

Article Social Media's Influence on Eco-Friendly Choices in Fitness Services: A Mediation Moderation Approach

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Abstract: In the evolving landscape of the building sector, the digital sphere is reshaping consumer engagement and purchase behaviors, especially in the sustainability-focused niche of fitness facilities. Utilizing the theory of planned behavior (TPB) and elaboration likelihood model (ELM), this study examines the impact of social media influence (SMI) on purchasing intentions for sustainable fitness services (PISFS) through the mediating role of green building consumption perceptions (GBCPs) and the moderating effect of environmental awareness (EA). To examine the proposed relationships and achieve the objectives of the study, 672 valid responses were collected from professionals and customers in fitness services in Turkey and analyzed using Smart PLS 4. The results of the data analysis revealed that SMI positively impacts PISFS, SMI positively impacts GBCP, GBCP positively impacts PISFS, GBCP plays an effective mediation role between SMI and PISFS, the influence of social media on purchasing intentions for sustainable fitness services is further enhanced at high levels of environmental awareness, and the impact of social media on green building consumption perceptions is further strengthened at higher levels of environmental awareness. This study's insights call for the building sector, particularly in sustainable fitness facilities, to actively integrate social media strategies and environmental awareness into their marketing and design. Emphasizing green building attributes on digital platforms can significantly influence consumer choices, steering the industry toward a more environmentally conscious and digitally engaged future.

Keywords: green building consumption; fitness services; environmental awareness; social media influence; SmartPLS; purchase intention

1. Introduction

The fitness industry has undergone a transformative shift in recent years, with an increasing emphasis on sustainability. As society becomes more environmentally conscious, consumers are seeking fitness services that align with their values of eco-friendliness and social responsibility. Concurrently, the pervasive influence of social media has become a driving force in shaping consumer decisions across various industries. The global sport and fitness industry is experiencing exponential growth, commanding attention as one of the most rapidly expanding sectors. The 2018 Global Wellness Institute report states that the global health and wellness sector, which includes fitness, boasts a substantial value of EUR 3.83 trillion, representing 5.3% of the world's economic production. Particularly, the fitness sector, constituting 21% of the global health and wellness industry, achieved a remarkable growth rate of 12.8% between 2015 and 2017, culminating in a total market value of EUR 83.4 billion [1–3].

Turkey has emerged as a key player in the European fitness market, experiencing substantial growth with 2555 fitness centers and generating a revenue of approximately EUR 823 million [4]. Despite having the lowest penetration rate, Turkey leads in membership growth at around 8%, signifying significant potential for sustained growth in the medium- and long-term [5,6]. In this increasingly competitive landscape, businesses



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Copyright: © 2024 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). providing fitness services must adopt customer-centric approaches and strategies to thrive, necessitating a keen understanding of consumer expectations [7,8]. Effective management in the fitness industry is crucial for both the success of the company and the well-being of its clientele. The failure to adapt to market changes may result in business obsolescence or necessitate a shift to new markets. Consequently, long-term sustainability is imperative in the dynamically evolving global landscape [9]. The emergence of green products, designed to minimize environmental impact, introduces a new dimension to consumer choices. Consumers' environmental consciousness significantly influences their purchasing decisions, making it imperative for marketers to understand and cater to these preferences. Studies indicate that factors such as green trust and subjective norms positively affect consumers' green purchase intentions [10–16].

This shift toward sustainability in the fitness domain reflects broader societal trends. With climate change, resource depletion, and pollution becoming increasingly prominent global concerns, individuals are scrutinizing their lifestyle choices with a discerning eye. The fitness industry, as a significant contributor to consumer habits, is not exempt from this scrutiny. Consumers are now, more than ever, cognizant of the environmental impact of their choices and are actively seeking ways to integrate sustainability into their fitness routines. The pervasive influence of social media has emerged as a potent force shaping consumer decisions across various industries. However, despite the wealth of research on social media and consumer behavior, there exists a significant gap in understanding how this influence specifically translates to the fitness sector, particularly in the field of sustainable fitness services.

One pivotal theoretical framework that guides this study is the theory of planned behavior (TPB) [17]. The TPB posits that an individual's intention to perform a behavior is influenced by their attitude toward the behavior, subjective norm, perceived social pressure to perform or not perform the behavior, perceived behavioral control, and perceived ease or difficulty of performing the behavior [18]. In this study, applying the TPB to understand how individuals' attitudes toward sustainable fitness services, the influence of social norms, and their perceived control over choosing such services collectively shape their intentions to purchase. Social media has become a powerful platform for influencing consumer behavior and preferences. Many fitness service providers use social media to promote their products and services, as well as to communicate their environmental and social values. However, the impact of social media influence on purchasing intentions for sustainable fitness services is not well understood. This paper aims to explore this topic by examining the mediator role of green building consumption perceptions and the moderator role of environmental awareness. The research questions are as follows:

- 1. How does social media influence individuals' attitudes toward sustainable fitness services as per the TPB?
- 2. To what extent do subjective norms, particularly those propagated through social media, affect individuals' intentions to choose sustainable fitness services?
- 3. How does perceived behavioral control, influenced by social media, impact individuals' intentions to opt for sustainable fitness services?
- 4. Do green building consumption perceptions mediate the relationship between social media influence and the components of the TPB in sustainable fitness service choices?
- 5. Does environmental awareness play a moderation role in the relationship between social media influence and green building consumption perceptions and the subsequent impact on purchasing intentions for sustainable fitness services?

By addressing these research questions, the study seeks to provide a comprehensive understanding of the factors influencing individuals' intentions to choose sustainable fitness services. While the TPB provides a valuable framework for understanding the factors influencing purchasing intentions, its application within the fitness industry and, more specifically, within sustainable fitness services, is underexplored. This gap makes it even more important to look into how attitudes, subjective norms, and perceived behavioral

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control, as described in the TPB, affect people's choices about sustainable fitness services, with a focus on how perceptions of green building consumption play a role.

Social media, particularly influential among younger generations, plays a pivotal role in shaping consumer behaviors and opinions. The pervasive influence of social media in daily life, coupled with its role in encouraging environmentally friendly consumption, highlights its significance for businesses promoting sustainable products. The rapid growth of social media platforms, currently engaging 3.6 billion users, is anticipated to reach 4.41 billion by 2025, providing businesses with direct engagement opportunities and a platform to promote green products [19–23]. The intersection of consumer behavior and environmental consciousness has led to an increased demand for green products. Environmental sustainability has become a key consideration for consumers, influencing not only their product choices but also their lifestyle habits, including dietary preferences. Social networking, deeply embedded in consumers' lives, serves as a powerful marketing tool, altering communication dynamics between buyers and marketers [24–31]. To elucidate the underlying cognitive processes driving the influence of social media on consumer behavior, this study employs the elaboration likelihood model (ELM) [32]. ELM posits that individuals engage in two distinct routes of information processing: the central route and the peripheral route. In situations where individuals are motivated and capable of engaging in detailed cognitive processing, such as when making significant purchasing decisions, they are likely to take the central route [33]. This involves thoroughly evaluating the information and considering the merits and relevance of the message. In sustainable fitness services, consumers engaging the central route may critically assess information from social media, evaluating its alignment with their values and the environmental impact of the services. When individuals lack the motivation or cognitive resources for in-depth processing, they may take the peripheral route. This involves relying on cues such as celebrity endorsements, visual appeal, or social media trends. Understanding the role of the peripheral route is crucial, especially in social media, where influencers and visual content often play a significant role in shaping consumer perceptions. By applying the ELM, this research aims to decipher whether the influence of social media on sustainable fitness service purchasing intentions operates primarily through the central route, where consumers critically evaluate information, or through the peripheral route, where cues and influencers play a more dominant role.

