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The Impact of Short Video Experience on Consumers' Willingness to Purchase Clothing: Based on the Mediating Effect of Virtual Tactile

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Article

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ABSTRACT

With the advent of the Internet era, the scale of online shopping users is expanding, and more clothing brands sell clothing online.While online shopping offers convenience to consumers, it also has certain limitations, such as consumers not being able to directly experience products. Therefore, some clothing brands attempt to improve the online shopping experience through short video experiences. To explore how short video experience affects consumers' clothing purchase intention, this paper constructs a theoretical model with short video experience as the independent variable, virtual touch as the mediating variable, and consumers' clothing purchase intention as the dependent variable, and conducts empirical analysis through the data obtained from the questionnaire survey.The questionnaires were mainly distributed through the online survey platform Wenjuanxing. The sample primarily consisted of individuals aged 18 to 45, which aligns with the characteristics of consumers who watch clothing-related short videos in this study.The results demonstrates that the visual, auditory, and synchronization of audiovisual experience of short video content significantly enhances consumers' clothing purchase intention(a), with virtual tactile feedback acting as a mediating factor(b). These findings enrich existing studies on consumer behavior in online shopping scenarios and provide actionable insights for merchants to optimize video content selection in digital apparel marketing.

KEYWORDS

short video, sensory experience, virtual touch, consumer purchase intention

INTRODUCTION

E-commerce has become a vital consumption model in modern society. For consumers, online shopping offers broad accessibility with diverse options and competitive pricing. For businesses, operating digital

platforms reduces operational costs compared to traditional brick-and-mortar stores while enabling targeted marketing to reach broader audiences[1]. Consequently, an increasing number of apparel retailers are adopting online sales channels. While e-commerce brings convenience to both buyers and sellers, it also presents limitations—particularly the inability to physically experience products. For clothing items, tactile engagement significantly influences purchasing decisions[2], yet online shopping lacks this physical touch. To compensate for this sensory gap, many merchants use product images and descriptions to enhance shopping experiences. However, static visuals and text provide limited tactile feedback. Research by Luo Shaohua shows that online product video demonstrations can more effectively convey tactile sensations [3]. As a result, apparel e-commerce platforms increasingly adopt video presentations to deliver richer and more intuitive product information to consumers.

Existing research has examined the impact of short videos on consumer purchase intention. Liu Shengfu and Wang Han showed that contextual cues in short video environments can influence purchasing decisions[4]. Similarly, Hao et al. found that video presentation scenarios significantly affect consumer intention [5]. Ma Rong's team investigated the relationship between video duration and purchase behavior[6]. Han Yaru's study revealed that merchants can enhance consumers' virtual tactile perception of products through the completeness, accuracy, and professional expertise of short video content, thereby influencing purchase decisions [7]. Chen Guoping's research highlighted that the entertainment and interactivity of short videos provide tactile compensation, thus increasing purchase intention [8]. However, existing studies on apparel-related short videos mainly focus on video characteristics and host traits, with limited research integrating short video experiences with consumers' audiovisual perceptions and virtual tactile sensations.

To explore how short video experiences influence consumer purchasing behavior in e-commerce, this study focuses on apparel video content. Using questionnaire survey data, we investigate its effect on purchase intention and develop a research model in which short video experience serves as the independent variable,virtual tactile feedback as the mediating variable, and consumers' clothing purchase intention as the dependent variable. This work aims to advance research in online short apparel presentation and provides theoretical guidance for businesses to optimize video production and selection strategies from a marketing practice perspective.

RESEARCH HYPOTHESIS AND THEORETICAL MODEL

Theoretical Basis

When shopping for clothing online, consumers often lack direct physical contact with garments, making it difficult to experience tactile sensations. Yang Qiang et al. proposed that when consumers cannot physically touch products, certain technologies or methods can simulate tactile engagement, creating a sense of presence [9]. They termed this virtual touch. Yang Hui and Leng Xionghui further noted that human sensory systems interact, integrate, and transfer information across senses. Cross-sensory interactions generate synesthetic effects, whereby individuals compensate for missing sensory experiences through another channel [10].

