Factors affecting green purchase behavior: a systematic literature review

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Factors affecting green purchase behavior: A systematic literature review

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Abstract
The worldwide increased consumption of goods and services squeezes natural resources, thus causing severe damage to the environment. In the backdrop of the growing affirmative reaction of people, the inclination to buy green products is on the rise. Therefore, we explore the extant literature to identify the factors established for their role in determining the purchase of products having a less damaging impact on the environment. A systematic literature review was conducted following the Theory-Context-Characteristics-Methodology framework covering 151 empirical studies on green purchase intention and green purchase behavior, published between years 2000 and 2021. This paper identifies factors influencing consumers’ green purchase intention and green purchase behavior and provides strategic insights to marketers to create better marketing opportunities for green products.

KEYWORDS
attitude, environmental consumption behavior, green purchase behavior, green purchase intention

1 | INTRODUCTION

Sustainability is a socially relevant issue, with more consumers becoming aware and curious about what they consume and how their consumption habits impact the environment. In India, consumers, particularly young consumers, are aware of environment-friendly consumption choices (Khare et al., 2020), and adopting green values affects their consumption patterns (Babutsidze & Chai, 2018). This paradigm shift in consumer decision-making pushes companies to adopt environment-friendly practices. Companies thus switch to eco-friendly production practices, making ethical and sustainable issues more evident to their consumers.

Used interchangeably, “Green” and “sustainable” products involve manufacturing techniques that ensure stability for future generations. Various factors, like health concerns, green lifestyle, environment protection, social norms, and beliefs, are suggested to have a significant role in determining the purchase of green products (Golob et al., 2018; Groening et al., 2018; Kirman & Khan, 2018; Nilashi et al., 2019). Various studies, including Munerah et al. (2021), He and Zhan (2018), Zhang et al. (2018), Liu et al. (2012), Vermeir and Verbeke (2008), and Hughner et al. (2007), however, report the gap between favorable consumer attitude and actual purchase behavior, termed as “green attitude-behavior gap” or “green purchasing inconsistency” (Wheale & Hinton, 2007). Paco and Raposo (2009) observed that although consumers are aware of the environmental challenges and emphasize policies to protect the environment, the “concern” does not reflect in their purchase pattern. Green purchasing inconsistency exists in varied contexts related to pro-environment
consumption choices, like the purchase of green beauty products by non-green consumers (Munerah et al., 2021). The reasons reported for inconsistency are like limited knowledge (He & Zhan, 2018), lack of trust and confidence (Zhang et al., 2018), lack of awareness and trust in eco-labels (Liu et al., 2012), scant availability (Vermeir & Verbeke, 2008), quality perceptions (Hughner et al., 2007), higher price (Vermeir & Verbeke, 2006), habits of past behavior (Xu et al., 2020), and accessibility issues (Tanner & Kast, 2003).

Although a considerable amount of literature has been published in the context of factors affecting green purchase behavior (GPB), research for exploring the specific factors that explain the attitude behavior gap is still lacking (Kumar et al., 2019; Panda et al., 2020; Prakash & Pathak, 2017). Also, studies are often inconsistent in their findings; e.g., Nguyen et al.’s (2017) and Sharma and Foropon’s (2019) studies are conflicting on the effect of perceived behavioral control (PBC) on green purchase intention (GPI). Recent review-based studies exploring GPB and GPI are limited in terms of the number of researches used for review and the timespan of review. Further, Kotler (2011) and Sharma (2021) observed that green purchase tendencies are evolving. Therefore, an extensive review is essential to deeply understand green consumer behavior. The present study provides a systematic review of 151 extant literature relating to GPI and GPB published over the last 21 years and identifies a set of factors that may affect purchase intentions for green products. The study used the review–Context–Characteristics–Methodology (TCCM) review framework given by Paul and Rosado-Serrano (2019) to discover the new or less explored research domains that could explain GPI and GPB in terms of their theoretical and empirical aspects.

