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Online Shoppers' Impulse Buying Behavior for Athleisure Products

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Abstract This study aimed to explore factors influencing consumers' perceived value and how these perceptions drive online impulse purchases. The research focused on how elements such as product presentation, recommendations, fashion involvement, and perceived hedonic and utilitarian value influence online impulse buying behavior specifically for athleisure items. A web-based survey was conducted, yielding 506 valid responses that were utilized for data analysis. Regression analyses indicated that both product presentation and fashion involvement significantly influenced consumers' hedonic and utilitarian values. Moreover, fashion involvement exerted a greater impact on impulse buying than product presentation. Among all the variables, hedonic value emerged as the strongest predictor of online impulse buying. The findings offer valuable understanding of the purchasing behavior of online consumers in the athleisure market and provide guidance for e-commerce retailers on how to refine their digital marketing strategies.

Keywords Fashion involvement, Product presentation, Hedonic value, Utilitarian value, Impulse buying, Online shopping

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Introduction

The rapid advancement of technology has greatly broadened the online retail landscape, transforming it into a dominant marketplace. The industry has seen significant expansion in recent years and is expected to continue its upward trajectory until 2030 (Grand View Research, 2023). Digital marketplaces offer a shopping experience distinct from traditional retail stores, enabling consumers to make impulse purchases more easily and conveniently. The widespread adoption of smartphones, tablets, and laptops has further fueled this trend, particularly within the fashion industry (Nam et al., 2021). The online setting, with minimal social pressure from salespeople and less time limitation, enables consumers to conduct product searches and comparisons more frequently and effectively (Eroglu et al., 2001).

Given this evolving landscape, online impulse buying behavior has become increasingly intertwined with both rational and irrational consumer decision-making. Even amidst rising living costs post-pandemic, consumers continue to demonstrate a heightened propensity for impulse purchases (Dickler, 2022). Various factors have been shown to contribute to online impulsive buying, including environmental cues being a significant influence (Bressolles et al., 2007; Parboteeah et al., 2009; Shen & Khalifa, 2012; Wells et al., 2011) and individual consumer characteristics (Wood, 1998) that drive impulsive buying behavior in online contexts. By integrating both practical functionalities and elements that

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trigger impulsive behavior, marketers can intentionally design websites to promote spontaneous purchases. A deeper understanding of website characteristics and consumer traits can lead to more effective e-commerce strategies for online retailers.

Although numerous studies have thoroughly examined the impact of website features and shopper characteristics on impulsive buying behavior (Chan et al., 2017), certain critical aspects remain underexamined. Notably, online product recommendations have been overlooked as an external stimulus, and fashion involvement has not been sufficiently considered as an internal factor. Product recommendations introduce consumers to items they may not have previously considered, often based on browsing history and preferences, which can trigger impulsive purchases. Simultaneously, fashion involvement significantly influences impulse purchases made online, as consumers with high fashion involvement tend to make quicker purchasing decisions based on style and trends, bypassing extensive evaluation processes. Prior studies suggest that a strong interest in fashion considerably increases spontaneous purchasing tendencies (Han et al., 1991; Liapati et al., 2015; Park et al., 2006). Consequently, the current research aims to fill the existing research gap by exploring the associations between online product information, recommendations, and consumers' impulse consumption.

Incorporating online product recommendations and fashion involvement into the study of online impulse shopping enables researchers to achieve a deeper understanding of how external cues and individual characteristics interact to influence impulsive purchasing in digital environments, Moreover, there is a noticeable gap in research exploring online impulse buying from the perspective of perceived value (Yang et al., 2021). Perceived value refers to how consumers evaluate products or services (Grönroos, 1997; Zeithaml, 1988). Most studies have focused on hedonic and utilitarian value to interpret consumer behavior (Babin et al., 1994; Huang, 2016), particularly regarding online impulsive purchases (Yang et al., 2021). Building on this, the current study posits that hedonic and utilitarian value perceptions are key motivators behind online impulse buying.