Ye Wenhao pointed out that synesthesia reflects the interconnectedness of human senses such as sight, hearing, touch, and smell. When individuals perceive the environment through one sense, imagination and association generate sensations from other senses [11]. Based on Cohen's research, noted that human perception inherently possesses a cross-sensory holistic characteristic in its primordial form, rather than being a fragmented collection of isolated single-sensory modules [12]. Wiskus concluded that, during perception, bodily organs do not operate independently but work collaboratively, with bodily experience serving as a crucial source and foundation of artistic synesthesia [13]. Havsteen-Franklin and Perbion argued that, in the process of artistic appreciation, the subject can transcend the limitations of unisensory pleasures (such as visual or auditory) through psychological activities like imagination, recollection, association, and analogy, spontaneously giving rise to an interconnected aesthetic phenomenon known as synesthesia.[14]. Qian Xuewei emphasized that synesthesia is rooted in past sensory experience and acts as a bond between human senses and the world. It triggers responses from one sense to others, achieving integration among visual, auditory, tactile, olfactory, and gustatory senses, forming a composite physiological and psychological perception [15]. Sun Ningna and Zhang Bo explained that synesthesia arises from combined physiological and psychological processes. The cerebral cortex contains five sensory systems that are distinct yet interconnected, enabling integration of visual, auditory, olfactory, tactile, and gustatory sensations. This demonstrates that when external stimuli activate sensory organs, these senses trigger other sensory experiences through neural pathways [16]. This process is often accompanied by psychological responses,

whereby individuals, based on cognitive and experiential knowledge, use memory and association to translate one sensory input into another, generating emotional associations that lead to synesthesia. Han Wenjing and Ma Yu further explained synesthesia formation: physiologically, external stimuli activate sensory organs that transmit signals to sensory nerves; psychologically, these signals activate other sensory pathways through memory association, ultimately forming synesthesia through emotional association [17].

Kim and Lee's study demonstrates that in online retail environments, the visual and textual presentation significantly influences consumers' tactile mental imagery, consequently modifying product evaluations and purchase intentions [18]. Short videos represent an advanced form of online product visualization. Jiang Hongyan et al. noted that dynamic visual elements, compared with static displays, more effectively enhance perceived product efficacy [19]. Moreover, short videos provide not only visual experiences but also auditory stimuli that text and images cannot convey. According to the SOR theory, individuals respond to external stimuli (S) by evoking cognitive and emotional states (O), which then manifest as behavioral responses (R) [20]. For apparel e-commerce platforms, short video experiences act as external stimuli that trigger virtual tactile responses, ultimately transforming these responses into purchase intention.

Research Dimension Classification

Sensory experience refers to the subjective perceptions and cognitive processes generated when the sensory system interacts with external environments or products, encompassing visual, auditory, tactile, gustatory, and olfactory experiences. Xu Dingyi categorized the direct sensory experiences that short videos provide to audiences as visual and auditory sensations, arguing that under the influence of these two direct sensations, audiences can develop indirect sensory experiences, including tactile sensations [21].Liu Qianqian et al. proposed that human-computer interaction can provide users with visual and auditory perceptual experiences, thereby inducing pseudo-tactile sensations[22]. Qiang et al. highlighted that dynamic visual and auditory elements in short videos deliver immediate sensory stimulation to viewers[23]. Kanaya noted that vision and audition constitute fundamental dimensional axes of sensory experience. External stimuli targeting either visual or auditory modalities can generate cross-modal associations, thereby inducing synesthetic experiences in other sensory domains [24]. Zhang Zhipeng and Zhang Liyi argued that audiovisual synesthesia enhances information transmission efficiency and strengthens memory retention [25]. Wang

Shengtian noted that short video media extends sensory coordination by encoding information into audiovisual symbols, creating sensory interconnections, memory associations, and immersive experiences to facilitate information delivery [26].

