

GREEN INTENTIONS VS. ACTUAL BEHAVIOUR IN SUSTAINABLE FOOD SERVICE: A SYSTEMATIC LITERATURE REVIEW**Anil Bukya**

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Email id: anindita.ghosh@sspu.ac.in**ABSTRACT**

Sustainable food service has emerged as a critical arena in the global effort to reduce the environmental footprint of human consumption. Despite increasing public awareness of environmental challenges and a measurable rise in pro-environmental attitudes, a well-documented and persistent disconnect exists between consumers' stated green intentions and their actual food-related behaviors. This systematic literature review examines 68 peer-reviewed studies published between 2000 and 2026 to investigate the nature, extent and underlying mechanisms of this attitude-behavior gap specifically within the food service context encompassing restaurants, cafeterias, catering services and food retail environments. Drawing on databases review synthesizes findings across multiple theoretical frameworks, including the Theory of Planned Behavior (TPB), the Value-Belief-Norm (VBN) model and Cognitive Dissonance Theory. The analysis identifies major structural, psychological, social and informational barriers that prevent green intentions from translating into sustainable purchasing and consumption actions. Price premiums, habitual decision-making, information asymmetry, greenwashing skepticism and social dining norms consistently emerge as the most influential inhibitors. Conversely, eco-labelling, behavioral nudging, value-aligned communication and trusted green branding are identified as effective enablers. The review also highlights significant gaps in longitudinal research, cross-cultural validation and the integration of digital and post-pandemic consumer behavior shifts. The findings carry important implications for food service operators, sustainability marketers, policymakers and researchers committed to closing the green intention-behavior gap.

KEYWORDS: sustainable food service, attitude-behavior gap, green intentions, pro-environmental behavior, Theory of Planned Behavior, eco-labelling, sustainable consumption, food choice, green marketing

1. INTRODUCTION

Few contradictions in contemporary consumer research are as well-established and as frustrating for practitioners as the gap between what people say they will do and what they actually do, particularly in the domain of environmental sustainability. People frequently express strong commitments to protecting the environment, reducing carbon emissions and making ethically responsible consumption choices. Yet, when confronted with real-world purchase decisions in a restaurant, at a food counter, or while ordering from a delivery app those same individuals often choose convenience, taste and price over ecological responsibility. This divergence between attitude and behavior has come to define one of the central challenges of the sustainability transition in the food service sector.

The food service industry bears a substantial and often underappreciated share of responsibility for global environmental degradation. The sector contributes significantly to greenhouse gas emissions through food production, transportation, storage, preparation and waste disposal. According to estimates across multiple studies, the food system as a whole accounts for approximately 25–30% of global greenhouse gas emissions (Poore & Nemecek, 2018; Rockström et al., 2020), with food service operations amplifying these impacts through energy-intensive cooking, single-use plastics and food waste. As awareness of climate change has deepened across society, consumers have increasingly expressed preferences for greener food options. Surveys across North America, Europe and Asia-Pacific consistently reveal that majorities of consumers report concern about environmental issues and express willingness to choose or even pay more for sustainable food products (Vermeir & Verbeke, 2006; Aertsens et al., 2009; Wang et al., 2020).

However, these stated preferences rarely translate proportionally into consistent purchasing behavior. Studies across various food service contexts from fast food restaurants to university canteens to fine dining establishments reveal that sustainable menu options remain under selected relative to their conventional equivalents, even when they are clearly available, attractively priced, and well-communicated (Schubert et al., 2010; DiPietro et al., 2013; Sirieix et al., 2013). This phenomenon, often referred to in the literature as the green gap, intention-behavior gap, or attitude-behavior inconsistency, has attracted scholarly attention across disciplines including consumer psychology, environmental sociology, behavioral economics, hospitality management and marketing.

Despite a growing body of empirical research addressing this issue from multiple angles, the literature remains fragmented. Studies vary widely in their theoretical orientation, methodological approach, geographic scope and definition of sustainable behavior. Some focus narrowly on organic food purchasing; others examine plant-based meal choices, food waste reduction, fair-trade product selection, or willingness to patronize certified green restaurants. This diversity of foci, while enriching the field, complicates efforts to synthesize findings into coherent and actionable insights.

This systematic literature review addresses this gap by providing a comprehensive, structured synthesis of research published between 2000 and 2026 on the attitude-behavior gap in sustainable food service. The review seeks to answer four key questions: (1) What theoretical frameworks have been used to understand the intention-behavior gap in sustainable food service? (2) What barriers most consistently inhibit the translation of green intentions into actual sustainable food behaviors? (3) What enablers or interventions have been shown to bridge or narrow the gap? (4) What gaps remain in the current literature and what directions should future research pursue?

By answering these questions through a rigorous and transparent review process, this paper aims to consolidate existing knowledge, identify points of consensus and contention; offer practical and theoretical implications for stakeholders across the food service industry.

