with collecting sociodemographic data. It was also observed that the value-attitude-behavior hierarchy and the Theory of Planned Behavior are utilized as theoretical frameworks in such research.

Although personal values are not unique and direct predictors of consumer behavior, understanding the relationship between these values and food safety issues associated with consumer choices is of considerable importance. As seen in the research results, empirical studies provided important contributions to the understanding of how values are expressed in trends in consumers' daily lives.

The studies analyzed are relevant to both literature and practice. Examining the influences on food purchases by consumers is fundamental, as these choices can have major impacts on the properties of the food supplied to the market. Likewise, the search for identifying mediators in consumer relations is relevant for food safety and health promotion policies.

This integrative review contributes to advancing knowledge on the topic by connecting elements related to personal values and food safety present in the literature. Furthermore, by describing the knowledge in its current state, it serves as a starting point for new theoretical and empirical studies. A limitation of this study is the reliance on only two scientific databases, Web of Science and Scopus, which may have restricted the scope of the research corpus. This could have led to the exclusion of relevant studies published in other databases, potentially affecting the comprehensiveness of the review. For future literature reviews, it is recommended to select other databases to search for additional studies to enrich the research corpus and expand understanding of the topic.

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| 3. Development of theoretical propositions (theoretical work) | √ | √ | √ |
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