This study explored how both external and internal stimuli affect consumers' hedonic and utilitarian value perceptions, and how these values lead consumers to engage in impulse buying behaviors. The research was grounded in Woodworth's (1929) stimulus-organism-response (S-O-R) model, which examines the factors driving impulse purchases of athleisure products in an online shopping setting. In this framework, external stimuli are represented by the online presentation of product information and recommendations (referred to as online product presentation), while internal stimuli are reflected in consumers' level of fashion involvement. The organism component encompasses hedonic and utilitarian values, and the response represents consumers' online impulse buying behavior. The study specifically analyzed the connections among online product presentation, fashion involvement, perceived value, and their collective influence on consumers' likelihood to make spontaneous purchases in digital retail environments.

Literature Review

Theoretical Framework

The S-O-R model (Woodworth, 1929) effectively identifies the factors that influence individual behavior (Chen-Yu et al., 2022; Nam et al., 2021). It has served as the foundation for numerous studies focused on identifying the elements that drive impulse buying behavior (Chan et al., 2017; Chen-Yu et al., 2022; Habib & Qayyum, 2018; Goel et al., 2022; Kimiagari & Malafe, 2021; Suh & Prophet, 2018; Wu et al., 2013; Wu et al., 2020; Zheng et al., 2019). According to Mehrabian and Russell (1974), the model illustrates how environmental stimuli (S) influence consumers' internal states (O), which then lead to behavioral outcomes (R). The model suggests that stimuli initiate changes in consumers' internal evaluations or perceptions. Chan et al. (2017) categorized variables in online impulse buying studies into external and internal stimuli. External stimuli include website design and marketing factors, while internal stimuli are consumer traits. In this study, the external stimulus is defined as the website's product information and recommendations (i.e., online product presentation). The internal stimulus is fashion involvement, which reflects consumers' interest and attention to fashion products (O'Cass, 2004). Fashion

involvement is an inherent trait that affects how consumers respond to external stimuli, rather than being a reaction itself. The organism encompasses both cognitive and emotional responses. Cognitive responses occur when consumers assess potential benefits and limitations during the online impulse-buying process (Chan et al., 2017; Parboteeah et al., 2009). Emotional responses arise when consumers experience positive feelings, such as enjoyment or pleasure, during this process (Chan et al., 2017; Floh & Madlberger, 2013). The organism (O) includes perceived value, which encompasses both hedonic and utilitarian aspects. The response (R) represents consumer behavior, such as unplanned purchases, commonly known as online impulse buying (Chen-Yu et al., 2022; Goel et al., 2022; Woodworth, 1929). This model enables a comprehensive examination of the effects of external and internal stimuli on consumers' internal reactions and their subsequent purchasing behaviors.

Online Impulse Buying

Researchers and e-commerce businesses have increasingly focused on online impulse buying as a key area of interest. During the Covid-19 pandemic, individuals made impulsive purchases more frequently than before, as these purchases provided a short-term increase in happiness due to dopamine release (Tronier, 2021). As online impulse buying continues to grow, it becomes essential to identify strategies that enhance consumers' positive experiences on e-commerce platforms. Impulse buying refers to an impromptu purchase prompted by a stimulus and typically driven by a strong and sudden desire to buy products (Redine et al., 2023; Zheng et al., 2019). Sharma et al. (2010) identified several factors influencing impulse buying, including enjoyment of shopping, urgency, novelty and variety seeking, the desire for optimal stimulation, and a perceived lack of control. Kimiagari & Malafe (2021) examined both external stimuli, such as situational, and marketing influences, as well as internal stimuli like trust propensity, self-esteem, and self-confidence. Djafarova and Bowes (2021) explored how user-generated content on Instagram serves as an external stimulus. Kathuria and Bakshi's (2024) extensive review of the literature found that various website factors impact online impulse buying. Redine et al. (2023) pointed out that consumer characteristics, self-control, and available resources are associated with impulse buying behavior. Specifically, Nyrhinen et al. (2024) found that self-control is related to impulse buying. However, there has been limited research on how online product presentation, product recommendations, and fashion involvement influence online impulse buying.