2. Background and Conceptual Context**2.1 The Sustainable Food Service Landscape**

The food service sector encompasses a broad spectrum of operations including restaurants of all service types, institutional food providers such as school and hospital canteens, catering companies, fast food chains, coffee shops and increasingly digital food delivery platforms. What unites these diverse contexts is their common reliance on food supply chains that carry significant environmental consequences: land use, water consumption, packaging waste, energy use and the generation of organic waste at various stages of the production-to-consumption chain.

From the early 2000s onward, growing concern about climate change, resource depletion and food insecurity stimulated interest in transitioning food systems toward greater sustainability. International frameworks including the United Nations Sustainable Development Goals (SDGs), particularly Goal 12 on Responsible Consumption and Production and Goal 13 on Climate Action placed sustainable consumption at the Centre of global policy agendas (United Nations, 2015). Scholars began directing attention toward the role of individual consumer behavior as both a symptom of and a potential solution to unsustainable food systems (Stern, 2000; Jackson, 2005).

Within this context, sustainable food behavior came to encompass a range of actions: purchasing organic or locally sourced produce, reducing meat consumption, minimizing food waste, choosing items with lower carbon footprints, patronizing restaurants with certified environmental credentials and avoiding excessive packaging. These behaviors share the common feature that they require consumers to override default, habitual, or convenience-driven patterns of decision-making in favor of options that carry some personal cost whether financial, cognitive, or hedonic in exchange for an environmental benefit that is distant, diffuse and difficult to perceive individually (Gifford, 2011).

2.2 Defining the Attitude-Behavior Gap

The concept of an attitude-behavior gap the inconsistency between stated attitudes or intentions and actual behavior is not unique to environmental consumption. Researchers have documented similar gaps in health behavior, financial decision-making and political participation. However, the green attitude-behavior gap has attracted particular scholarly attention because its consequences are systemic and because the gap appears to widen rather than narrow even as public environmental awareness increases (Follows & Jobber, 2000; Young et al., 2010).

In the food service context, the gap manifests distinctly because of the uniquely real-time, social, hedonic and habitual nature of food choices. Unlike a considered purchase decision such as buying a car or choosing an energy supplier food decisions in restaurants and food outlets are often made quickly, under social influence, in conditions of incomplete information, and with the primacy of sensory pleasure rather than environmental utility (Pohjanheimo & Sandell, 2009; Spaargaren, 2011). This makes the food service environment both a particularly challenging and a particularly important site for understanding and addressing the gap.

Early foundational work by Follows and Jobber (2000) distinguished between environmentally responsible consumers who both hold green values and demonstrate consistent purchasing behavior and those who hold green values but fail to translate them into behavior due to various constraints. This distinction has since been refined across hundreds of studies that seek to decompose the gap into its contributing variables.

3. Methodology

3.1 Review Protocol and Design

This review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure transparency, reproducibility and methodological rigor (Page et al., 2021). The review protocol was designed to address the four research questions outlined in the introduction through a structured, systematic search and synthesis of peer-reviewed literature.

3.2 Search Strategy and Databases

A comprehensive literature search was conducted across five major databases: Scopus, Web of Science, Google Scholar, PubMed/MEDLINE and JSTOR. The search was limited to peer-reviewed articles published in English between January 2000 and March 2026. The year 2000 was chosen as the starting point to capture the emergence of sustainability as a mainstream academic and consumer discourse topic (Fig 1).

3.3 Inclusion and Exclusion Criteria

Studies were included if they (a) examined some aspect of consumer attitude, intention, or behavior in relation to sustainable food consumption; (b) were set in or directly relevant to a food service context; (c) were published in peer-reviewed academic journals; and (d) were empirically grounded or provided substantive theoretical contributions. Studies were excluded if they (a) focused exclusively on agricultural production without considering consumer behavior; (b) examined non-food environmental behaviors; (c) were conference proceedings, dissertations, or grey literature; or (d) were not available in full text. Two independent reviewers screened all titles and abstracts and subsequently reviewed full texts of eligible studies, with disagreements resolved by consensus.