The attitude-behavior gap and lack of agreement on other consumer decision-making factors affecting green purchases have been noted as major global concerns and are receiving a lot of interest from industry and academia (Jaiswal & Kant, 2018; Sharma et al., 2021; Yadav & Pathak, 2017). The TCCM analysis provides new avenues for future studies (Rajan & Dhir, 2020) to help explore the specific avenues related to the marketing of green products.

2 | REVIEW STRUCTURE AND METHODOLOGY

We discussed about relevant studies, their search, and selection criteria in this section.

2.1 | Locating studies

We extracted 218 relevant research studies for systematic literature review (SLR) accessed through multiple sources (Figure 1) to ensure an extensive literature search over a long time period.

2.2 | Selection and evaluation

Following classic reviews (Billore & Anisimova, 2021; Chakma et al., 2021; Gilal et al., 2019; Hao et al., 2019; Khatoon & Rehman, 2021; Mishra et al., 2021; Paul & Benito, 2018; Paul & Mas, 2020; Paul & Rosado-Serrano, 2019; Rosado-Serrano et al., 2018; Södergren, 2021), the screening of articles was conducted. The screening criteria included studies investigating varied factors that affect consumer GPI and GPB. The paper selection criteria for SLR based on the journal impact factor, as suggested by Keupp and Gassmann (2009), resulted in the sourcing of high-quality papers with a yearly impact factor of at least 1.0. The high-impact factor journals were chosen for two reasons. First, researches published in these journals are likely to include ideas that are examined, more closely evaluated and extended in further studies. Second, these journals serve as scholarly evidence and significantly affect the field (Cheng et al., 2017; Podsakoff et al., 2005; Shabbir, 2020; Tahai & Meyer, 1999). Following Paul and Criado (2020), we eliminated 38 research papers for SLR published in journals with a lower or non-existent impact factor.

Following SPAR-4-SLR protocol (Paul et al., 2021), this review is based on empirical studies examining various drivers, barriers, and other factors influencing consumers’ GPI and GPB as they provide consumer insights across different cultures and contexts.

We read all 177 research papers to determine that the review excludes irrelevant studies. These research papers were further Screened for their relevance, which led to the elimination of another 26 research papers and the use of 151 research papers for review purposes (Figure 2).

a. We decided to choose the 2000–2021 period because the concept of green marketing gained new momentum after 2000 with advanced technology, rules and regulations by governments, and increased global environmental awareness levels (Peattie, 2001). Also, since 2000, researchers have extensively focused on more
issues related to green products than previously considered (Chamorro et al., 2009), which is also evident in Figure 3.

b. We used GPI, GPB, green products, sustainable consumption, eco-friendly products, and environmental consciousness as different keywords as search criteria to conduct relevant literature searches. Figure 4 shows GPI and GPB-related research gained momentum after 2015, and the research focus has shifted from GPB to GPI.

c. The literature search identified 151 papers published in 75 journals accessed under the present study (Table S1). The sampled journals for review mostly have an impact factor of more than two and ensure the use of high-quality papers for review purposes. We observed a surge in research publication on GPI/GPB in top rating journals having a high impact factor.

d. The psychographic variables consider the influence of subjective norms, attitude, values, perceived behavior control, moral norms, and other factors, which are more important for understanding green consumers, and instead of demographic variables, these are commonly used to profile consumer segments (Akehurst et al., 2012; Cornwell & Schwepker, 1995; Fishbein & Ajzen, 1975). Therefore, this review focuses on identifying psychological, social, and cultural factors affecting GPI and behavior and addresses the attitude-behavior inconsistency.

### 3 | GENERAL OVERVIEW

Past researchers used different approaches to identify various factors affecting consumers’ attitudes and behavior towards green products in different contexts. The factors with significant effect thus help marketers segment the market and maximize GPB. A comprehensive chart
(Figure 5) shows theories and concepts related to GPB research at the theoretical or empirical level. Accordingly, we have researched various stages, including adoption, execution, and outcomes. The theoretical level covers theories that highlight the conceptual frameworks checked empirically and varies in terms of the unit of analysis. Our research shows that past studies examined various associated concepts and outcomes at the consumer, product, industry, and country levels and covered the related characteristics such as demographics, industry type, and product type. We analyzed these levels to explain behavioral intentions for green products. Regarding outcomes, green

**FIGURE 4** Number of GPI and GPB-related research studies

**FIGURE 5** General overview of GPB and GPI studies
consumers have become a driving force for companies to do their business by manufacturing green products, adopting different marketing strategies for promoting ecological purchase and consumption behavior, and creating an emerging global market (Akbar et al., 2014).