Green consumption aligns closely with concepts of sustainable development and consumer behavior, prompting global manufacturing firms to focus on green marketing and innovate constantly to satisfy the needs of eco-friendly customers. Green inventions have a key role in forming consumer buying habits and contribute to the overall competitiveness of firms [34]. While environmental awareness is recognized as a potential moderator in this dynamic relationship, there is limited research on how varying levels of environmental awareness might impact the interplay between social media, green building consumption perceptions, and the TPB components. Investigating this interaction is crucial for uncovering the conditions under which social media has a more pronounced effect on individuals' intentions to choose sustainable fitness services, considering their environmental consciousness. Within the fitness industry, the adoption of green building practices emphasizes environmental sustainability. Green building consumption in fitness services involves integrating energy-efficient technologies, sustainable materials, and water conservation measures. This approach not only contributes to environmental conservation but also aligns with the preferences of eco-conscious consumers, fostering a positive impact on both the environment and individual well-being. Environmental concerns significantly influence people's behavior, prompting companies to focus on environmental issues in their outputs. Earlier research, frequently using the theory of planned behavior (TPB), has explored the motivations behind green purchasing, emphasizing the importance of consumer green values in shaping attitudes and intentions toward green consumption [35–38]. Customers select professional fitness centers not only for skilled fitness advice but also to improve their physical and mental well-being. The principles of green building, emphasizing eco-friendly

and healthy growth, align with the rationale behind fitness spending [10]. Furthermore, the trend of green building consumption perceptions introduces a layer of complexity to the sustainable fitness landscape. Existing research has not fully explored how these perceptions act as a mediator between social media influence and the components of the TPB, leaving a critical research gap. Understanding the relationship between social media, green building consumption perceptions, and the elements of the TPB is vital for comprehending the decision-making processes driving individuals toward sustainable fitness choices. Yet, despite the significance of sustainable practices and social media influence in the fitness industry, there is a notable gap in understanding their collective impact on purchasing intentions for sustainable fitness services. This research aims to address this gap by investigating the interplay between purchase intention, social media influence, green building consumption, and environmental awareness in fitness services.

2. Underpinning Theory

2.1. Theory of Planned Behavior (TPB)

Ajzen introduced the TPB [18], positing that an individual's behavioral intentions are shaped by the interplay of attitude (AT), subjective norm (SN), and perceived behavioral control (PBC) [17]. Within this framework, attitude reflects an individual's approval or disapproval of a specific behavior, while subjective norm relates to the social pressures associated with performing or abstaining from a particular behavior. Perceived behavioral control involves assessing the ease or difficulty of executing a specific behavior [39]. The TPB is versatile and applicable across diverse research domains. It can be utilized to ascertain consumers' intentions when considering a product or service, as well as their brand preferences. This theory accommodates adaptation and extension by incorporating additional behavioral constructs, thereby acquiring meanings based on the specific focus of research. In the TPB, an individual's attitude toward a behavior signifies the extent to which the individual perceives that behavior as either favorable or unfavorable. According to the TPB, a more favorable attitude increases the likelihood of an individual replicating that behavior. Positive attitudes are often displayed when individuals positively evaluate the outcomes associated with certain behaviors, influencing their likelihood of engagement. Subjective norms within the TPB encompass perceptions of social expectations regarding participation or nonparticipation in a particular behavior [38]. The opinions of people who are important to the person shape these norms, influencing their decision-making process. If an individual believes that those important to them either approve or disapprove of a behavior, it may impact the decision to engage in that behavior. Conversely, perceived behavioral control within the TPB gauges the ease or difficulty a person associates with performing a specific behavior. The TPB has proven instrumental in predicting intention and behavior across various disciplines, including applications in predicting behavior related to green buildings, energy-efficient products, and environmentally friendly products. Exposure to social media content promoting the advantages of sustainable fitness practices, including environmentally friendly initiatives and wellness benefits, shapes attitudes that reflect people's approval or disapproval. Subjective norms extend to perceptions of social expectations, wherein social media becomes a key influencer, potentially framing sustainable fitness services as socially desirable. Perceived behavioral control, assessing the ease or difficulty of adopting a behavior, involves individuals' perceptions of access to and engagement with sustainable fitness services and is influenced by the availability of information on social media platforms. This direct application of TPB underscores the integral role of social media in shaping attitudes, norms, and control perceptions, thereby influencing individuals' purchasing intentions for sustainable fitness services. The study's enhanced structured understanding provided by TPB offers a comprehensive lens to analyze the intricate relationships between social media, green building consumption perceptions, environmental awareness, and the decision-making process regarding sustainable fitness service consumption.

2.2. Elaboration Likelihood Model (ELM)

ELM is a theoretical framework that becomes particularly pertinent in the context of the new economic era and the prevalence of digitalization, which overwhelms consumers with an abundance of information, especially through social media channels. In understanding the impact of social media on purchasing intentions for sustainable fitness services, ELM serves as a valuable tool, explaining how individuals process persuasive messages in an information-rich environment. The beginning of a new economic era and the rise of digitalization have overwhelmed consumers, with an abundance of information affecting products, services, and various brands through social media channels [32]. Given constraints such as limited time, individuals may struggle to process the numerous persuasive messages originating from sources such as companies or friends [33]. The ELM serves as a theoretical framework explaining how individuals process information, particularly in terms of its influence. It encompasses persuasive messages disseminated through social media and endeavors to anticipate how consumers will react, identifying instances of persuasion and nonpersuasion. ELM provides a valuable tool for comprehending the appropriateness of persuasive communication capable of influencing consumers [40]. Numerous studies suggest that the key determinant in ELM affecting enduring persuasiveness is linked to consumers' ability to elaborate on and comprehend the conveyed persuasion. ELM posits two potential routes for persuasion, influencing consumers' behavioral changes: the central route and the peripheral route. The central route involves a focused and thoughtful understanding process, while the peripheral route involves focusing on things other than the content of the message while it is being processed [40]. The rise of user-generated content makes the quality and credibility of persuasive messages even more important, warranting close attention.

3. Literature Review and Research Hypotheses

3.1. Social Media Influence and Purchasing Intentions for Sustainable Fitness Services

Sustainable fitness services refer to fitness offerings that prioritize ecological responsibility, minimizing environmental impact in areas such as facility operations, equipment production, and waste management. Social media influence is understood as the impact that content, recommendations, and advertisements encountered on social media platforms have on individuals' perceptions and decisions regarding sustainable fitness services. According to TPB [18], attitudes, subjective norms, and perceived behavioral control are the three main factors that affect people's behavioral intentions. In this hypothesis, social media is expected to influence individuals' attitudes and subjective norms regarding sustainable fitness services, ultimately shaping their purchasing intentions. ELM proposes two processing routes, central and peripheral, through which individuals engage with information. In the central route, individuals critically evaluate information, while the peripheral route relies on cues such as influencers and visual appeal. Social media content, as a primary source of information, may trigger either route depending on the individuals' motivation and ability to process information, thus influencing their purchasing intentions [32]. The main purpose of this study is to understand how social media affects people's decision to buy sustainable fitness services. Sustainable fitness services are those that prioritize being environmentally friendly, such as using eco-friendly equipment and reducing waste. The hypothesis holds that social media can positively influence what people think about these services and how likely they are to buy them.