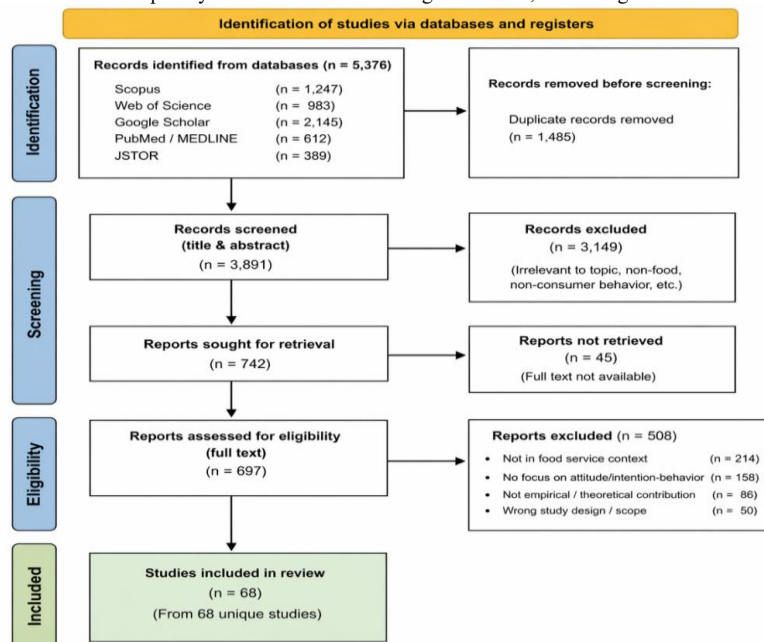


Fig 1: PRISMA flow Diagram of Study Selection Process

3.4 Data Extraction and Synthesis

Data were extracted systematically from each included study using a structured coding sheet capturing information on: authorship and year, geographic context, theoretical framework, research method (quantitative, qualitative, mixed), sample characteristics, key findings regarding the intention-behavior gap, identified barriers, identified enablers and implications. Given the heterogeneity of methods and outcomes across included studies, a narrative synthesis approach was adopted, supplemented by thematic analysis to identify recurring patterns, points of convergence and areas of disagreement across the literature (Popay et al., 2006).

4. Theoretical Frameworks in the Literature

One of the most striking features of the literature on the green intention-behavior gap in food service is the diversity and sometimes fragmentation of its theoretical foundations. Researchers have drawn from social psychology, behavioral economics, environmental sociology and marketing science to construct models of sustainable food behavior. Table 1 summarizes the major theoretical frameworks identified across the included studies.

Table 1: Major Theoretical Frameworks Identified in the Literature

Theoretical Framework	Origin / Key Author(s)	Core Premise	Application in Food Service Research
Theory of Planned Behavior (TPB)	Ajzen (1991)	Predicts behavioral intention based on attitude, subjective norms and perceived behavioral control	Most widely applied; explains up to 40% variance in green food intentions
Value-Belief-Norm (VBN) Theory	Stern et al. (1999)	Links personal values to pro-environmental norms and behaviour	Explains altruistic motivations; links values to willingness-to-pay for sustainable food
Norm Activation Model (NAM)	Schwartz (1977)	Activates personal norms through awareness of consequences and ascription of responsibility	Applied to organic and local food purchasing decisions
Social Identity Theory	Tajfel & Turner (1979)	Group membership influences individual behavior through in-group norms	Social dining pressure and peer influence on sustainable menu choices
Cognitive Dissonance Theory	Festinger (1957)	Discomfort from inconsistency between beliefs and behavior drives rationalization	Explains why consumers hold green values yet choose unsustainable options
Technology Acceptance Model (TAM)	Davis (1989)	Perceived usefulness and ease mediates acceptance	Applied to digital eco-menus and sustainable food apps
Self-Determination Theory (SDT)	Deci & Ryan (1985)	Intrinsic vs. extrinsic motivation regulates autonomous behavior	Explains internal vs. external drivers of sustainable food choices
Stimulus-Organism-Response (S-O-R)	Mehrabian & Russell (1974)	Environmental stimuli influence internal states and behavioral responses	Restaurant ambience, eco-labelling effects on sustainable consumption

4.1 Theory of Planned Behavior

By far the most frequently employed theoretical framework in this literature is the Theory of Planned Behavior (TPB) developed by Ajzen (1991). The TPB posits that behavioral intention which is the immediate antecedent of behavior is jointly determined by attitude toward the behavior, subjective norms and perceived behavioral control. In the food service context, this translates to the proposition that a consumer's intention to choose a sustainable food item is shaped by how positively they evaluate the choice (attitude), what they believe significant others expect of them (subjective norms) and how capable they believe themselves to be of enacting the choice (perceived behavioral control). Numerous studies confirm the explanatory power of the TPB in predicting green food intentions (Aertsens et al., 2009; Chen & Tung, 2014; Pham et al., 2019), but also consistently highlight that intentions explain only a portion of actual behavior a phenomenon Sheeran (2002) formally termed the intention-behavior gap.

Extensions of the TPB that incorporate additional variables including environmental concern, moral norms, green self-identity and past behavior tend to improve predictive power but also complicate parsimony (Han et al., 2010; Yazdanpanah & Forouzani, 2015). This suggests that while the TPB provides a robust starting scaffold, the food service context introduces complexities that require augmentation of the basic model.

4.2 Value-Belief-Norm Theory

The Value-Belief-Norm (VBN) theory advanced by Stern et al. (1999) offers a complementary perspective that situates consumer behavior within a chain of causality extending from deep personal values through environmental worldviews and beliefs about consequences to personal moral norms and ultimately to behavior. Applied to food service, the VBN framework has been used to explain why consumers who express biospheric values concern for the natural world for its own sake are more likely to endorse sustainable food options even at a financial cost (Steg et al., 2005; de Groot & Steg, 2008). The framework has also been extended by Thøgersen and Olander (2006), who showed that value spillover effects can link sustainable behaviors in one domain to green choices in others, with implications for how food service operators might leverage broader sustainability commitments.