Li Pei et al. argued that the integration of audiovisual elements enhances consumers' purchasing intention in retail markets [27]. Synchronization between visual and auditory components is frequently emphasized in this integration. Gijbels et al. defined audiovisual synchronization as the alignment of sound and visuals at the same point in the narrative timeline [28]. Chen Chunyan explained that such synchronization establishes a one-to-one correspondence between video audio and visuals, in which each element matches specific actions in the environment. For example, when a character walks, corresponding footsteps should be heard. Emphasizing this audiovisual relationship creates more authentic and engaging content that better aligns with viewers' audiovisual habits [29]. Su Xin proposed that when visual signals and auditory feedback are dynamically synchronized through algorithms, this synchronization extends beyond simple sensory overlay. It activates the Gestalt principle of bodily schema, allowing users to integrate virtual sensory inputs into coherent perceptual fields based on established physical habits [30].

Therefore, based on the characteristics of short videos, this paper divides short video experience into three dimensions: visual experience, auditory experience, and audiovisual synchronization experience.

Short video experience and Purchase Intention

1) Research by Wan Jun and Chen Weijia demonstrates that short video marketing can enhance consumer purchase intention [31]. Gudonavičienė and Alijošienė pointed out that visual elements can help Lithuanian apparel and footwear stores increases the likelihood of impulse purchases [32]. Zhang Zhipeng et al. noted that the visual prominence of short video can attract the attention of consumers and enhance their perception of information intensity, while the rich color can stimulate the higher level of emotional response of consumers. [33]. Lin Bin et al. argued that short videos advertising strategies should enhance users' audiovisual sensory experience to capture attention and foster stronger consumer purchase intention. [34]. Li Jing emphasized that in online shopping environments where consumers cannot directly experience products, visual elements serve as the core means of product communication. Visual marketing efficiently attracts consumer attention and stimulates purchase desire through images and videos [35]. Zhang Jiemei

and Zhang Zhiwei suggest that visual and informational elements in visual marketing enhance consumers' online immersion, ultimately translating into purchase intention [36]. Xu Mingxiu and Liang Jianfang developed a mechanism model showing how visual experience in fashion short videos improves perceived usefulness and purchase intention, revealing that visual engagement improves perceived usefulness and consequently increases purchase willingness [37]. Similarly, Chang Junqi et al. found in a study of college students that visual elements in short video ads influence perceived fit and purchase intention [38]. Xu He et al. demonstrated that enhanced visual performance in live-streaming scenarios can boost perceptual awareness and stimulate consumer purchasing behavior [39].

2) While visual experience is crucial, research indicates that single-sensory engagement remains limited. To enhance purchasing intent, businesses should integrate other sensory elements , such as auditory engagement [40]. This underscores the importance of audio elements in short videos. Tooby and Cosmides demonstrated that sound stimulation, as a key sensory medium, enhances consumer experience and psychological proximity in entertainment–consumption contexts [41]. Research by Xiao Quan et al. showed that visual and auditory elements in short videos collectively boost e-commerce marketing effectiveness [42]. Shen Qiwu and Song Jiachen observed that live-streaming platforms often use symbolic sounds to reinforce product impressions. For example, apparel retailers demonstrate hardware quality through zipper-pull sounds [43]. Audio elements in short videos also include host narration. Chen Chuluo noted that through rational appeal marketing strategies, video bloggers effectively communicate product attributes such as functionality, cost-effectiveness, and quality, enabling better product understanding and informed purchasing decisions [44].

3)Numerous studies have confirmed that even minor audiovisual desynchronization significantly impairs viewing experience. The greater the discrepancy, the stronger the audience's dissatisfaction, leading to declining viewership and diminished public perception [45]. Han Yu highlighted that cognitive psychology research shows when visual focal points achieve precise spatiotemporal synchronization with corresponding auditory elements, viewers' information processing speed increases by about 40%, while long-term memory retention improves by over 35% [46]. Li Ying emphasized that audiovisual synchronization extends beyond temporal alignment and requires rhythmic and dynamic coordination. This synergy enhances visual impact and emotional immersion [47]. Goncalves et al.'s research indicated that even minor desynchronization

affects viewing experience, and leading to a marked decrease in viewer satisfaction, potentially prompting channel switching [48]. When watching intention is enhanced,, consumer purchase intention increases accordingly [49]. Therefore, the hypotheses regarding the relationship between the three dimensions of short video experience and consumers' clothing purchase intention are proposed as follows.

H1a: The visual experience of short videos positively influences consumers' clothing purchase intention.