The incorporation of TPB and ELM provides a comprehensive understanding of the psychological mechanisms at play. Social media, acting as a persuasive tool, is expected to influence individuals' attitudes and subjective norms (TPB) while triggering either central or peripheral processing routes (ELM), ultimately impacting their intentions to purchase sustainable fitness services. There is believed to be a relationship between the use of social media and individuals' intentions to purchase sustainable fitness services, with the expectation that this influence is positive. In exploring the impact of social media on purchasing intentions for sustainable fitness services, several key studies have contributed

valuable insights. Exposure to social media content is anticipated to contribute positively to the likelihood that individuals will express an intention to purchase fitness services that are characterized by sustainability. Some studies highlight the role of social media content in shaping people's decisions about sustainable fitness services. However, there is a gap in understanding regarding how people think when they see this content. This study proposes a more in-depth examination using surveys or experiments to explore how individuals engage with social media content, considering their attitudes, what others think, and their perceived control over their behavior. Additionally, this study suggests looking into how environmental advertising on social media influences people's attitudes and intentions to buy eco-friendly products. It emphasizes the need for a more detailed exploration of the cognitive processes involved in understanding how advertising on social media shapes people's thoughts about sustainable fitness services.

According to Erwin Halim and Rizal Haqo Karami [41], purchasing intentions for sustainable fitness services suggest that individuals, under the influence of social media, are expected to express a higher intention to purchase fitness services that are deemed sustainable. Social media platforms are expected to have a constructive impact on individuals' intentions to purchase fitness services that align with sustainability principles. The hypothesis could be tested through empirical research, perhaps using surveys, experiments, or other research methods to gather and analyze data on social media usage and purchasing intentions for sustainable fitness services. Environmental advertising, especially on social media, has been shown to have a substantial influence on shaping consumer attitudes and intentions. While existing studies highlight the positive influence of social media on sustainable fitness service intentions, there is a gap in understanding regarding the cognitive processes involved. A more comprehensive exploration of how individuals cognitively engage with social media content, considering factors such as attitudes, subjective norms, and perceived behavioral control, would contribute to a more comprehensive understanding. While the importance of environmental advertising is acknowledged, there is a gap in understanding regarding the specific dynamics through which environmental advertising on social media shapes consumer attitudes and fortifies the intention to purchase green products. A more in-depth exploration of these dynamics would contribute to a more holistic understanding of the role of advertising in influencing sustainable fitness service intentions. The study underscores the importance of environmental advertising in encouraging positive environmental actions and strengthening the intention to purchase green products [35]. Fitness brands are increasingly leveraging data analytics and artificial intelligence (AI) to personalize marketing messages, workout plans, and promotions to individual preferences, through which companies enhance user experiences and drive engagement. In a study of [42], the effectiveness of personalization strategies in fitness marketing is emphasized. Influencers, fitness bloggers, and user-generated content contribute significantly to brand visibility and consumer engagement. In [43,44] the impact of social media marketing on fitness brand equity is explored. Fitness apps have become indispensable for consumers seeking convenient solutions. These apps offer features such as workout tracking, nutrition guidance, and community support. Brands that invest in user-friendly mobile experiences gain a competitive edge.

The studies examines two psychological theories, one concerning people's planned behavior and the other about how they process information. Together, these theories suggest that social media, as a persuasive tool, can shape people's attitudes and what others around them think (subjective norms). Moreover, social media can affect how individuals process information, either by critically evaluating it or relying on cues such as influencers and visuals. In simpler terms, the study aims to determine out how social media makes people want to buy eco-friendly fitness services. It brings together two psychological theories and suggests a need to understand how people think when they see social media content and ads about these services. One study demonstrated that the attractiveness, expertise, and trustworthiness of branded material associated with fitness products shared by social media influencers have a significant impact on followers' purchase intentions [45]. Another study found that social media usage, social influence, drive for environmental responsibility, and perceived trust in social media are major antecedents of consumers' sustainable purchasing attitudes [46]. The sample should ideally represent a diverse range of individuals who engage with social media and have an interest in fitness services. Potential biases could arise from self-selection, as individuals who are more active on social media and more interested in sustainable fitness might be more likely to participate in the study. In essence, this study aims to understand how social media affects people's decision to buy sustainable fitness services. Sustainable fitness services are those that prioritize being environmentally friendly, which may include using eco-friendly equipment and reducing waste. The hypothesis holds that social media can positively influence what people think about these services and how likely they are to buy them [47]. Based on a literature review and the research question, this paper proposes the following hypothesis to test the relationships among the variables of interest:

H1: Social media influence has a positive impact on purchasing intentions for sustainable fitness services.

3.2. Social Media Influence and Green Building Consumption Perceptions

The hypothesis under consideration investigates the relationship between social media influence and individuals' perceptions of green building consumption. Green building consumption perceptions encompass attitudes, beliefs, and views related to environmentally friendly building practices and how individuals positively perceive and engage in consumption behaviors aligned with green building principles. Social media influence is defined as the transformative effect of social media on consumer behavior. Research has specifically focused on how exposure to information, content, or discussions related to green building practices on platforms like Facebook, Instagram, Twitter, etc., shapes individuals' attitudes and perceptions regarding green building consumption [20]. The theoretical foundation for understanding this relationship is based on the TPB and the ELM. TPB helps explain how attitudes, subjective norms, and perceived behavioral control shape individuals' perceptions, while ELM aids in understanding the cognitive processes involved in the influence of social media on these perceptions.

Si Xie and Ghulam Rasool Madni [19] explored the transformative impact of social media on green consumption patterns, offering insights into how social media shapes consumer psychology and attitudes toward green practices. Their study surveyed 303 young people in China and applied multiple statistical techniques to determine the reliability and validity of the data. However, potential biases could have arisen from self-selection, as individuals who are more active on social media and more interested in sustainable fitness might have been more likely to participate in the study. Similarly, Karina Sokolova and Charles Perez [48] investigated the reasons why users follow fitness celebrities on YouTube, examining the connection between parasocial communication, intentions to view fitness content, and intentions to work out. Their paper acknowledges consumers as significant actors in fostering a green lifestyle, using social media as a platform for exchanging opinions about green products, influencing others, and promoting a collective commitment to environmental preservation. Erwin Halim and Rizal Haqo Karami [41] highlight how social media influence encompasses the information, messages, and discussions about sustainable and environmentally friendly building practices that individuals are exposed to on platforms such as Facebook, Instagram, Twitter, etc. Their hypothesis is that a higher level of exposure to information and discussions about green buildings on social media is expected to result in more favorable attitudes and perceptions toward green building consumption. Social media influence is anticipated to have a positive impact on green building consumption perceptions, suggesting that exposure to information, content, or discussions related to green building practices on social media platforms leads individuals to form more favorable attitudes and perceptions toward consuming products or services associated with green buildings [23]. This aligns with the transformative influence of social media on consumer behavior and the expected positive link between social media impact

and individuals' views on green building consumption. Based on the literature review and the research question, this paper proposes the following hypothesis to test the relationships among the variables of interest:

H2: Social media influence has a positive impact on green building consumption perceptions.

3.3. Green Building Consumption Perceptions and Purchasing Intentions for Sustainable Fitness Services

The provided hypothesis focuses on the positive impact of green building consumption perceptions on purchasing intentions for sustainable fitness services. It draws on the TPB to understand how attitudes, subjective norms, and perceived behavioral control influence individuals' intentions. Additionally, the ELM is used to comprehend the cognitive processes involved in the influence of green building consumption perceptions on purchasing intentions [38]. The existing literature, as exemplified by Yuyang Hou et al. [49], indicates that positive perceptions of green building usage can increase motivations to buy fitness services in business health clubs. This suggests a positive relationship between consumers' perceptions of green building practices in fitness services and their intentions to purchase sustainable fitness services. The focus here is on how individuals perceive environmentally friendly features associated with fitness service buildings, such as energy efficiency, sustainable materials, or overall environmental consciousness.