Purchase intention is a consumer’s predisposition towards purchasing products (Yoo et al., 2000). GPI is an inner wish, an aspiration, and a motivation to buy products and services less detrimental to the environment (Mainieri et al., 1997). GPB involves actual purchasing and consuming products having less impact on the environment. Green buying, pro-environmental, and environmentally responsible purchase behavior are used interchangeably with GPB (Follows & Jobber, 2000; Kim & Choi, 2003; Tillikidou, 2007). GPB is an effective form of pro-environmental behaviors, which profoundly impacts the environment (Kim & Choi, 2003; Mostafa, 2007).

Guagnano et al. (1995) proposed the Attitude–Behavior–Context (ABC) model, which suggests that various contextual factors influence green consumer behavior besides attitude.

We synthesized the literature using the TCCM framework (Mansoor & Paul, 2021; Paul & Rosado-Serrano, 2019; Y. Chen et al., 2021) and identified the factors affecting GPI and behavior. The paper identifies factors affecting GPI and behavior based on analysis and synthesis of extant literature. Apart from the psychological factors under the individual category, the study could identify cultural, ethical, political and product-related factors affecting GPI and GPB. It is observed that consumer characteristics such as socio-demographics and personality traits positively influence GPB in varied cultural contexts of Western and Asian countries.

Further, Effendi (2020) and Yu and Lee (2019) suggest similarities and dissimilarities in GPB at the industry level. Prior studies show how the factors like green lifestyle, willingness to pay (WTP), and health consciousness determine their GPB.

4 | THEORIES

Table 1 shows the theoretical frameworks primarily used to explore GPB in the contexts like green packaging, food choice behavior, recycling behavior, green hotels, and organic food. Among 151 research studies, the maximum number of research papers used theory of planned behavior (TPB). Those frameworks explained GPI and GPB at cognitive, social-psychological, ethical, and moral levels with an underlying purpose of addressing attitude-behavior inconsistency. Various theories provide deeper insights and suggest the variables such as human values, ethics, innovativeness, and moral obligations. However, unless these theories are used in complementarity, we may fail to get a holistic understanding of key drivers of GPI and GPB. Norm activation theory (NAM), for example, is not successful in explaining the consumer’s GPI while focusing on an individual’s pro-environmental motivations and moral obligations (He & Zhan, 2018; Liu et al., 2012; Zhang et al., 2018). Integrating NAM with TPB provides a good estimation of pro-environmental behavior tendencies in the context of purchasing fair-trade goods, intake of organic meals, and recycling (Gatersleben et al., 2014; Park & Ha, 2014; Shi et al., 2020).

### 4.1 | Theory of reasoned action

The theory of reasoned action (TRA) is widely applied in prior studies to define the attitude-behavior relationship (Yii et al., 2020). Ajzen (1980) states that TRA predicts a person’s intentions with certain positive beliefs, and such beliefs, in return, determine a person’s attitude towards the behavior. Individual attitude is an essential factor which, along with subjective norms, determines behavioral intentions (Kotchen & Reiling, 2000; Masrom, 2007).

### 4.2 | Theory of planned behavior

TPB states that the more intent is towards a particular behavior, the more probable one is to engage in the desired behavior (Ajzen, 1991). Consumer purchase intention is an essential tool for predicting consumer purchase behavior (Newberry et al., 2003). Using the TPB, various researchers confirmed the strong relationship between purchase intention and behavior (Ajzen & Fishbein, 2005; Lai & Cheng, 2016; Liebikien et al., 2017; Minbashrazgah et al., 2017). Kanchanapibul et al. (2014) affirmed that green purchase intention often drives buying behavior due to human health and environmental reasons. Researchers like Wiederhold and Martinez (2018), Arli et al. (2018), and Albayrak et al. (2013) suggest that the TPB constructs, i.e., attitudes, perceived behavior control, and subjective norms, are the predictors of GPB. Prior studies (He & Zhan, 2018; Liu et al., 2012; Zhang et al., 2018) report that NAM and TPB fail to explain the green purchase intentions of the consumer, as these revolve more towards self-interest and social approvals.