Online Product Presentation and Perceived Value

Online product presentation includes three main components: the effectiveness of the website, features of recommended products, and photos uploaded by consumers. Website effectiveness involves aspects such as usability and the ability to provide useful information, including variety in selection, pricing, promotions, size charts, color options, and sensory details (Chen-Yu et al., 2022; Park et al., 2012). Recommended product features provide impersonal yet personalized insights, potentially influencing how consumers perceive value (Ansari et al., 2000). There is a lack of research examined the association between online product recommendations and purchasing decisions (Senecal & Nantel, 2004). Moreover, the literature does not provide a comprehensive understanding of the effect of consumer-uploaded photos on online impulse buying. To address this gap, this study investigates how product recommendations and consumer-uploaded photos impact consumers' perceptions of value.

External factors, such as product presentation, can shape consumers' value perceptions. Hedonic shoppers, for instance, tend to enjoy browsing websites that offer a wide variety (Park et al., 2012). Factors like visual appeal, information quality, ease of navigation, pricing, and self-confidence have been shown to enhance the experience of hedonic browsing (Kimiagari & Malafe, 2021; Zheng et al., 2019). Websites that incorporate sensory stimuli and a diverse range of options can evoke positive emotions, which may increase impulse buying among hedonic shoppers (Park et al., 2012). External stimuli can also affect utilitarian values. Zheng et al. (2019) found that visual appeal influences utilitarian browsing. Therefore, online product presentation tied to visual appeal may promote utilitarian values. Building on these findings, we suggest the subsequent hypotheses:

Hypothesis 1: Online product presentation significantly influences hedonic value for online shopping.

Hypothesis 2: Online product presentation significantly influences utilitarian value for online shopping.

Fashion Involvement and Perceived Value

Fashion involvement describes how meaningful and interesting fashion clothing is to a consumer (Engel et al., 2005). It reflects a person's inclination to stay informed about fashion trends and frequently update their closet to stay in style (Sproles, 1974). Previous research has shown that higher fashion involvement increases the likelihood of impulse purchases of fashion-related products (Han et al., 1991; Liapati et al., 2015; Park et al., 2006). However, there has been limited investigation into the connection between fashion involvement and perceived value. Perceived value is how a consumer judges the worth of a product by weighing the benefits they gain against the costs they have to pay (Zeithaml, 1988). This assessment is subjective and can vary widely, often encompassing factors such as quality, convenience, and quantity (Zeithaml, 1988). Researchers view perceived value as a multidimensional concept, with the most common dimensions in marketing being hedonic and utilitarian values (Babin et al., 1994). Hedonic value pertains to enjoyment, sensory pleasure, and emotional satisfaction (Scarpi, 2006), whereas utilitarian value relates to practical, goal-driven decision-making and efforts to minimize risk (Park et al., 2012). According to Bhaduri and Stanforth (2017), fashion involvement positively impacts perceived value. Thus, in an online-shopping setting, stronger engagement with fashion should elevate consumers' perceived value. On this basis, we propose the subsequent hypotheses:

Hypothesis 3: Fashion involvement significantly influences hedonic value for online shopping.

Hypothesis 4: Fashion involvement significantly influences utilitarian value for online shopping.

Perceived Value and Online Impulse Buying

Perceived value, encompassing both hedonic and utilitarian aspects, can influence online impulse buying behavior. Yang et al. (2021) found that hedonic value notably drives impulse purchases. Similarly, Goel et al. (2022) highlighted hedonic motivations as a key factor in promoting continued impulsive purchases. Park et al. (2012) observed that consumers with strong hedonic tendencies are more inclined toward websites offering entertaining experiences, which can trigger impulse buying. Chen-Yu et al. (2022) also linked hedonic values such as beliefs, desires, and expectations related to apparel to a higher propensity for impulsive shopping. Additional studies (Indrawati et al., 2022; Zheng et al., 2019) confirmed the direct influence of hedonic values on impulse buying behavior.