4.3 Cognitive Dissonance and Identity Theories

Cognitive Dissonance Theory (Festinger, 1957) offers a psychologically grounded explanation for the persistence of the attitude-behavior gap. When individuals who hold pro-environmental values consume unsustainably, they experience psychological discomfort from the inconsistency. Rather than change their behavior which involves real costs many individuals reduce this dissonance by adjusting their cognitions: downplaying the environmental impact of their choices, questioning the reliability of green claims, or rationalizing that individual actions are inconsequential (Haws et al., 2014; Whitmarsh et al., 2011). This dissonance-reduction dynamic is compounded in the food service context, where hedonic motivations and social pleasures of eating make behavior change particularly resistant. Social Identity Theory (Tajfel & Turner, 1979) contributes the insight that group membership and social identity are powerful determinants of food choices. Consumers eating in group settings are more susceptible to social influence and less likely to deviate from group norms even if those norms favor conventional over sustainable options. Conversely, green consumer identity defining oneself as an environmentally responsible person has been shown to strengthen the intention-behavior link in food choices (Sparks & Shepherd, 1992; Whitmarsh & O'Neill, 2010).

5. Barriers to Sustainable Food Behavior

The included literature identifies a wide array of barriers that prevent green intentions from materializing into sustainable food choices. These barriers operate at individual, social and structural levels and their relative importance varies across geographic, demographic and contextual factors (Table 2).

Table 2: Key Barriers to Sustainable Food Behavior in Food Service Contexts

Barrier	Category	Description	Frequency	Key References
Price Premium Barrier	Economic	Sustainable and organic food items cost 15–40% more than conventional options	High	Thøgersen & Olander (2006); Vermeir & Verbeke (2006)
Information Asymmetry	Cognitive	Consumers lack knowledge about environmental impacts of food choices	High	Follows & Jobber (2000); Rex & Baumann (2007)
Convenience & Habit	Behavioral	Habitual food choices are automatic and difficult to disrupt	High	Verplanken & Aarts (1999); Spaargaren (2011)
Social Norms & Peer Pressure	Social	Social dining contexts privilege taste and social approval over environmental concerns	Moderate	Cialdini et al. (1990); Schultz et al. (2007)
Greenwashing Skepticism	Trust	Consumer distrust of green claims reduces sustainable food purchasing	Moderate	Chen & Chang (2013); Polonsky et al. (2010)
Limited Menu Availability	Structural	Restaurants offer few or unclear sustainable options	Moderate	Schubert et al. (2010); Hu et al. (2010)
Sensory Expectations	Hedonic	Consumers expect sustainable options to taste inferior	Moderate	Pohjanheimo & Sandell (2009); Schuldt & Schwarz (2010)
Temporal Discounting	Psychological	Immediate gratification overrides future environmental concern	Moderate	Hardisty & Weber (2009); Gifford (2011)
Low Perceived Consumer Effectiveness	Motivational	Individuals doubt their actions can make a meaningful difference	Moderate	Ellen et al. (1991); Roberts (1996)
Lack of Green Infrastructure	Operational	Food service operators lack supply chains, skills, and systems for sustainable sourcing	Moderate	Bohdanowicz (2006); Hsieh (2012)

5.1 Price Premiums and Economic Constraints

The most consistently documented barrier across the literature is the price premium associated with sustainable food options. Organic, locally sourced, fair-trade and environmentally certified food items typically cost significantly more than their conventional counterparts a differential that can range from 15% to over 40% depending on product category and context (Vermeir & Verbeke, 2006; Lusk & Norwood, 2011). While affluent, highly educated consumers may be willing and able to absorb this premium, price sensitivity among lower-income demographics creates a structural inequality in sustainable food access that the literature increasingly recognizes as a social justice issue (Sirieix et al., 2013; Nuttavuthisit & Thøgersen, 2017).

Importantly, the relationship between price and sustainable purchasing is not straightforward. Several studies demonstrate that stated willingness-to-pay for sustainable food items substantially overestimates actual payment behavior in real purchase contexts a manifestation of hypothetical bias that complicates survey-based research (Carlsson & Martinsson, 2001; Lusk & Norwood, 2011). Moreover, Thøgersen and Olander (2006) found that price sensitivity interacts with environmental concern: consumers with strong green values demonstrate lower price sensitivity for sustainable options, suggesting that price is as much a motivational barrier as an absolute financial constraint.

5.2 Habitual Decision-Making

A second major barrier is the habitual, automatic nature of food decision-making. Consumer research consistently demonstrates that food choices, particularly in familiar restaurant and retail contexts, are heavily driven by ingrained habits rather than deliberate reasoning (Spaargaren, 2011; Verplanken & Aarts, 1999). Strong habits effectively short-circuit the intention-to-behavior pathway by directing action toward established patterns before conscious deliberation can occur. This means that even consumers with genuine green intentions may fail to enact them simply because their habitual food choices run on cognitive autopilot.