The hypothesis holds that as green building consumption perceptions improve, there is a corresponding increase in purchasing intentions for sustainable fitness services. It anticipates that individuals who perceive fitness facilities as environmentally conscious, perhaps due to features such as eco-friendly architecture or energy-saving practices, are more likely to express an intention to choose and use these services. In essence, the hypothesis implies a positive connection between the perceived green aspects of the building and consumers' inclination to choose sustainable fitness services. To contribute significantly to this research area, a potential research gap is identified. While the hypothesis provides a general expectation of a positive connection, it acknowledges the need for a more nuanced exploration of the intricate dynamics of green building consumption perceptions. Ying-Kai Liao et al. [35] integrated signaling theory and the attitude-behavior-context (ABC) theory to explore the multifaceted nature of green purchasing behavior. The study suggests that green building consumption perceptions involve various aspects, including energy efficiency, the use of sustainable materials, and overall environmental consciousness. A potential area for significant contribution could involve a detailed examination of how each of these specific aspects influences purchasing intentions. Consumers are actively seeking fitness centers that prioritize sustainability. Eco-friendly gyms incorporate energy-efficient equipment, implement recycling programs, and embrace green building practices. These initiatives resonate with environmentally aware members who appreciate the commitment to reducing the environmental footprint [50]. Fitness facilities are increasingly pursuing certifications such as LEED (leadership in energy and environmental design). These certifications are tangible evidence of a facility's dedication to sustainable practices. When consumers see the LEED certification, it positively influences their perceptions and reinforces the facility's commitment to environmental responsibility [51]. Research indicates that consumers prefer workout clothing made from eco-friendly materials. Brands that offer sustainable activewear gain favor among environmentally conscious fitness enthusiasts. Whether it is recycled fabrics, organic cotton, or low-impact dyes, sustainable apparel aligns with the values of health-conscious consumers [52]. Exploring the specific factors within the theoretical frameworks that may have varying impacts on consumers' willingness to engage in environmentally friendly transactions would deepen the understanding of this topic. In essence, a more comprehensive exploration of the multifaceted nature of green building consumption perceptions and their distinct influences on purchasing intentions could enhance the understanding of this relationship. Based on the literature review and the research question, this paper proposes the following hypothesis to test the relationships among the variables of interest:

H3: *Green building consumption perceptions have a positive impact on purchasing intentions for sustainable fitness services.*

3.4. Green Building Consumption, Social Media Influence, and Purchasing Intentions for Sustainable Fitness Services

The provided hypothesis explores the influence of green building consumption perceptions and social media on individuals' purchasing intentions, utilizing the TPB to understand how attitudes, subjective norms, and perceived behavioral control shape these intentions. Additionally, the ELM provides insights into the cognitive processes related to how individuals process information regarding green building consumption and social media influence.

Arun Kumar and Mrinalini Pandey [53] conducted research on the intersection of social media, consumer motivations, and subjective norms, focusing on their impact on green consumption habits. Their study highlighted the roles of altruistic and egoistic motivations, as well as social norms, in influencing young consumers' intentions to buy green or organic products. The findings revealed that both environmental and health motivations significantly influenced youth's green purchasing intentions, with a particular emphasis on health concerns affecting green product choices. The study acknowledged the role of social media as a powerful communication tool that can contribute to environmental and health awareness, positively influencing green consumption behavior. It emphasized the importance of businesses leveraging social media platforms to enhance customer motivation, buying intentions, and behavior toward green products. A potential research gap in this context could involve a more comprehensive exploration of the specific mechanisms through which social media contributes to environmental and health awareness, ultimately influencing green consumption behavior. While the study recognized the positive impact of social media, it did not delve into the intricacies of how different aspects of social media content, interaction, or platform features may differently shape consumers' perceptions and intentions. A potential area for significant contribution could involve conducting research that delves deeper into the nuances of social media's influence on green consumption behavior. This could include examining specific types of content, engagement strategies, or platform features that have varying effects on individuals' attitudes and purchasing intentions. Understanding these specific mechanisms can provide businesses with actionable insights into how to optimize their use of social media to positively impact consumer behavior related to green products. Consumers who exhibit high environmental awareness tend to make choices aligned with their values. When it comes to fitness services, this translates into preferences for environmentally friendly options. Green gyms that prioritize energy efficiency, recycling, and sustainable practices attract individuals who value ecoconsciousness. Additionally, organic food options and eco-friendly fitness gear resonate with this segment [54]. Trust in fitness brands is closely linked to their commitment to sustainability. Consumers appreciate transparency regarding eco-friendly initiatives. Brands that communicate their green practices whether through certifications, clear messaging, or visible efforts build trust with environmentally conscious consumers [55]. Subjective norms play a significant role in shaping consumer behavior. When friends, family, or social circles endorse sustainable fitness practices, individuals are more likely to adopt them. Social influence acts as a powerful motivator, reinforcing the importance of eco-friendly choices within fitness contexts [56]. While the existing literature acknowledges the positive influence of social media on green consumption behavior, there is a potential research gap in understanding the specific mechanisms at play. A significant contribution could involve a more detailed exploration of how different aspects of social media contribute to environmental and health awareness, providing businesses with practical insights for enhancing customer motivations and intentions to purchase green products. Based on the literature review and the research question, this paper proposes the following hypothesis to test the relationships among the variables of interest:

H4: *Green building consumption perceptions play a mediation role between social media influence and purchasing intentions for sustainable fitness services.*

3.5. Environmental Awareness as a Moderator

In TPB, attitudes, subjective norms, and perceived behavioral control collectively influence behavioral intentions. Here, environmental awareness acts as a moderator, influencing the strength of these components. For instance, individuals with higher environmental awareness may exhibit more positive attitudes, stronger subjective norms, and greater perceived behavioral control toward sustainable fitness services. Within the ELM framework, central and peripheral information processing routes are relevant. Environmental awareness can impact the central route, where individuals contemplate information, and the peripheral route, where cues and heuristics influence perceptions. In hypotheses H5 and H6, individuals with high environmental awareness may be more inclined to engage in central processing, leading to a deeper consideration of information related to social media influence, purchasing intentions, and green building consumption perceptions. Yuyang Hou et al. [40] investigated environmental awareness identified as a positive moderator and established a link between green building usage views and the tendency to buy fitness services in business fitness centers. This emphasizes the importance of environmental consciousness in influencing consumer behavior. Their study surveyed 303 young people in China and applied multiple statistical techniques to determine the reliability and validity of the data [19]. However, potential biases could have arisen from self-selection, as individuals who are more active on social media and more interested in sustainable fitness might have been more likely to participate in the study. Vijay Kumar Jain et al. [34] underscore the importance of shaping policies that encourage the acceptance of green products, contribute to environmental sustainability, and reduce the environmental impact through informed consumer choices. This study anticipates that the inclination of consumers, particularly that of millennials, toward green products will stimulate companies to innovate in this space. Such green innovations are expected to not only improve environmental performance but also enhance firm performance and productivity. Deepak Jaiswal and Rishi Kant [57] showed that green buying intention may be notably and directly influenced by environmental consciousness. Environmental consciousness is one of the strongest predictors of holding a positive attitude toward green products and green buying intention and is compatible with the field of green consumer behavior [58]. Environmental awareness can either enhance or reduce the link between social media impact and buying intentions for eco-friendly fitness services depending on the level of awareness and the direction of influence. This hypothesis holds that environmental awareness, which is the degree of concern or interest that people have for the natural environment and its protection, influences how social media, purchasing intentions, and green building perceptions are related to each other. Based on the literature review and the research question, this paper proposes the following hypotheses to test the relationships among the variables of interest:

H5: Environmental awareness plays a moderator role in the relationship between social media influence and purchasing intentions for sustainable fitness services.