In contrast, research on the impact of utilitarian values on impulse buying is relatively sparse. Indrawati et al. (2022)

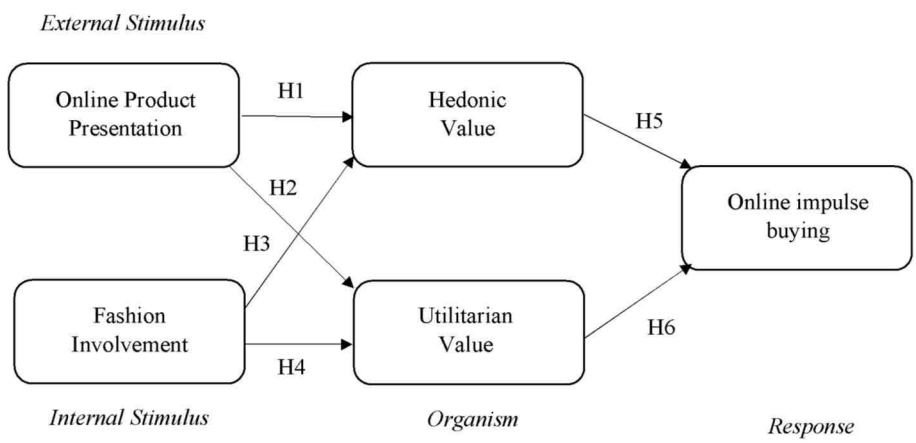


Figure 1. Theoretical framework and hypotheses

reported that utilitarian motivations do play a significant role in shaping impulse buying intentions. Zheng et al. (2019) noted that utilitarian browsing can indirectly lead to impulse buying by transitioning into hedonic browsing. They further argued that utilitarian browsing itself is an important catalyst for impulsive purchases. Despite their different responses to external stimuli, both hedonic and utilitarian values contribute to consumers' likelihood of making impulsive purchasesonline.

Thus, the subsequent hypotheses are posited:

Hypothesis 5: Hedonic value significantly influences online impulse buying.

Hypothesis 6: Utilitarian value significantly influences online impulse buying.

Method

Sampling and Data Collection

The Institutional Review Board (IRB) approved this study in accordance with ethical standards for research involving human subjects. Amazon Mechanical Turk (MTurk) was used to recruit participants by sending a message that explained the study's purpose, participants' rights, and compensation details. Those who chose to participate were emailed a survey link along with completion instructions. The online survey was available for participants to complete it over a five-day period. The survey began with an online consent form explaining participants' rights, study objectives, and procedures. Only those who provided consent could proceed with the survey. Upon survey completion, participants received $0.80 via MTurk as compensation, which aided in securing a sufficient sample size. The study focused on U.S.-based adults who had previously purchased fashion items from online retailers.

Survey Instruments

The online survey was developed using Qualtrics to gather data and test six proposed hypotheses. Five key constructs were measured using validated, pre-established scales. Before beginning the questionnaire, participants viewed a researcher-modified Nike website featuring athleisure clothing, style recommendations, and user-generated images. Nike was selected due to its strong brand recognition and relevance in athleisure, ensuring participants could relate to the content. Participants began by reading a scenario illustrating a standard online shopping situation and were prompted to envision browsing the Nike website for clothing items (see Appendix). The scenario stated: "*While searching fashion brand websites to buy clothing for yourself, you find this website. You decide to browse its webpages for fashion product purchases."* Following this, they answered questions based on their perceptions of the site they browsed. Fashion involvement was measured using five items adapted from Fairhurst et al. (1989) and Kang & Park-Poaps (2010). Online product presentation was assessed with eight items from Chen-Yu et al. (2022), such as whether the website displayed all color options, high-quality product images, and coordinated outfits. Measures for hedonic and utilitarian values each consisted of five items taken from Park et al. (2012) and Zheng et al. (2019), while online impulse buying was also measured using five items from Park et al. (2012). Demographic data were collected in the final section. Except for demographic items, all responses were recorded on a seven-point Likert scale, with 1 indicating strong disagreement and 7 indicating strong agreement.

Data Analyses

SPSS 18.0 was used to analyze data. The reliability of the scales was assessed using Cronbach's alpha. The analysis comprised descriptive statistics, exploratory factor analysis (EFA) employing principal axis factoring with varimax rotation, as well as both simple and multiple regression analyses. Initially, descriptive statistics summarized the participants' demographic information. Subsequently, Descriptive statistics summarized participant demographics. EFA was conducted to refine the measurement structure for the five main variables. To verify the internal consistency of each scale, Cronbach's alpha scores were computed. Finally, the six hypotheses was tested using regression analyses, and the Sobel test was used to assess whether hedonic and utilitarian values acted as mediators.