<table>
<thead>
<tr>
<th>Theory</th>
<th>No. of papers</th>
<th>%</th>
<th>Theory</th>
<th>No. of papers</th>
<th>%</th>
</tr>
</thead>
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</tr>
<tr>
<td>Theory of Reasoned Action</td>
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<td>5.96</td>
<td>Cognition–Affect–Behavior</td>
<td>2</td>
<td>1.32</td>
</tr>
<tr>
<td>Value Orientation Model</td>
<td>3</td>
<td>1.99</td>
<td>Values–Lifestyle–Behavior Hierarchy</td>
<td>2</td>
<td>1.32</td>
</tr>
<tr>
<td>Norm Activation Theory</td>
<td>3</td>
<td>1.99</td>
<td>Choice Behavior Model</td>
<td>1</td>
<td>0.66</td>
</tr>
<tr>
<td>The Hunt–Vitell Model</td>
<td>1</td>
<td>0.66</td>
<td>Diffusion of Innovations Theory</td>
<td>1</td>
<td>0.66</td>
</tr>
<tr>
<td>No Guiding Theory</td>
<td>79</td>
<td>52.32</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 1 Theories employed in GPI and GPB (N = 151)
4.3 | Value orientation model

Value tells people what is reasonable, necessary, valuable, desirable, and appropriate for them. The value orientation model (Kluckhohn & Strodtbeck, 1961) explores the uniqueness of Chinese cultural values (Yau, 1988). Many behavioral researchers have measured value as the foremost guide of contemplated attitudinal measures in environmentally friendly behavior (Corraliza & Berenguer, 2000; Follows & Jobber, 2000; Laroche et al., 2001; Schwartz & Bilsky, 1987).

4.4 | Norm activation theory

NAM, developed by Schwartz (1997) with a perspective of altruistic behavior, emphasizes personal norms or a feeling of moral obligation, which is not the same as intentions. The awareness of performing or not performing defines personal norms derived from a particular behavior having consequences and the responsibility of performing a specific behavior (Schwartz, 1997). NAM has been used as a theoretical framework for predicting environment-friendly behavior (Ebreo et al., 2003; Harland et al., 2007; Matthies et al., 2012; Steg et al., 2014; Zhang et al., 2013).

4.5 | The Hunt–Vitell model

Hunt and Vitell (1986) extended the Fishbein and Ajzen model and showed the connection between individual behavior and ethical beliefs. Hunt–Vitell model has been used in the context of consumer ethical decision-making (Blodgett et al., 2001; Chan et al., 2008; Singh et al., 2007), ethical behavior (Kavak et al., 2009) and to propose a positive theory explaining how consumers make ethical decisions (Lu et al., 2013). Green buying involves ethical values influencing green purchases (Joshi & Rahman, 2015; Munerah et al., 2021), which help protect the natural resources and environment (Papaoikonomou et al., 2011).

4.6 | The consumption value theory

Consumption value theory (Sheth et al., 1991) suggests social, functional, epistemic, conditional, and emotional values that affect consumer choice behavior. Consumption value as the basis of a successful transaction persuades consumers to buy repeatedly (Yeh et al., 2021), and consumers hold a good attitude towards green products and feel that they get emotional benefits from them (Adhitiya & Astuti, 2019).

4.7 | Cognition–affect–behavior

Using the Cognition–affect–behavior (C-A-B) model, Nguyen et al. (2019) study shows the mediating effect of green skepticism on the negative relationship of greenwash with GPI. Acceleration of greenwashing actions in the food industry influences consumers’ cognitive knowledge, and the suspicion of green food claims affects their GPI.