H6: Environmental awareness plays a moderator role in the relationship between social media influence and green building consumption perceptions.

4. Research Design and Methodology

4.1. Research Framework and Variable Measures

This study examined the impact of social media on consumers' perceptions of green buildings in fitness services and the factors influencing their purchasing intentions for sustainable fitness services. The key components of the framework included the independent variable, social media influence (SMI), which was measured using a composite index that considered the frequency of interaction with fitness-related content, types of content engaged with sustainability, fitness routines, and the depth of engagement, such as likes, shares, and comments. Meanwhile, the dependent variable was purchasing intentions for sustainable fitness services (PISFS), which was examined through Likert-scale questions related to the likelihood and willingness to subscribe to or purchase sustainable fitness services. Green building consumption perceptions (GBCPs) were considered to be a mediator and were measured through dimensions such as perceived eco-friendliness, energy efficiency, and sustainable materials. Environmental awareness (EA) was used to assess how individuals' environmental awareness moderates the impact of social media on perceptions of green buildings and purchasing intentions. The framework in Figure 1 provides a structured approach to understanding the complex relationships among social media influence, green building perceptions, environmental awareness, and consumers' intentions to purchase sustainable fitness services.



Figure 1. Conceptual research framework.

4.2. Design of the Study

This study adopted an online survey-based questionnaire approach to gather data on consumer perceptions, social media habits, and purchasing intentions regarding sustainable fitness services. Respondents rated various elements on a Likert scale ranging from 1 to 5, where 5 indicated strong agreement and 1 denoted strong disagreement. PISFS was assessed using items selected based on their relevance to the fitness industry and their alignment with sustainable practices, ensuring face validity [1,7,49]. SMI was chosen to capture the multifaceted nature of social media engagement in the fitness context [5,24]. GBCPs were recognized for their applicability in assessing perceptions related to green building features [1,19,24]. EA was evaluated using items derived from [1,2,13] to measure individual environmental awareness comprehensively. For a detailed list of the survey items used to measure Social Media Influence (SM), Green Building Consumer Perception (GBCP), Purchase Intention (PI), and Environmental Awareness (EA), see Appendix A. The process of selecting the sample for this research study was conducted meticulously to align with the study's goals and contextual framework. A purposive sampling technique was employed, which involved purposely targeting professionals and customers within Turkey's fitness industry. This strategic selection aimed to capture individuals who have a genuine interest in sustainability within the fitness sector, ensuring that the collected data would accurately reflect the attitudes and behaviors relevant to the study's objectives.

In this research study, it was crucial to recognize and mitigate potential biases that could influence the results. One such bias that was carefully considered was self-selection bias. This bias occurs when individuals who already have a strong interest in the subject being studied are more likely to participate, potentially skewing the findings. To address self-selection bias, the research team employed a strategic approach known as stratified sampling. This method involves dividing the population into distinct subgroups, or strata, based on relevant characteristics, and then selecting samples from each subgroup. In this study, the stratification focused on different consumer segments within the fitness industry. Using stratified sampling ensured that participants were drawn from various segments of the fitness industry and represented a diverse range of backgrounds, preferences, and levels of environmental awareness. This approach helped to minimize the impact of selfselection bias by providing a more balanced and representative sample. Furthermore, the study meticulously collected demographic data from the participants. These data included information such as age, gender, fitness level, and environmental awareness. By collecting and analyzing these demographic factors, the study sought to provide a comprehensive understanding of the sample's diversity and its relevance to the research goals. In essence, this detailed approach to sample selection aimed to ensure that the findings derived from the study would be applicable and reflective of a wide spectrum of perspectives within Turkey's fitness industry, thereby enhancing the validity and robustness of the research outcomes.

The data were collected over six weeks through online surveys, resulting in a robust sample of 672 participants. Descriptive statistical techniques, including measures of central tendency and variability, were applied for data summarization. Confirmatory factor analysis (CFA) within structural equation modeling (SEM) was utilized to assess the interrelationships among latent variables, thereby validating the measurement model and facilitating hypothesis testing. This methodology enhances the statistical validity of the study.

5. Results and Interpretation

5.1. Measurement Model

(i) Demographics

Demographic analysis involves the systematic examination and interpretation of various demographic characteristics within a population or sample. Demographics encompass a range of socioeconomic and personal attributes that provide insights into the composition and diversity of a group. These characteristics commonly include age, gender, marital status, education, ethnicity, income, occupation, and other relevant factors. The purpose of demographic analysis is to understand the composition of a population and identify patterns, trends, or associations that may exist among different demographic groups. Table 1 provides demographic information via a detailed list of the study participants, revealing a diverse and representative sample. The majority of respondents were female (70%), reflecting a gender distribution that is crucial for understanding the broader impact of social media on purchasing intentions for sustainable fitness services. Age-wise, the study captured a significant segment of individuals between 21 and 30 years old (55%), while also including representation across other age groups. The educational spectrum was broad, ranging from participants with no formal education to those holding PhDs, with the majority possessing at least a bachelor's degree (51%). Social media use duration varied, with the majority having used it for 1–2 years (52%). This demographic representation enhances the generalizability of findings, allowing for an advanced exploration of the impact of social media on purchasing intentions among varied participants.

(ii) Descriptive Test

Descriptive statistics involves summarizing and describing the main features of data, providing its central tendencies, variability, and distributional characteristics. These statistics are essential to gaining a preliminary understanding of the data and communicating the key features to others. Table 2 presents key statistical measures for four variables in the study: SMI, GBCP, EA, and PISFS. For SMI, the mean score of 3.76 indicates a moderate level of influence, with a slightly leftward skew in the distribution. GBCP shows a

generally positive perception (mean of 4.001) with a symmetric distribution. EA reflects a moderate level of awareness (mean of 3.648), exhibiting a leftward skew in participants' responses. PISFS has a moderately positive inclination (mean of 3.997), with a slightly leftward-skewed distribution. These findings characterize the participants' sentiments and preferences regarding sustainable fitness services, highlighting the variability and distributional patterns within the sample of 672 participants. The data contributes valuable information for understanding the interplay of SMI, GBCP, PISFS, and EA in sustainable fitness services.

Name	Options	N Sample Size		Percentage		
Gender	er Female		672	30 70	100	
	Below 20 years	18		3		
	21–30 years	375		55		
Ago	31–40 years	192		29	100	
Age	41–50 years	56	672	8	100	
	51–60 years	28		4		
	Above 60 years	3		1		
	No formal education	2		1		
	Primary school	8		2		
	High school	68		10		
Education	Diploma	137	672	20	100	
	Bachelor's degree	348		51		
	Master's degree	95		13		
	PhD	14		3		
	Less than 1 year	135		20		
Social media use	1–2 years	358		52		
	3–4 years	159	672	24	100	
	5–6 years	17		3		
	More than 6 years	3		1		

Table 1. Demographic analysis.