Wansink and Sobal (2007) estimated that the average individual makes over 200 food-related decisions per day, the vast majority of which are unconscious. Breaking habitual food patterns therefore requires either a significant disruption event or the systematic redesign of the decision environment a challenge that demands engagement from food service operators, not merely from consumers themselves.

5.3 Information Asymmetry and Complexity

Consumers face substantial challenges in obtaining, processing and trusting information about the environmental impact of food choices. Environmental performance information is complex, multi-dimensional, and context-dependent: a locally sourced product may have a lower transport footprint but a higher land-use footprint than an imported equivalent; an organic label guarantees certain production standards but does not necessarily guarantee lower carbon emissions (Garnett, 2011). This complexity overwhelms the bounded rationality of ordinary consumers and creates conditions in which simplification heuristics brand loyalty, price-as-quality assumptions, familiar labels dominate decision-making over rigorous environmental assessment (Rex & Baumann, 2007; Grunert et al., 2014).

The problem is compounded by the proliferation of green claims and environmental labels, which creates confusion and can paradoxically increase skepticism rather than trust (Polonsky et al., 2010). When consumers cannot confidently distinguish genuine sustainability credentials from marketing embellishments a practice widely known as greenwashing they may disengage entirely from environmental information as a decision input (Chen & Chang, 2013).

5.4 Social and Contextual Influences

The social context of eating deserves particular attention in food service research. Unlike solitary consumption decisions, restaurant and catering choices frequently occur in social settings where individual preferences are subordinated to group dynamics, social approval and shared norms. Several studies document that consumers eating in groups are significantly less likely to choose sustainable options than those eating alone, reflecting the subordination of personal environmental values to social harmony and impression management (Mollen et al., 2013; Trudel & Cotte, 2009).

This dynamic is particularly pronounced in professional and hospitality dining contexts, where the hedonic and relational dimensions of the meal taste, variety, generosity, status signaling are paramount, and environmental considerations are perceived as incompatible with pleasurable dining. Sirieix et al. (2013) found that French restaurant consumers associated organic and sustainable menu items with asceticism and social awkwardness, actively avoiding them in social dining contexts to avoid stigmatization.

5.5 Greenwashing Skepticism and Trust Deficits

Trust in green claims made by food service operators has been identified as a critical mediating variable between intentions and behavior. Consumers who are skeptical of corporate sustainability communications are significantly less likely to act on green intentions, even when those intentions are strong (Chen & Chang, 2013; Nyilasy et al., 2014). This skepticism is often well-founded: documented instances of greenwashing from misleading eco-labels to unsubstantiated carbon-neutral claims have eroded consumer confidence in corporate sustainability communications across industries, with the food sector particularly affected given its long history of contested marketing claims (Polonsky et al., 2010).

The consequence for food service operators is a credibility trap: even genuinely sustainable operators struggle to communicate their credentials convincingly in an environment of generalized skepticism. Third-party certification and independent verification emerge from the literature as the most effective trust-building strategies, but these come with their own costs and complexity burdens (Thøgersen, 2000; Grunert et al., 2014).

5.6 Enablers and Interventions Bridging the Gap

Despite the formidable array of barriers documented in Section 5, the literature also identifies a range of strategies, interventions, and contextual conditions that can meaningfully narrow the intention-behavior gap in sustainable food service. Table 3 summarizes the principal enablers identified across the reviewed studies.

Table 3: Interventions for Sustainable Food Behavior

Enabler	Category	Mechanism	Key References
Eco-labelling & Certification	Informational	Third-party labels (organic, fair trade) reduce information asymmetry and increase trust	Thøgersen (2000); Grunert et al. (2014)
Social Proof & Descriptive Norms	Social	Highlighting popular sustainable choices nudges others to follow suit	Cialdini et al. (1990); Goldstein et al. (2008)
Environmental Education Programs	Educational	Targeted food literacy campaigns enhance awareness and green food intentions	Follows & Jobber (2000); Milfont & Duckitt (2010)
Choice Architecture & Nudging	Behavioral Design	Positioning sustainable items prominently on menus increases selection	Thaler & Sunstein (2008); Pichert & Katsikopoulos (2008)
Value-based Communication	Marketing	Messages aligned with consumer identity and values increase persuasion	Thøgersen & Ölander (2006); Steg & Vlek (2009)
Price Incentives & Subsidies	Economic	Discounts on sustainable choices and price parity programs reduce cost barriers	Vermeir & Verbeke (2006); Lusk & Norwood (2011)
Trusted Green Branding	Brand Strategy	Authentic, consistent sustainability branding builds consumer confidence	Chen & Chang (2013); Hartmann & Ibanez (2006)
Staff Training & Service Cues	Operational	Informed staff who advocate sustainable options positively influence consumer choices	Schubert et al. (2010); DiPietro et al. (2013)

5.6.1 Behavioral Nudging and Choice Architecture

Among the most robust and practically applicable findings in the literature is the effectiveness of choice architecture interventions often termed nudges in increasing sustainable food selections without restricting consumer choice or relying on conscious deliberation (Thaler & Sunstein, 2008). Positioning plant-based or low-carbon menu items as defaults, placing them prominently in menu hierarchies, or framing them as the most popular choice have all been shown to significantly increase their selection rates (Pichert & Katsikopoulos, 2008; Thorndike et al., 2012).