4.8 | Values–lifestyle–behavior hierarchy

Homer and Kahle (1988) suggested the hierarchy of abstract values, individual attitudes, and specific behaviors in a particular situation. It shows how one’s value perception manipulates one’s actual behavior through the attitudinal construct (al Mamun et al., 2018; Milfont et al., 2010).

4.9 | Choice–behavior model

Sheppard et al.’s (1988) choice–behavior model indicates that behavior affects intention formation. Based on the choice–behavior model, Chen et al. (2018) confirmed that cognitive and affective aspects have a significant impact on consumer purchase intention for green appliances.

4.10 | Diffusion of innovations theory

Innovation is developing new ideas into marketable products (Schumpeter, 1939; Tidd, 1997). Zhen and Mansori (2012) used diffusion of innovation theory to explore consumers’ intention and willingness to try organic food in different categories of the target audience.
and found that innovativeness might influence the consumer intention to purchase organic food.

5 | CONTEXT

A detailed synopsis of research papers focusing on GPI and GPB shows that these studies were conducted globally, and most studies examined GPB at a general level. Few studies have undertaken research at a particular industry and specific product level. The different industry and product categories covered by previous research are discussed next.

5.1 | Industry

The industry-wise analysis (Figure 6) shows that eleven research studies involving GPB were primarily conducted in the food industry, focusing on organic food (like Akbar et al., 2019; Boobalan & Nachimuthu, 2020; Effendi, 2020; Mai Nguyen, 2019; Sultan et al., 2019; Testa et al., 2018; Wang et al., 2020; Zhen & Mansori, 2012). Seven studies related to the manufacturing industry focused on products like green furniture, recycled plastic products, personal care products, and bio-plastics products (e.g., Confente et al., 2020; Dalila et al., 2020; Ling, 2013; Shahsavari et al., 2019; Yu & Lee, 2019). Five studies on the retail and seven on the electrical equipment industry focused on energy-saving appliances and FMCG goods (e.g., Chen et al., 2021; Tascioglu et al., 2017; Waris & Hameed, 2020). Six studies related to the hotel industry are focused on hotels and restaurants. Eight studies about the apparel industry focused on apparel products and sustainable clothing (e.g., Jung et al., 2020; Mai Nguyen, 2019; Theresa Rausch & Kopplin, 2020; Wang et al., 2020). The automobile industry accounts for five studies, like Hamzah and Tanwir (2020) and Lim et al. (2019), which focused on electric and hybrid vehicles. Three studies related to the construction industry focus on green housing (Chen et al., 2021; Kumar et al., 2020; Zahan et al., 2020).

5.2 | Country

GPB research is found more popular among researchers in Western and Asian countries. Figure 7 shows that among 151 research studies, China accounted for the maximum number of studies (33), followed by the USA (21), India (20), and Malaysia (13). Other countries have less than ten studies, except Korea, Fiji, New Zealand, Saudi Arabia, Japan, and the United Arab Emirates, with one study each.

6 | CHARACTERISTICS

Attitude is the most researched variable in GPB’s context. There are varied other factors suggested across various studies for their impact on GPI and GPB (Appendix S2, A 2.1 to A 2.4), which are discussed here as independent variables. The study identified these factors within the five categories, viz., cultural, individual, ethical, political, and product-related factors, with an idea to (i) bring coherence to their analysis, (ii) suggest the literature focus on explaining GPI and GPB, and (iii) find the gap areas for further investigation into interlinkages between factors originating in different categories which may have mediating or moderating relationships.

6.1 | Cultural factors

Hofstede’s (2001) cultural dimensions, i.e., masculinity, uncertainty avoidance, individualism versus collectivism, long-term orientation, and power distance, are widely used to understand consumer’s purchase intention across diverse cultures. Collectivism and long-term orientation are the primary dimensions determining GPI (Ansari & Siddique, 2019; Chen, 2013; Sreen et al., 2018). Collectivism is confirmed for its positive effect on GPI in various studies like Wang et al. (2020), Tascioglu et al. (2017), Chan (2000), and McCarty and Shrum (1994). Some studies report a negative or insignificant relationship between the two (Ansari & Siddique, 2019; Chen et al., 2021; Lee, 2008). Masculinity

FIGURE 7 Countries investigated GPB (N = 151)
and femininity do not influence GPI and GPB (Ansari & Siddique, 2019; Asamoah & Chovancova, 2016).