	Mean	Median	Min	Max	Standard Deviation	Kurtosis	Skewness	Number of Observations Used
SMI	3.76	3.75	1.75	5	0.625	0.433	-0.305	672
GBCP	4.001	4	2.4	5	0.544	-0.131	0.054	672
EA	3.648	3.8	1.6	5	0.729	0.106	-0.543	672
PISFS	3.997	4	2	5	0.67	0.578	-0.548	672

 Table 2. Descriptive test.

(iii) Reliability and validity test

Reliability refers to the consistency and stability of measurement instruments. In this study, reliability was assessed through Cronbach's alpha and composite reliability (CR). Table 3 provides Cronbach's alpha values for PISFS, SMI, GBCP, and EA, which are all above the commonly accepted threshold of 0.7. This indicates a high level of internal consistency within each construct, suggesting that the selected items reliably measure the intended concepts. Additionally, composite reliability values for each construct exceed the recommended threshold of 0.7, further supporting the reliability of the measurement model. Validity assesses whether the measurement items truly measure the intended constructs. Factor loadings represent the strength of the relationship between the items and their respective constructs. In this study, factor loadings for all items within each construct are high, indicating a strong connection between the items and their latent constructs.

Specifically, factor loadings for items related to PISFS, SMI, GBCP, and EA are consistently strong, ranging from 0.712 to 0.873. These high factor loadings provide evidence supporting the construct validity of the measurement items, suggesting that they effectively capture the underlying concepts they are intended to measure.

Variable	Item	Factor Loading	Cronbach's Alpha	CR	AVE
Purchasing intentions for sustainable fitness	PISFS1	0.868			
r urchasing intentions for sustainable intress	PISFS2	0.873	0.823	0.836	0.735
services (PISFS)	PISFS3	0.831			
	SMI1	0.788			
Control and the imfluence (CMII)	SMI2	0.827	0.024	0.02(0 (55
Social media miluence (Sivil)	SMI3	0.828	0.824	0.826	0.655
	SMI4	0.793			
	GBCP1	0.712			
	GBCP2	0.759			
Green building consumer perception (GBCP)	GBCP3	0.836	0.828	0.835	0.595
. . . .	GBCP4	0.827			
	GBCP5	0.763			
	EA1	0.701			
	EA2	0.733			
Environmental awareness (EA)	EA3	0.821	0.851	0.849	0.631
	EA4 0.864				
	EA5	0.863			

Table 3. Reliability and validity test.

(iv) Discriminant validity test

The Table 4 outlines the outcomes of the Fornell–Larcker criterion, a commonly used method in structural equation modeling to measure discriminant validity. The logic is that a construct's AVE should be higher than its associations with other constructs, implying that the variance explained by the construct's items is greater than the shared variance with other constructs. In this study, the square root of AVE values for EA, GBCP, PISFS, and SMI are approximately 0.794, 0.77, 0.857, and 0.809, respectively. These values surpass the corresponding associations between constructs, confirming that each construct is more closely related to itself than to others. This supports the measurement model's ability to efficiently differentiate between the constructs, providing evidence of discriminant validity.

Table 4. Discriminant validity test—Fornell–Larcker criterion.

Variable	EA	GBCP	PISFS	SMI
EA	0.794			
GBCP	0.381	0.77		
PISFS	0.502	0.32	0.857	
SMI	0.394	0.43	0.256	0.809

The heterotrait–monotrait (HTMT) ratio test results, as presented in Table 5, demonstrate discriminant validity among the key constructs in the research study. The HTMT ratios were calculated by comparing the correlations between different constructs (heterotrait correlations) with the average correlations within the same construct (monotrait correlations). For discriminant validity, the HTMT ratios should be considerably below 1.0, signifying that the correlations between distinct constructs are markedly lower than the average correlations within each construct. In this study, the HTMT ratios of 0.444 (EA-GBCP), 0.37 (PISFS-GBCP), and 0.303 (SMI-PISFS) are all below the important level, which means there is strong evidence for discriminant validity. These results imply that the correlations between different constructs are smaller than the average correlations within each construct, strengthening the measurement model and effectively distinguishing between EA, GBCP, PISFS, and SMI.

Variable	EA	GBCP	PISFS	SMI
EA				
GBCP	0.444			
PISFS	0.571	0.37		
SMI	0.46	0.51	0.303	

Table 5. Discriminant validity test-heterotrait-monotrait ratio.

Table 6 presents the cross-loading values, which represent the strength of relationships between individual items and their intended constructs, as well as potential associations with other constructs. The interpretation involves examining the pattern of these cross-loadings to assess their discriminant validity. Each item should exhibit a higher correlation with its intended construct than with other constructs. In this study, the results indicate that items related to EA, GBCP, PISFS, and SMI normally align with their intended constructs. This pattern supports the discriminant validity of the constructs, suggesting that the measurement items effectively capture the distinct aspects of each construct.

Table	6.	Cross	loadings.
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Code	EA	GBCP	PISFS	SMI
EA1	0.701	0.29	0.512	0.293
EA2	0.733	0.3	0.372	0.359
EA3	0.821	0.3	0.366	0.32
EA4	0.864	0.33	0.363	0.319
EA5	0.863	0.27	0.321	0.248
GBCP1	0.186	0.71	0.233	0.271
GBCP2	0.234	0.76	0.271	0.363
GBCP3	0.345	0.84	0.23	0.288
GBCP4	0.379	0.83	0.223	0.313
GBCP5	0.306	0.76	0.261	0.393
PISFS1	0.386	0.23	0.868	0.216
PISFS2	0.384	0.22	0.873	0.174
PISFS3	0.496	0.34	0.831	0.255
SMI1	0.266	0.32	0.205	0.788
SMI2	0.263	0.33	0.19	0.827
SMI3	0.37	0.38	0.189	0.828
SMI4	0.365	0.35	0.244	0.793

5.2. Structural Model

(i) Modelling

This study used partial least squares structural equation modeling (PLS-SEM) method via SmartPLS 4.0 to build and analyze a model based on insights from previous studies. This involved evaluating path coefficients, significance levels, and the coefficient of determination (\mathbb{R}^2) for each dependent construct. The significance of path coefficients was highlighted, along with their orientation and statistical relevance, with 5000-sample bootstrapping being used for stability evaluation. Path coefficients indicate the intensity and direction of relationships between constructs. A positive path coefficient implies a positive relationship, while a negative coefficient indicates a negative relationship. The size of the coefficient shows the intensity of the relationship. The t-values associated with path coefficients show their statistical significance. Bootstrapping with 5000 samples is frequently used to produce t-values and assess the stability of outcomes. The coefficient of determination (\mathbb{R}^2) quantifies how well the model accounts for the variation in dependent

constructs. A higher R^2 implies a better-fitting model. It is essential to assess both the overall model and individual construct R^2 values. High R^2 values imply that the model efficiently explains the variation in dependent constructs based on the given independent variables. Figure 2 displays the structural model setup for testing the research hypotheses.



Figure 2. Structural model.

(ii) Collinearity test

The Table 7 shows the variance inflation factor (VIF) values for collinearity assessment between the latent constructs. The VIF values were calculated to evaluate the degree of multicollinearity between variables, with higher values indicating a greater level of collinearity. Generally, VIF values below 5 are considered acceptable, and values exceeding this threshold may suggest potential collinearity issues. The absence of extremely high VIF values in this table suggests that the latent constructs are relatively independent of each other in the analysis.

Table 7. Collinearity test.