Results

Participant Characteristics

The survey gathered responses from 570 participants recruited via Amazon Mechanical Turk. Following the removal of incomplete responses, 506 valid submissions remained for analysis. The sample predominantly consisted of Caucasian Americans (92.6%) with bachelor's degrees. Most respondents (93.5%) were between 18 and 39 years old at the time of the 2023 survey. The median household income for the group ranged from $50,000 to $75,000. Table 1 presents detailed demographic information.

Exploratory Factor Analysis (EFA)

EFA was performed was conducted using Principal Axis Factoring with varimax rotation to identify a single factor for each construct. Factors were selected based on eigenvalues greater than 1.0. Items were assigned to a factor if their standardized loadings were at least .50 on that factor and .30 or lower on all others, following the guidelines of Nunnally and Bernstein (1994). Cronbach's alpha was used to assess the reliability and internal consistency of each construct, with values of .70 or above considered satisfactory. Table 2 presents the factor loadings, eigenvalues, explained variance percentage, cumulative variance, and Cronbach's alpha for

Table 1. Demographic Characteristics of Participants (n=506)

Participant characteristics	Frequency	Percent (%)
Gender		
Male	206	40.7
Female	299	59.1
Missing	1	0.2
Age		
18-29	259	51.2
30-39	214	42.3
40-49	33	6.5
Ethnicity		
White or European	465	92.6
Black or African American	18	3.6
American Indian or Alaska Native	3	0.6
Other	16	3.2
Missing	4	0.8
Education Attainment		
No schooling is completed	3	0.6
Less than 9th grade	3	0.6
9th to 12th grade, no diploma	2	0.4
High school graduate	8	1.6
Some College, no degree	18	3.6
Associate's degree	22	4.4
Bachelor's degree	437	87.1
Graduate or professional degree	9	1.8
Missing	4	0.8
Household Income		
Less than 24,999	14	2.8
$25,000-49,999	104	20.6
$50,000-74,999	204	40.3
$75,000-99,999	121	23.9
$100,000-149,999	42	8.3
$150,000-199,999	13	2.6
Missing	8	1.6

Table 2. Results of EFA and Reliability (n=506)

Constructs	Scale Items	Factor loadings
Fashion involvement	I usually have one or more outfits of the very latest style.	.61
	I am interested in shopping at boutique or fashion specialty stores rather than at department stores for my fashion needs.	.70
	An important part of my life is dressing smartly.	.76
	When I must choose between fashion and comfort, I usually dress for fashion, not comfort.	.74
	I spend a lot of time talking to my friends about fashion products and brands.	.85
	Eigenvalue = 3.15; % of variance explained = 62.99; Cumulative % = 54.22; Cronbach's α = .85	
Online product presentation	The products are displayed in an organized way.	.82
	The product display is attractive.	.80
	The website gives detailed written descriptions of products.	.78
	The images on the website are large enough.	.77
	The website shows good photos of products.	.81
	The website shows products from various angles.	.80
	The website shows products in all available colors.	.79
	The website shows images that coordinated various items.	.84
	Eigenvalue = 5.52; % of variance explained = 68.96; Cumulative % = 64.54; Cronbach's α = .94	
Hedonic value	I was able to forget my problems and to feel relaxed.	.53
	I enjoyed web browsing enough to forget the time out.	.76
	I looked around at products on the website with no intention of purchasing.	.79
	I was very excited: it felt like playing.	.78
	I browsed products to buy better items in price or quality.	.83
	Eigenvalue = 3.16; % of variance explained = 63.16; Cumulative % = 54.93; Cronbach's α = .85	
Utilitarian value	I browse to buy better products in price or quality.	.84
	I browse shopping websites to gather information about products.	.80
	I look around shopping websites to comparison shops.	.78
	I browse the shopping websites in order to get additional value as much as possible.	.79
	I browse for efficient online shopping.	.81
	Eigenvalue = 3.57; % of variance explained = 62.99; Cumulative % = 54.22; Cronbach's α = .90	
Online impulse buying	While I was looking at the website page,	
	I had the urge to purchase products from this brand that I do not need.	.60
	I had the urge that I wanted to buy products from this brand that I did not plan to buy.	.75
	I had a desire that I want to buy products from this brand without thinking.	.82
	I had the feeling that I was a bit inattentive about what I would buy.	.83
	I consider myself an impulse purchaser of this brand.	.82
	Eigenvalue = 3.33; % of variance explained = 66.58; Cumulative % = 58.78; Cronbach's α = .87	

each construct.