Kluckhohn and Strodtbeck’s (1961) framework suggests five value orientations: relationship, past-time, man-himself, man-nature, and personal activity for cross-cultural studies. Man-nature orientation, i.e., a man should not try to master nature and live in harmony, impacts GPI (Chan & Lau, 2000; Sreen et al., 2018). Extant studies gave initial insights into other cultural factors, including the doctrine of the mean and religiosity. The doctrine of the mean is a cultural thinking pattern derived from the traditional Confucian Philosophy of China (Yang, 2010) and impacts GPI and GPB (Sheng et al., 2019). Religiosity is a subcultural belief that consumers exhibit throughout their consumption choices (Wang & Wong, 2020).

6.2 | Individual factors

The studies examine individual factors, i.e., consumers’ attitudes, motives, behavior, and actions, to help reduce environmental problems (Roberts & Bacon, 1997). These factors listed in Appendix S1, A 2.2.1 to A 2.2.5, form part of consumer personality, psychographics, and psychology and differ in their relationship with GPI and GPB. The factors related positively to GPI/GPB include adventurous spirits, brand experience, consumer guilt, consumer responsive efficacy, ecological effect, perceived seriousness of environmental issues, environmental visibility, green brand associations, esthetic values, firm’s greenwash, self-efficacy, emotional value, health belief, healthy lifestyle, environmental commitment, consumer optimism, consumer pessimism, environmental awareness, instrumental values, green thinking, internet use, environmental values, utilitarian values, perceived busyness, interdependent self-construal, life satisfaction, perceived communication, self-image, terminal values, egoistic values, customer engagement and positive emotions (Appendix S1, A 2.2.1 to A 2.2.4). GPI is negatively related to conspicuous values, cynicism, environmental value, external locus of control, self-expression value, and self-monitoring (Appendix S1, A 2.2.5). However, extant studies are inconsistent in their results for some factors, including environmental attitude, environmental concern, perceived behavior control, environment knowledge, subjective norms, materialism, perceived consumer effectiveness, consumer trust/green trust, altruism, social influence, innovativeness, environmental consciousness, environmental collective efficacy, health consciousness, and The New Ecological Paradigm affecting GPI and GPB. For example, Kumar et al. (2020), Choi and Johnson (2019), Chen et al. (2021), Nguyen et al. (2017), and Ling (2013) report a positive relationship between environmental attitude and GPI. Other researchers like Hamzah and Tanwir (2020), Xu et al. (2020), Sharma and Foropon (2019), and Ho and Wu (2011) report the insignificant relationship between the two. Also, perceived behavioral control is said to have a positive and direct effect on GPI in studies like Kumar (2021), Jie Jin et al. (2020), Ali (2018), Yadav and Pathak (2017), and Nguyen et al. (2017) and negative effect on GPI in studies like Choi and Johnson (2019) and Sharma and Foropon (2019).

6.3 | Ethical factors

Ethics refer to an individual’s moral beliefs, rules, and obligations about right and wrong, guiding an individual’s life and direct decision-making (Leonidou et al., 2015). Ethical values influence consumers’ GPI (Joshi & Rahman, 2015; Munerah et al., 2021). Ethical factors comprising of personal norms (Biel & Thøgersen, 2007; Kaiser et al., 2005; Munerah et al., 2021; Zhang et al., 2013), deontology (Sparks & Merenski, 2000), law obedience (Basgoze & Tektas, 2012), and moral norms (Al-Adamat et al., 2020; Liu et al., 2019) positively influence GPI and GPB. Some researchers used the revised TPB model with moral norms added as an independent predictor that favored GPI (Jung et al., 2020; Nguyen et al., 2017; Steg et al., 2014). Also, ethical values and norms positively influence consumers’ green attitudes related to green consumption (Jung et al., 2020).