Variable	EA	GBCP	PISFS	SMI
EA		1.202	1.294	
GBCP			1.319	
PISFS				
SMI		1.192	1.34	

(iii) Model fit

Table 8 shows the several model fit indices for the latent constructs GBCP and PISFS. For GBCP, the Q^2 value is 0.232, indicating the predictive significance of the model for this construct. Q^2 assesses the model's ability to predict the endogenous latent variable, with higher values suggesting better predictive accuracy. In this study, a Q^2 of 0.232 for GBCP implies that the model has a moderate level of predictive relevance for green building consumer perception. For PISFS, the Q^2 value is 0.253, suggesting a moderate predictive relevance for purchasing intentions for sustainable fitness services. The R^2 values measure the proportion of variation in the dependent constructs accounted for by the independent variables. For GBCP, the R^2 is 0.242, implying that approximately 24.2% of the variance in green building consumer perception is accounted for by the predictors, reflecting a moderate level of explanatory power. For PISFS, the R^2 is 0.277, indicating

that around 27.7% of the variance in purchasing intentions for sustainable fitness services is explained by the model. SRMR (standardized root mean square residual) is a measure of the discrepancy between observed and predicted covariances. A lower SRMR value suggests a better fit, with values below 0.08 generally considered acceptable. The SRMR value of this study is 0.078.

Table 8. Model fit test.

Variable	Q ²	R ²	SRMR
GBCP	0.232	0.242	0.078
PISFS	0.253	0.277	

(iv) Hypotheses Test

(a) Path coefficient

Table 9 explains the relationships between latent constructs and the strength and statistical significance of these connections. The path from EA to GBCP is positively significant, with a path coefficient (β) of 0.264 and a highly strong T statistic of 6.928, and the *p* value is 0.000 (*p* < 0.001). Moreover, the path from EA to PISFS is even stronger, with a β of 0.487, a highly significant T statistic of 14.522, and a *p* value of 0.000 (*p* < 0.001), suggesting an extensive influence of EA on PISFS. The path from GBCP to PISFS, while positive, is comparatively weaker, with a β of 0.13 and a significant T statistic of 3.455, and the *p* value is 0.001 (*p* = 0.001). Also, SMI appears to have a positive effect on both GBCP and PISFS. The path coefficient for SMI to GBCP is 0.334 (T statistic = 9.999, *p* < 0.001), while the path coefficient for SMI to PISFS is 0.078 (T statistic = 2.139, *p* = 0.033), which shows that PISFS is affected less strongly by SMI. Standard deviations for each path represent variability in observed scores. The varying strengths of these relationships underscore the strong relationship between the latent constructs in the structural model.

Path	β	Standard Deviation (STDEV)	T-Statistic	<i>p</i> -Value
EA -> GBCP	0.264	0.038	6.928	0.000
EA -> PISFS	0.487	0.034	14.522	0.000
GBCP -> PISFS	0.13	0.038	3.455	0.001
SMI -> GBCP	0.334	0.033	9.999	0.000
SMI -> PISFS	0.078	0.036	2.139	0.033

Table 9. Path coefficient test.

(b) Mediator test

Table 10 shows the results of tests that looked at the mediating effect of GBCP in the relationships between EA and PISFS and between SMI and PISFS. The tests were run along two sequential paths in the structural equation model. For the EA -> GBCP -> PISFS path, the path coefficient (β) of 0.034 signifies a positive mediating effect of GBCP between EA and PISFS. The significant T statistic of 2.929 (p = 0.003) indicates the strength of this mediation effect, and the confidence interval (2.50% to 97.50%) spans from 0.014 to 0.174. Similarly, for the SMI -> GBCP -> PISFS path, the path coefficient is 0.043, signifying a positive mediation effect of GBCP between SMI and PISFS. The highly significant T statistic of 3.315 (p = 0.001) underscores the strength of this mediation effect, with a confidence interval ranging from 0.019 to 0.198. Overall, these findings suggest that GBCP serves as a significant mediator, explaining how both EA and SMI contribute to influencing individuals' intentions to purchase sustainable fitness services.

Table 10. Mediating effect test.

Path	β	STDEV	T-Statistic	<i>p</i> -Value	2.50%	97.50%
EA -> GBCP -> PISFS	0.034	0.035	0.012	2.929	0.003	0.014
SMI -> GBCP -> PISFS	0.043	0.043	0.013	3.315	0.001	0.019

(c) Moderator test

The results of the moderating effect test, as represented in Table 11, clarify the relationship between EA and SMI and its impact on GBCP and PISFS. The significant path coefficient of 0.073 demonstrates a positive moderating effect for EA \times SMI -> GBCP. This suggests that the influence of EA and SMI has a distinct impact on shaping consumers' perceptions of green building fitness services. Similarly, EA \times SMI -> PISFS exhibits a positive moderating effect on PI, with a significant path coefficient of 0.071. This implies that the influence of EA and SMI significantly affects consumers' intentions to purchase sustainable fitness services. The T statistics of 0.029 and 0.035 for GBCP and PISFS, respectively, show that both interactions are statistically significant. These results highlight the moderating role of SMI in influencing the link between EA and consumers' perceptions and intentions, providing advanced knowledge of EA and SMI in sustainable fitness services. Figure 3 depicts the correlation between EA at various levels of standard deviations (SD) and SMI on GBCP. The lines depict the values of EA at -1 standard deviation (below average), EA at the mean (average), and EA at +1 standard deviation (above average). As the SMI increases, the GBCP also increases across all levels of EA. Nevertheless, the gradient is most pronounced for individuals with higher environmental awareness, specifically those at +1 standard deviation. This indicates that as their social media influence increases, their perceptions of green building consumption experience a more significant rise. Conversely, for those with lower environmental awareness (EA at -1 SD), the increase in GBCP is less significant.

Table 11. Moderating effect test.

Path	β	STDEV	T-Value	<i>p</i> -Value
$EA \times SMI \rightarrow GBCP$	0.073	0.072	0.029	2.486
$EA \times SMI \rightarrow PISFS$	0.071	0.07	0.035	2.002



Figure 3. Moderating effect.

6. Discussion

6.1. Interpretation of Findings

In examining the relationship between SMI and PISFS, the findings underscore the significant impact of SMI on consumer decisions within the sustainable fitness sector. The positive correlation observed suggests that social media plays a pivotal role in shaping consumers' intentions to engage with eco-friendly fitness services. Moreover, the exploration of GBCP reveals that it serves as a mediator in this relationship. This implies that consumers' perceptions of sustainable infrastructure directly influence their purchasing intentions and provide a relationship between environmental consciousness and consumer choices.

6.2. Role of Green Building Consumption Perceptions

The mediating role of GBCP illuminates the significance of perceived environmental sustainability in consumer decision-making processes. The study contributes to the understanding of consumer behavior within the context of sustainable services by emphasizing the pivotal role of GBCP. Consumers' perceptions of green building practices emerged as influential factors that shaped their intentions to adopt sustainable fitness services. Fitness service providers must invest in sustainable infrastructure and communicate these efforts effectively, as positive GBCP enhances consumers' likelihood to engage with eco-friendly fitness options. These findings attest to a deep relationship between consumer perceptions and sustainable service adoption and provide practical implications for businesses seeking to align with environmental values.

6.3. Importance of Environmental Awareness

In this study, the moderating role of environmental awareness (EA) on the relationship between SMI and both PISFS and GBCP underscores the importance of fostering environmental consciousness in targeted marketing strategies. The results suggest that consumers with heightened environmental awareness exhibit an amplified response to social media influence, further influencing their purchasing intentions and perceptions of green building practices. This finding underscores the need for fitness service providers to tailor marketing efforts to enhance environmental awareness, thereby leveraging social media as a powerful tool to resonate with ecologically conscious consumers. This implication aligns with current trends in sustainability marketing and emphasizes the potential for businesses to amplify the impact of social media campaigns by strategically targeting and engaging environmentally aware consumer segments.