Cafeteria and canteen studies are particularly instructive here. Interventions that made the vegetarian option the default in university and corporate cafeterias in the Netherlands, the United Kingdom and Denmark achieved 25–40% increases in plant-based meal selection without any reduction in overall customer satisfaction (de Boer et al., 2004; Wynes et al., 2018). These findings suggest that structural modifications to the food service environment can bypass the conscious barriers to sustainable choice far more effectively than communication campaigns that require active deliberation.

5.6.2 Eco-Labeling and Environmental Information

Eco-labels and environmental certifications serve a dual function: they reduce information asymmetry by communicating environmental credentials in a standardized, accessible format and they activate pro-environmental norms at the point of purchase (Thøgersen, 2000; Grunert et al., 2014). The effectiveness of eco-labels varies considerably depending on consumer familiarity with the label, trust in the certifying body, label simplicity and the extent to which it aligns with the consumer's existing values and concerns.

Research consistently shows that simple, graphically intuitive labels outperform complex, text-heavy ones and that labels endorsed by trusted third-party bodies such as the EU Organic Leaf, the Rainforest Alliance certification, or the Marine Stewardship Council seal are significantly more effective in influencing behavior than unverified green claims by operators themselves (Grunert et al., 2014; Janssen & Hamm, 2012). In the context of digital food platforms, carbon footprint labelling on menu items has emerged as a promising innovation, with early evidence suggesting modest but meaningful increases in lower-carbon item selection (Lohmann et al., 2022).

5.6.3 Social Norms and Descriptive Norm Interventions

Leveraging social proof and descriptive norms communicating that a certain sustainable behavior is common and widely practiced has been shown to be an effective strategy for nudging food choices. Goldstein et al. (2008), in their classic hotel towel reuse study, demonstrated that descriptive norm messages substantially outperformed standard environmental appeals. Applied to food service, research shows that messages such as 'Most visitors to this café choose the plant-based option or Seven out of ten guests at this restaurant select certified sustainable fish can meaningfully increase selection of the target item (Mollen et al., 2013; Schultz et al., 2007).

These effects appear to be moderated by social identity: consumers who identify strongly with the relevant reference group show larger responses to descriptive norm messages (Cialdini et al., 1990). This finding has practical implications for how food service operators segment and target their sustainability communications, suggesting that tailored social norm messages may be more effective than generic appeals.

5.6.4 Green Brand Identity and Authentic Communication

Beyond individual menu items or labelling decisions, research suggests that the overall green identity of a food service brand or establishment plays an important role in bridging the attitude-behavior gap. Consumers who perceive a restaurant or food service operator as genuinely and consistently committed to sustainability as evidenced by visible practices, staff behavior, supply chain transparency and authentic communication are more likely to extend trust to specific green claims and to feel psychologically rewarded for aligning their consumption choices with their values (Chen & Chang, 2013; Hartmann & Ibanez, 2006).

This effect operates through the mechanism of green brand equity the additional value consumers attribute to a product or service based on its environmental reputation (Chen, 2010). Food service operators who invest in building authentic, long-term sustainability narratives rather than point-of-sale greenwashing tactics appear to generate more durable behavioral change among their customer base. However, the literature also warns that inconsistency between brand sustainability claims and observable operational practices is particularly damaging to consumer trust and can amplify cynicism about green marketing broadly (Nyilasy et al., 2014).

5.6.5 Education, Engagement and Value Alignment

Longer-term sustainability communication strategies that build consumer knowledge and align environmental messages with existing personal values have been shown to strengthen the intention-behavior link, even if their effects are slower to materialize than nudge-based interventions. Thøgersen and Olander (2006) demonstrated that educational interventions focused on values clarification helping consumers recognize how sustainable food choices align with their broader personal commitments can facilitate behavioral change that is more autonomous, stable and generalizable than behavior change achieved through external incentives or restrictions.

Similarly, food literacy programs that combine environmental education with practical skills such as menu reading, sustainable product identification and cooking with low-carbon ingredients have shown promising results in school, university and community food service settings (Follows & Jobber, 2000; Milfont & Duckitt, 2010). These approaches align with the Self-Determination Theory's emphasis on intrinsically motivated behavior change, which is theoretically more durable than extrinsically motivated compliance.