6.4 | Political factors

Political action refers to a person’s desire to engage in various socio-political issues such as lobbying political agents, participating in pressure groups, and boycotting irresponsible companies (Brathwaille, 1997). Political values such as individual politics and liberalism have a significant effect on GPB ( Larson & Farac, 2019; Leonidou et al., 2015). The government role defined by the government’s green initiative, including green product promotion among the citizens, manufacturers, and producers, influences GPI (Kumar et al., 2019).

6.5 | Product-related factors

Appendix S1, A 2.3.1, includes the product-related factors positively influencing GPI/GPB. These factors are acceptability, information about green products, functional values, green perceived risk, economic incentives, experience, green perceived value, eco-label, perceived product features and quality, green brand image, green perceived value, epistemic value, e-word of mouth, green consumption values, green advertising, eco-label, willingness to pay, marketing mix-4 P’s, and novelty-seeking. Brand consciousness, product price, green products’ availability, conditional value, green confusion, and perceived functional risk are the other product-related factors that negatively affect GPI/GBP (Appendix S1, A 2.3.2). The reported results for some product related factors are, however, inconsistent. Willingness to pay factor impacts the willingness of consumers to purchase green products (Chaudhary & Bisai, 2018; Kumar et al., 2020; Narula & Desore, 2016), unlike Yadav and Pathak’s (2017) research reporting no effect of WTP on GPI. For eco-labels, Farzin et al. (2020) report no relationship between eco-label and GPI due to a lack of consumer trust. Nilashi et al. (2019) and Lim et al. (2019) report the positive influence of eco-label on GPI.
TABLE 2  Research approach and methods for GPB study (N = 151)

<table>
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<tr>
<th>Research method</th>
<th>No. of Studies</th>
<th>%</th>
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<td>Factor analysis(^a)</td>
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</tr>
<tr>
<td>ANOVA</td>
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<td>Descriptive analysis</td>
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<tr>
<td>T test, Sobel test, multivariate data analysis</td>
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<td>5.30</td>
</tr>
<tr>
<td>Regression analysis(^b)</td>
<td>35</td>
<td>23.18</td>
</tr>
<tr>
<td>Path analysis technique</td>
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<td>1.32</td>
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<tr>
<td>Qualitative research analysis(^c)</td>
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<td>Hierarchical regression analysis</td>
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<td>Process macro</td>
<td>02</td>
<td>1.32</td>
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</tbody>
</table>

\(^a\)Includes Confirmatory Factor Analysis (CFA), Exploratory Factor Analysis (EFA) and K-Means cluster analysis.
\(^b\)Includes multiple regression analysis, linear regression analysis, Probit regression analysis, discriminant analysis, and two-stage least squares method.
\(^c\)Includes semi-structured in-depth interviews, focus group discussions and Kohonen’s LVQ behavior prediction agent.

8 | FUTURE RESEARCH DIRECTIONS

Environmentalism is a vital aspect of sustainability, resulting in increased environmental concern among consumers and raising the demand for green products worldwide (Akbar et al., 2014). Various studies have confirmed the gap between attitude and behavior (Ackermann & Palmer, 2014; Iweala et al., 2019; Zhou et al., 2013) and provide very little quantitative evidence on the intention-behavior gap (Hassan et al., 2016). Following Paul and Barari (2022), TCCM framework (Paul & Rosado-Serrano, 2019) used to outline future research directions based on theory, context, characteristics, and methodology.

8.1 | Theories

The past studies used the TPB and the TRA, affirming that GPI predicts consumers’ purchase behavior. The studies reporting attitude-behavior inconsistency modified TPB and added various NAM model constructs to explain reasons for attitude-behavior inconsistencies in green purchasing (Shi et al., 2020; Gatersleben et al., 2014; Park & Ha, 2014). Culture, personality, political, and ethical values are additional factors determining one’s pro-environmental attitudes towards green products to help identify an environmentally-conscious consumer. Other theoretical aspects like Hunt–Vitell model (ethical beliefs), values-attitudes-behaviors (perception of value), choice behavior model (the process of forming intention), diffusion of innovations theory (consumers’ willingness to try), and the cognition-affect-behavior (cognitive and affective attributes) bring clarity on green attitude-behavior gap. However, less attention has been paid to the theoretical base explaining the inconsistency in the conduct of individuals when it comes to GPI and behavior.