7. Implications for Practice and Policymakers

7.1. Theoretical Implication

The TPB and the ELM provide a strong theoretical framework for understanding consumer behavior in sustainable fitness services influenced by social media. The TPB theory underscores the importance of attitudes, subjective norms, and perceived behavioral control in determining consumers' intentions to engage with sustainable fitness services. The findings align with the TPB, as they demonstrate the influence of attitudes, subjective norms, and perceived control on purchasing intentions for sustainable fitness services. The study extends TPB by incorporating social media as a significant external factor impacting these psychological constructs. Additionally, ELM is supported by illustrating how social media serves as a peripheral cue, influencing consumer attitudes and intentions through heuristic processing. The study underscores the importance of attitudes, subjective norms, and perceived control in shaping purchasing intentions. In particular, favorable attitudes toward sustainable fitness services, subjective norms influenced by social media, and a sense of perceived control over decision-making play a significant role in consumers' intentions to adopt sustainable fitness practices. Green building consumption perceptions act as a crucial mediator within the TPB framework. The study reveals that individuals form positive attitudes toward sustainable fitness services through their perceptions of environmentally friendly facilities. This mediator role emphasizes the interconnectedness

of environmental considerations and purchasing intentions within the TPB model. Social media, in sustainable fitness services, functions as a peripheral cue in the ELM. Consumers exposed to sustainability-related content on social media platforms undergo heuristic processing, impacting their attitudes and intentions. The study demonstrates how social media serves as a source of information that influences consumers' mental shortcuts in decision-making.

7.2. Practical Implications

Fitness service providers can leverage social media by creating content that emphasizes the sustainability aspects of their services. Strategies may include showcasing eco-friendly facilities, sharing success stories of sustainable fitness transformations, and collaborating with influencers who align with environmental values. To influence consumer perceptions and intentions, providers should focus on visually appealing content. This could involve sharing videos or images depicting sustainable practices, virtual tours of green facilities, and infographics illustrating the positive environmental impact of choosing their services. Recognizing the varying levels of environmental awareness among consumers, social media campaigns should be customized to different segments. For instance, content targeting environmentally conscious consumers may emphasize detailed sustainability practices, while content for less-aware segments may serve as educational material to raise awareness gradually. Creating interactive content, such as polls, challenges, or virtual events, fosters community building and brand loyalty. This not only enhances the overall consumer experience but also strengthens the connection between the brand and environmentally conscious consumers who seek a sense of community. These practical recommendations directly align with the study's findings. For instance, the results show that exposure to perceptions of green building consumption on social media influences positive attitudes toward sustainable fitness services, reinforcing the need for providers to incorporate these elements into their strategies. The study's implications extend beyond individual providers, suggesting industry-wide implications. Policymakers can consider incentivizing sustainability initiatives in fitness services, and industry associations may develop certification programs that recognize and promote environmentally friendly practices, creating a collective push toward sustainable fitness.

8. Conclusions and Future Research

This study employed SmartPLS 4 software to conduct a comprehensive analysis of the measurement model and structural model using a sample of 672 participants, providing robust evidence supporting the relationships between social media impact, green building consumption perceptions, environmental awareness, and purchasing intentions for sustainable fitness services. The results of the measurement model analysis show a high degree of internal coherence within each construct, implying that the chosen items accurately assess the expected concepts. Factor analysis for all items within each construct is high, showing a strong link between the items and their hidden constructs. In the discriminant validity test, the values surpass the corresponding associations between constructs, confirming that each construct is more closely related to itself than to others. This supports the measurement model by effectively distinguishing between the constructs and providing evidence of discriminant validity. The results imply that the correlations between different constructs are smaller than the average correlations within each construct, strengthening support for the measurement model in effectively distinguishing between EA, GBCP, PISFS, and SMI. In addition, the structural model analysis revealed the associations among the variables being studied. Path coefficients indicate the magnitude and orientation of relationships between constructs. The model fit test suggests a better fit for the latent constructs, GBCP, and PISFS. Furthermore, the mediating role of green building consumption perceptions was evident, emphasizing the importance of environmentally conscious facilities in influencing consumers' preferences for sustainable fitness services. Furthermore, the moderation analysis in this study highlights the significance of environmental awareness in shaping

the intensity of the correlation between social media impact and the intention to make purchases. This study contributes to the understanding of the TPB and the ELM, elucidating the intricate dynamics between social media, green building consumption perceptions, and environmental awareness in shaping consumer behavior. Industry professionals can leverage the findings to enhance the design and promotion of sustainable fitness services, emphasizing the importance of environmentally conscious facilities and strategic social media engagement. The study's robust methodology strengthens its validity, and the findings provide a foundation for future research improvements. Qualitative approaches such as interviews or focus groups can be further employed to gain deeper insights into the subjective experiences influencing consumer perceptions and behaviors related to sustainable fitness services. Moreover, future research should investigate other potential mediators such as consumer knowledge of sustainability, the brand image of sustainable practices, the perceived value of sustainability in fitness services, or trust in green claims made on social media, as well as moderators such as personal health consciousness, public commitment to sustainability, frequency of social media usage, or cultural attitudes toward sustainability with regards to the relationship between social media and purchasing intentions to reveal different dimensions shaping consumer behavior.

Author Contributions: Spearheaded by S.H., this research illuminates the effect of social media influence on purchasing intentions within the context of sustainable fitness services, integrating the roles of green building consumption perceptions and environmental awareness. Under A.A.'s supervision, it addresses literature gaps in the sustainability of service industries, particularly fitness. Through empirical analysis, S.H.'s work, enriched by A.A.'s seasoned perspective, proposes practical strategies for the industry's sustainable advancement. All authors have read and agreed to the published version of the manuscript.

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Appendix A

Social Media Influence (SM)

SM1: Your social media engagement significantly influences your decision to purchase products from green building commercial fitness clubs.

SM2: You use social media to seek information about products offered by green building commercial fitness clubs.

SM3: You consider information related to green building commercial fitness clubs on social media to be reliable.

SM4: You deem the content regarding green building commercial fitness clubs on social media to be credible.

Green Building Consumer Perception (GBCP)

GBCP1: You believe that engaging in green building commercial fitness clubs is environmentally beneficial.

GBCP2: Prioritizing environmental concerns, you affirm that choosing fitness services in green building commercial fitness clubs contributes positively to the ecological environment.

GBCP3: You feel a responsibility to prefer green building commercial fitness clubs for fitness experiences over conventional fitness clubs.

GBCP4: Aligning with your fitness program, participation in fitness activities at green building commercial fitness clubs is integral to your immersion.

GBCP5: You perceive engaging in green-building commercial fitness clubs as a means to enhance your image and garner recognition from others.

Purchase Intention (PI)

PI1: If you require fitness services, you are open to purchasing them from green building commercial fitness clubs.

PI2: When friends seek fitness services, you would suggest green building commercial fitness clubs.

PI3: Green building commercial fitness clubs serve as an optimal choice for investing in fitness services.

Environmental Awareness (EA)

EA1: Taking the initiative, you seek to understand environmental protection in your life and enhance your ability to protect the environment.

EA2: Adopting environmentally friendly behaviors in your personal and professional life is a spontaneous choice.

EA3: You actively encourage your family, friends, and colleagues to embrace more environmentally conscious behaviors.

EA4: You stay informed about environmental initiatives promoted through social media. EA5: Your attitude toward environmental protection and green initiatives remains consistently positive.

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