Regression and Mediation Analyses

The proposed hypotheses were tested using simple linear regression analyses. The results showed that product presentation significantly influenced the hedonic (β = .87, p <.001) and utilitarian (β = .89, p <.001) value of online shopping, thereby supporting H1 and H2. Similarly, fashion involvement significantly influenced both the hedonic (β = .87, p < .001) and utilitarian (β = .84, p < .001) values, supporting H3 and H4. In addition, the hedonic value significantly predicted online impulse buying behavior (β = .79, p < .001), confirming H5, while the utilitarian value also significantly influenced online impulse buying (β = .77, p < .001), confirming H6.

Furthermore, multiple regression analysis was used to

Table 3. Results of Multiple Regression Analysis

		Model 1	Model 2	Model 3
Dependent Variable	Independent Variables			
Online Impulse Buying	Online Product Presentation	.36***		.12
	Fashion Involvement	.47***	.31***	.27***
	Hedonic Value		.34***	.32***
	Utilitarian Value		.21**	.14*
	R^2	.65	.67	.67
	Adjusted R^2	.64	.67	.67
	F	429.26	328.93	243.27

*p < .05, **p < .01, ***p <.001

examine the influence of the four independent variables (i.e., online product presentation, fashion involvement, hedonic value, and utilitarian value) on online impulse buying. The analysis revealed that fashion involvement (β = .47, p <.001) had a stronger influence than online product presentation (β = .36, p <.001) on online impulse buying. However, when hedonic value (β = .38, p < .001) and fashion involvement (β = .29, p < .001) were both included, hedonic value showed a stronger effect. Notably, the effect of online product presentation became non-significant when hedonic and utilitarian values were included in the model (see Table 3).

Finally, Sobel tests were conducted to assess the indirect effects of hedonic and utilitarian values. The results confirmed that hedonic and utilitarian values mediated the

Table 4. Results of Sobel Test: Mediation Effects of Hedonic and Utilitarian Values

Relationship	Input		Test statistics	Std. Error	*P*-value
OPP → HV HV → OIB	a 0.845 b 0.852 S_a 0.021 S_b 0.029	Sobel test Aroian test Goodman test	23.72774193 23.72296389 23.73252286	0.0303417 0.03034781 0.03033559	0.000000 0.000000 0.000000
OPP → UV UV → OIB	a 0.910 b 0.787 S_a 0.021 S_b 0.029	Sobel test Aroian test Goodman test	22.99988595 22.99548826 23.00428617	0.03113798 0.03114394 0.03113202	0.000000 0.000000 0.000000
FI → HV HV → OIB	a 0.884 b 0.906 S_a 0.023 S_b 0.029	Sobel test Aroian test Goodman test	24.24282172 24.23788229 24.24776418	0.03303675 0.03304348 0.03303001	0.000000 0.000000 0.000000
FI → UV UV → OIB	a 0.906 b 0.787 S_a 0.026 S_b 0.029	Sobel test Aroian test Goodman test	21.41085066 21.40536484 21.4163407	0.0333019 0.03331043 0.03329336	0.000000 0.000000 0.000000

Note: OPP: Online product presentation; FI: fashion involvement; HV: hedonic value; UV: utilitarian value; OIB: online impulse buying; a = unstandardized regression coefficient for the association between the independent variable and the mediator; Sa = standard error of a; b = unstandardized regression coefficient for the association between the mediator and the dependent variable; Sb = standard error of b.

relationship between online product presentation and online impulse buying, with significance indicated by $p < .001$. Additionally, hedonic and utilitarian values were found to indirectly mediate the relationship between fashion involvement and online impulse buying, also supported by $p < .001$ (see Table 4).