8.2 | Context

COVID 19 has resulted in structural changes in many areas of life and business (Chopdar, Paul, & Prodanova, 2022; Gordon-Wilson, 2021; Kursan Milaković, 2021; Nayal et al., 2021; Paul & Bhukya, 2021; Rayburn et al., 2021; Sharma et al., 2021; Yap et al., 2021). For example, consumer behavior has changed in many ways (Chakraborty & Paul, 2022; Purohit et al., 2022; Chopdar, Paul, Korfiatis, et al., 2022). As an outcome, we need new theories, methods, and paradigms to carry research studies in the post-pandemic era to analyze the new processes, patterns and problems. Following prior models (Paul & Mas, 2020), we call for developing frameworks and models in the same way to carry out future studies in this area.

Future research concerning GPI factors is needed in different cultural settings, especially in emerging countries like India/China, as the
demand and attitude for green products are expected to vary across different cultures (Ottman, 1998; Peattie, 1995). A comparative analysis between Asian and Western countries may help understand consumer preferences for green products across these countries.

Industry-level analysis shows that GPB-related studies are in different industries such as food, apparel, automobile, construction, electrical equipment, hotel, manufacturing, and retail. Future research on specific industries and products must clarify their green initiatives and how they influence and encourage consumers to go green.

Further, consumers’ perceptions of companies’ sustainability practices play a vital role in significantly influencing consumers’ attitudes, intentions, and behavior (Feldman & Vasquez-Parraga, 2013; Rios et al., 2006; Stolz et al., 2013). A business can become sustainable through its managerial practices and decision-making abilities and can grow with the help of consumer support (Schaltegger & Burritt, 2018).

### 8.3 Characteristics

The study shows that green consumer behavior is not simply affected by attitude but also by cultural, personal, political, psychographic, and ethical values. Factors such as environmental attitude, environmental concern, perceived behavior control, environmental knowledge, subjective norm, perceived consumer effectiveness, and collectivism appeared to be the most studied variables impacting GPB. Political and ethical factors also draw researchers’ attention and confirm a significant relationship with GPB. Product-related variables such as price, features, availability of green products, inconvenience in purchasing the product, brand image, and green advertising are the significant barriers to consumer’s GPB and affect converting positive attitudes into actual actions. Various studies contradict their results, leading to inconsistent research findings. Appendix S2 (A2.1 to A2.4) lists the factors influencing GPI and GPB, where many factors having a few citations need to be investigated further for their role in a specific context.

### 8.4 Methodology

The dominant methods used for research on GPI and GPB are quantitative, including structural equation modeling (SEM), regression, and factor analysis. Researchers primarily used a primary survey with a focus on young consumers. Targeting other age groups for future research may, thus, help in addressing age biases in prior studies. We suggest using qualitative research tools with pure or mixed-method research design to better understand consumers’ GPB. Developing a GPB scale with the help of CFA and EFA is also a possible direction for future research.

This study has certain limitations. First, the present review has not explored the impact of identified factors on individuals from different cultural and social backgrounds. Second, the current review does not include the studies related to demographic characteristics for the reasons specified earlier in this study. These factors could provide further insights into the identification of consumer segments holding GPI and behavior. Third, only a few keywords are used for literature search, whereas adding other keywords could expand it for future studies. Future studies may focus on exploring other factors to bring more clarity to inconsistency in GPB. To provide deeper insights on GPB, future researchers can empirically examine the effect of overlooked variables studied less in prior studies in the context of GPI and behavior.

### CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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**SUPPORTING INFORMATION**

Additional supporting information can be found online in the Supporting Information section at the end of this article.