5.7. Emerging Themes and Cross-Cutting Issues

5.7.1 Digital Technologies and the Post-Pandemic Context

The rapid digitalization of food service accelerated dramatically by the COVID-19 pandemic and the associated growth in food delivery apps, digital menus and contactless payment systems has created new opportunities and challenges for sustainable food consumption. Digital platforms offer unprecedented scope for embedding environmental information at the point of ordering, for experimenting with default architectures and for delivering personalized sustainability communications based on individual order history and preferences (Reisch et al., 2021; Lohmann et al., 2022).

Early research on carbon footprint labelling within digital food ordering platforms reports modest positive effects on lower-carbon item selection, with effect sizes that appear larger in contexts where consumers have lower baseline environmental awareness (Lohmann et al., 2022). The pandemic period also prompted significant changes in food consumption patterns including increased interest in locally sourced food, heightened awareness of supply chain vulnerabilities, and growing consumer attention to health and safety dimensions of food production that have complex and not yet fully understood interactions with environmental sustainability motivations (Hobbs, 2020).

5.7.2 Cultural and Geographic Heterogeneity

A recurring limitation in the literature is its heavy geographic concentration in Western Europe, North America and Australia, with relatively limited representation of research from South and Southeast Asia, sub-Saharan Africa, Latin America, and the Middle East. This geographic skew is consequential because attitudes toward food sustainability, the nature of the attitude-behavior gap and the relative salience of different barriers and enablers vary substantially across cultural contexts (Nuttavuthisit & Thøgersen, 2017; Wang et al., 2020).

For example, studies from China and Southeast Asia suggest that social face concerns — the desire to be seen as generous and socially accomplished through food choices — can override environmental motivations in social dining contexts far more powerfully than in individualistic Western societies (Wang et al., 2020; Pham et al., 2019). Similarly, research from developing economies suggests that economic barriers to sustainable food consumption are substantially more severe and that environmental concern, while present it is more frequently subordinated to concerns about food security, affordability and cultural appropriateness (Nuttavuthisit & Thøgersen, 2017).

5.7.3 The Role of Food Service Operators

A notable feature of the literature is its predominantly demand-side orientation: most studies focus on consumer attitudes, intentions and behaviors, with comparatively less attention to the role of food service operators in shaping the conditions under which those behaviors occur. This is a significant limitation because the food service context unlike an individual's home kitchen is entirely constructed and controlled by operators, who make decisions about menu design, ingredient sourcing, portion sizes, packaging, waste management and staff training that fundamentally determine the range and accessibility of sustainable choices available to consumers (Bohdanowicz, 2006; Schubert et al., 2010).

Studies that do examine operator behavior suggest that sustainability adoption in food service is driven by a complex interaction of regulatory pressure, customer demand, cost considerations, owner values and competitive positioning (Hu et al., 2010; Hsieh, 2012). Importantly, operators who proactively design for sustainable consumption by reducing portion sizes, featuring plant-based dishes prominently, incorporating sustainability narratives into service interactions and training staff to advocate for green options appear to generate significantly more sustainable consumer behavior than those who rely solely on consumer-driven demand signals.

5.7.4 Methodological Concerns and Research Quality

The quality and comparability of research in this domain is constrained by several methodological issues that warrant acknowledgment. First, the vast majority of studies rely on self-reported survey measures of intention and behavior, which are vulnerable to social desirability bias particularly acute when measuring environmentally relevant attitudes (Corral-Verdugo, 1997). Respondents consistently overreport green intentions and behaviors when they believe the socially expected response is pro-environmental, making direct comparisons between stated intention and actual behavior difficult within survey designs.

Second, many studies are cross-sectional, capturing attitudes and behaviors at a single point in time and therefore unable to establish causal direction in the intention-behavior relationship. Longitudinal studies that track individuals over time are notably underrepresented in the literature and urgently needed to understand how green food behaviors develop, consolidate, or erode over time. Third, laboratory and scenario-based experiments offer greater causal control but sacrifice ecological validity — their findings may not generalize to the messy, social, time-pressured reality of actual food service encounters.

5.8. Discussion

The systematic synthesis presented in this review reveals a literature that is rich in theoretical sophistication and empirical breadth but fragmented in its practical implications. Several overarching themes emerge from the evidence.

First, the intention-behavior gap in sustainable food service is real, persistent and multiply determined. It cannot be attributed to any single barrier or explained by any single theoretical framework. Rather, it reflects the intersection of individual psychology, social dynamics, market structures and the physical and informational architecture of food service environments. This has important implications for intervention design: strategies that target only one dimension of the gap for example, providing environmental information are unlikely to achieve substantial behavioral change in the absence of complementary structural and social supports.

Second, the evidence strongly suggests that demand-side education and communication campaigns, while valuable, are insufficient on their own to bridge the gap. The persistent failure of decades of environmental communication to generate proportional behavioral change has led influential researchers to argue for a paradigm shift from behavior change communication toward systems-level redesign of food environments (Thaler & Sunstein, 2008; Steg & Vlek, 2009). The evidence on nudging and choice architecture is particularly compelling in this regard, demonstrating that modest structural modifications to food service environments can achieve behavioral shifts that outperform even intensive communication campaigns.