Discussion and Conclusions

E-commerce, the online exchange of goods, has experienced significant growth in recent years and is projected to increase by 9.4% from 2020 to 2027 (Grand View Research, 2023). Although many studies have explored how website design and consumer characteristics influence impulse buying behavior (e.g., Chan et al., 2017; Chen-Yu et al., 2022; Djafarova & Bowes, 2021; Floh & Madlberger, 2013; Goel et al., 2022), The roles of online product recommendations and fashion involvement have been largely overlooked. Chan et al.'s (2017) systematic review highlighted this gap, noting that these factors were not addressed in their framework for understanding online impulse buying stimuli.

To bridge this gap, this study examined the impact of online product presentation, product recommendation features, and fashion involvement on impulse buying behavior within the realm of athleisure shopping. The findings confirmed all proposed hypotheses. Specifically, online product presentation with recommendation elements significantly enhanced both hedonic and utilitarian shopping values. This supports earlier claims by Ansari et al. (2000), who argued that recommendations offer considerable marketing benefits, and aligns with Senecal and Nantel's (2004) findings that online recommendations strongly influence consumer decisions. Additionally, fashion involvement was shown to positively impact both hedonic and utilitarian values, suggesting that consumers with a strong interest in fashion derive both enjoyment and practical value from online shopping. These results echo prior research by Liapati et al. (2015) and Park et al. (2006).

In comparing the independent variables' effects on impulse buying, fashion involvement had a stronger influence than online product presentation. However, when hedonic and utilitarian values were included in the model, hedonic value demonstrated the most substantial impact, surpassing even fashion involvement in predicting impulse buying. This result underscores the key importance of hedonic value in motivating impulsive online purchases, aligning with prior research (Chen-Yu et al., 2022; Goel et al., 2022; Yang et al., 2021). Additional regression analysis revealed that fashion involvement, hedonic value, and utilitarian value each had a significant impact on impulse buying. However, once the mediating effects of hedonic and utilitarian values were considered, the direct influence of online product presentation became no longer significant. This suggests that product presentation impacts impulse buying indirectly, by shaping consumers' perceptions of value. Mediation analysis supported this, showing that both online product presentation and fashion involvement influence impulse buying through their effects on hedonic and utilitarian value perceptions. The Sobel test confirmed the mediating role of hedonic and utilitarian values.

From a theoretical perspective, this study advances the impulse buying literature by offering empirical support for the application of the S-O-R model. The results demonstrate that online product presentations featuring recommendation elements, along with fashion involvement, significantly affect consumers' perceptions of hedonic and utilitarian value, which in turn boosts online impulse buying of athleisure wear. This research builds on previous studies (e.g., Bhaduri & Stanforth, 2017; Chan et al., 2017; Chen Yu et al., 2022) by highlighting the important roles of product recommendations and fashion involvement within the S-O-R framework. Chen Yu et al.'s (2022) study defined the external stimuli as ten online apparel product presentation methods, however product recommendation features were not included as external stimuli. Although Bhaduri and Stanforth (2017) demonstrated the positive effect of fashion involvement on consumers' perceived value, they focused on luxury product purchases. This study differentiates between internal and external stimuli, classifying individual characteristics such as trust propensity, self-confidence, and involvement as internal stimuli rather than organisms. Unlike traditional approaches that typically position fashion involvement as an organism within the S-O-R model, this study redefines

fashion involvement as a stimulus. The results of this research confirm the role of fashion involvement as an internal stimulus in the S-O-R model.

The findings of the study reveal key factors of online impulse buying behavior, highlighting the important role of perceived hedonic value in driving consumers' spontaneous purchase decisions. Hedonic value, characterized by feelings of pleasure, excitement, and enjoyment, acts as a vital mediator that enhances the impulsive aspects of online shopping by satisfying emotional and experiential needs. In addition to hedonic value, perceived utilitarian value also plays a mediating role, where practical benefits such as convenience, efficiency, and functionality contribute to impulsive purchases by justifying the decision as sensible and necessary. Together, these dual pathways illustrate how both emotional gratification and rational justification can simultaneously influence consumers' likelihood to engage in unplanned online purchases, reinforcing the complex interplay between hedonic and utilitarian motivations in impulse buying of fashion products.