Third, the role of trust is increasingly recognized as a foundational enabler. Greenwashing, inconsistent green branding and label proliferation have created an environment of generalized consumer skepticism toward environmental claims in food service. Rebuilding trust requires authentic, consistent, transparent and third-party-verified sustainability practices not merely better marketing. Food service operators who invest in genuine operational sustainability and communicate it honestly appear to earn the trust of a growing segment of environmentally conscious consumers, who in turn display more consistent gap-bridging behavior.

Fourth, the literature reveals a significant mismatch between the demographics most likely to express strong green food intentions younger, more educated, higher-income consumers and those most likely to consistently enact sustainable food choices, which include the same demographic groups but are moderated strongly by contextual factors including social dining settings, convenience and habitual patterns. This suggests that green intentions, while necessary, are far from sufficient and that future research and practice must focus more intensively on the situational and contextual conditions that determine whether intentions translate into action.

Fifth, the post-2020 literature signals the emergence of new dynamics that previous research did not anticipate: the accelerated digitalization of food service, the pandemic's disruption of food habits and supply chains, growing consumer interest in the health-environment nexus of food choices and the increasing visibility of food system contributions to climate change in mainstream media and policy discourse. These developments may be shifting the baseline of consumer environmental literacy and motivation in ways that create new opportunities for bridging the gap that did not exist a decade ago.

5.9. Implications for Research and Practice

5.9.1 Implications for Food Service Practitioners

For food service operators, the evidence points clearly toward a menu of actionable strategies for bridging the green gap. Investing in choice architecture default vegetarian options, prominent placement of sustainable items, smaller default portion sizes and removal of unsustainable defaults represents a high-return, low-resistance intervention approach backed by strong empirical evidence. Operators should also prioritize authentic sustainability branding over point-of-sale greenwashing, as the reputational costs of inconsistency substantially outweigh any short-term marketing gains.

Staff engagement is another underutilized lever: well-informed, enthusiastic staff who can speak knowledgeably about the environmental provenance of menu items and who personally recommend sustainable choices are a powerful complement to structural and labelling interventions. Training programs that build food service staff's sustainability knowledge and communication skills represent a practical and relatively low-cost investment with meaningful potential for bridging the gap.

5.9.2 Implications for Policy and Regulation

The evidence reviewed here supports the case for regulatory interventions that create a more level playing field for sustainable food service. Mandatory environmental labelling standardized across the industry and backed by credible third-party verification would reduce information asymmetry and lower the cognitive burden of sustainable choice. Fiscal instruments including subsidies for sustainable sourcing and taxes on high-carbon food items could address the price premium barrier directly. Public procurement policies that embed sustainability criteria in institutional food service contracts (schools, hospitals, government facilities) offer a powerful lever for normalizing sustainable food choices across population segments that may not be reached by market-driven approaches.

5.9.3 Implications for Future Research

The literature review identifies several priority areas for future research. Longitudinal studies tracking the development and stability of sustainable food behaviors over time are urgently needed. Greater geographic diversity particularly research from the Global South and from Asian food service contexts would substantially enrich understanding of cultural moderators of the intention-behavior gap. Methodological innovation is also required: studies that combine behavioral measurement with stated attitude measures in real food service settings would strengthen causal inference considerably. Finally, the interaction between digital food platforms, algorithmic curation of menus and sustainable food choice warrants dedicated research attention as the food service landscape continues to digitalize rapidly.

6. Conclusion

The gap between green food intentions and actual sustainable behavior in food service contexts is one of the most pressing and complex challenges at the intersection of environmental sustainability and consumer behavior research. This systematic review of 68 peer-reviewed studies published over a quarter-century reveals a rich and evolving literature that has made substantial progress in identifying the dimensions of this gap, the barriers that sustain it and the interventions that can narrow it. The evidence converges on several key conclusions: the gap is real and persistent; it is driven by an interacting web of economic, psychological, social, informational and structural factors; demand-side communication alone is insufficient to close it; structural redesign of food service environments through nudging and choice architecture holds particular promise; trust grounded in authentic and verified sustainability practices is a foundational prerequisite for behavioral change. Yet significant knowledge gaps remain, particularly around longitudinal dynamics, cultural heterogeneity, the role of food service operators as active agents of sustainable change and the rapidly evolving digital food landscape. Closing these gaps through methodologically rigorous, geographically diverse and practically oriented research is a priority for the field. Ultimately, bridging the green food intention-behavior gap requires concerted action across multiple levels: individual consumers, food service operators, platform providers, policymakers, educators and researchers all have roles to play. The evidence reviewed here suggests that meaningful progress is achievable — but only if the structural conditions that currently reward convenience and convention over sustainability are fundamentally redesigned. Conflict of Interest Statement: The authors declare no personal, professional, or financial conflicts of interest that could have influenced the findings or interpretations presented in this manuscript.

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