These insights provide practical guidance for marketers aiming to enhance consumers' perceived value in online shopping settings. To encourage the impulse purchases, it is important to focus on online product presentation techniques that enhance both hedonic (emotional) and utilitarian (functional) value. Elements like diverse product images from various angles and personalized product recommendations can improve consumers' perceived value, which in turn may increase the tendency of impulsive buying behavior. Furthermore, the results emphasize the crucial role of hedonic value in driving impulse purchases. Unlike product presentation, which operates as an external stimulus, hedonic value is inherently linked to consumers' subjective shopping experiences. Consequently, marketers should focus on fostering an enjoyable and emotionally engaging shopping environment to maximize impulse buying potential. For instance, interactive product displays, engaging storytelling, and visually appealing product presentations may enhance the hedonic appeal of online shopping.

Furthermore, targeting consumers with high fashion involvement is another effective strategy, as they tend to find greater hedonic and utilitarian value in online shopping. Marketing campaigns aimed at this segment can focus on exclusivity, current trends, and aspirational branding. While online product presentation is an important part of the shopping experience, the findings suggest that its impact lies in how it enhances perceived value, particularly hedonic value. Overall, this research elucidates the complex dynamics among online product presentation, fashion involvement, and perceived shopping values in shaping online impulse buying behavior. Marketers can stimulate online impulse purchasing behavior by Incorporating personalized recommendations, strong visual merchandising, and emotionally engaging content. Future studies could explore how individual traits or levels of digital interaction influence these dynamics, offering richer insights into online consumer behavior.

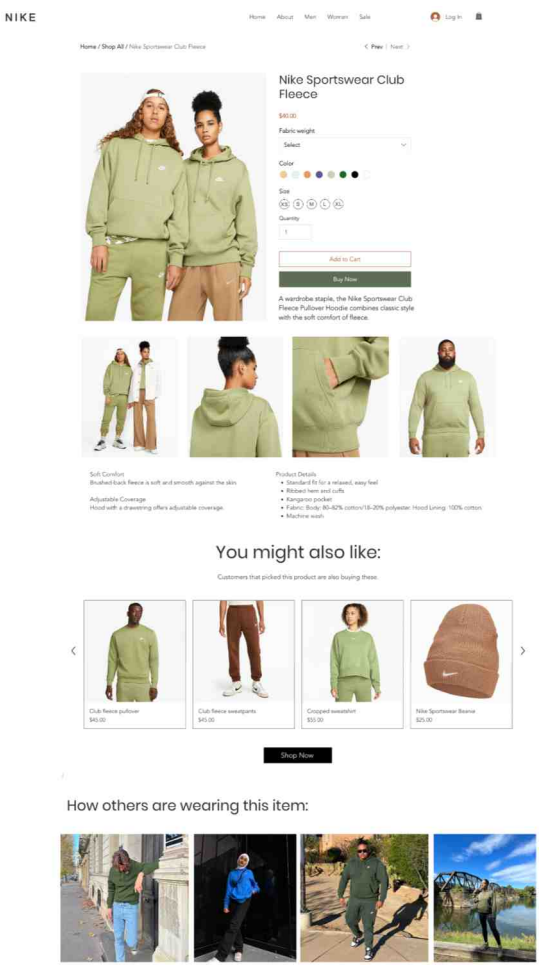
Limitations and Future Research

Data were gathered via Amazon Mechanical Turk, primarily from Caucasian American participants between the age of 18 to 39 and holding bachelor's degrees. However, this demographic does not fully reflect the diversity of the broader U.S. consumer population, limiting the generalizability of the findings. As such, these results should be applied to a broader audience with caution. To strengthen external validity, future research should seek more diverse participant samples. One strategy could involve surveying groups beyond Mechanical Turk, such as college students, who may show greater interest in fashion. Additionally, the unique characteristics of Mechanical Turk users may differ from those of the general public, posing further concerns about generalizability. Therefore, replicating this study with different populations (i.e., fashion-conscious individuals from various U.S. regions) could help enhance reliability and accuracy.

The findings also open the door for further exploration of variables that influence impulse buying through perceived value. Future research might investigate additional factors that affect the link between external stimuli and consumer behavior. The theoretical framework employed in this study could be extended to other contexts involving online impulse purchases. Although the main emphasis was on fashion involvement, future studies could investigate how other

consumer characteristics affect online impulse buying. Future studies are suggested to extend this by exploring whether fashion involvement also affects impulse purchases in other product categories.

Appendix



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