H1b: The auditory audio experience of short videos positively influences consumers' clothing purchase intention.

H1c: The audiovisual synchronization experience of short videos positively influences consumers' clothing purchase intention.

Short video experience, Virtual touch, and Purchase Intention

Virtual touch refers to the tactile experience perceived by consumers through short video browsing that closely resembles real-world scenarios. Liu Yuan argued that the immersive marketing environment of short videos can activate consumers' memories of product information and usage experiences, thereby triggering virtual touch and facilitating purchasing behavior [50]. Hu Jun and Hu Fei propose that virtual touch experiences exist at four levels: object layer, physical layer, mental imagery layer, and social layer [51]. The mental imagery layer involves the retrieval of tactile information stored in the multisensory system and insula, while the social layer encompasses context and interpersonal communication. They suggest that appropriate audiovisual stimuli can induce tactile "fantasies" in the brain, enabling the reproduction of tactile sensations (i.e., virtual touch) and transforming it into a shared experience. Kim et al. contend that high-quality virtual touch experiences help consumers acquire deeper product information, thereby reducing decision uncertainty, which increases purchase intention [52]. Guo Hailing et al. found through research that the informativeness and comprehensiveness of online short videos significantly positively influence purchase intention, with virtual touch factors playing a partial mediating role [53]. Zuo Jingjing and Li Yingying's study also confirmed that virtual touch affects consumers' psychological distance and boosts impulsive purchase intentions [54].

Zhang Hao posited that in art, successful paintings create tactile impressions on the retina, enhancing the physicality, texture, and weight of depicted objects. This process constructs a vivid three-dimensional world

on a two-dimensional plane, transforming visual experience into tactile perception [55]. Canadian scholar Laura Marks introduced the concept of tactile vision, arguing that images emerge through materiality and physical contact between the observer and the represented object. She further suggested that vision itself can be tactile, similar to touching image content [56], and described tactile perception as a synthesis of touch, proprioception, and kinesthetic awareness. By regarding the eyes as tactile organs, she argued that vision can perceive objects through tactile means [57]. Liang Feiyang et al. noted that during online shopping, consumers cannot physically handle products, yet often obtain tactile sensations of silk fabrics through visual observation. For example, when viewing hanging images, consumers commonly perceive subjective tactile feedback regarding softness, firmness, and smoothness [58].

When humans engage with objective reality, they consistently adopt specific perspectives, extracting partial prototypes from conceptual memory and projecting them onto cognitive objects [59]. Hu Jun noted that during object perception, cognitive subjects may transform auditory sensations into tactile experiences. This occurs because sound perception creates imaginative mental connections. When new auditory stimuli activate perception, similar tactile experiences from past memory are triggered, generating associative cognition. The connection between touch and hearing originates from similarities in their psychological spaces [60]. This interconnection is also reflected in language. Beyond physiological and psychological foundations, the primary reason lies in language's role in abstracting similarities among objects. Humans refine sensory experiences into linguistic expressions to convey related perceptions [61]. In daily life, people frequently interact with fabrics and textiles, becoming familiar with common materials. Thus, whether through natural sounds of fabric movement or auditory linguistic information, viewers may recall relevant experiences and trigger tactile mental associations about clothing in videos.

Zhao Song et al. emphasized that audiovisual temporal synchrony facilitates the brain's integration of information, leading to more accurate perceptual judgments . [62]. Wan Bicheng et al. noted that temporal mismatch between auditory stimuli and motion not only disrupts immersion in virtual environments but may also impair tactile material perception [63]. Zhang Jing and Chen Wei demonstrated that higher temporal synchronization enhances users' perception of bodily imagery, facilitating embodied effects in which virtual tactile feedback plays a key role [64]. Liu Zihang et al. further suggested that synchronized audiovisual information increases content coherence and realism [65]. Silveira et al. highlighted that audiovisual

synchronization creates a sense of presence [66]. These findings collectively suggest that audiovisual synchronization influences virtual tactile experience. Thus, the hypotheses regarding the relationships among apparel brand short video experience, virtual touch, and purchase intention are proposed as follows.

H2a: Virtual touch mediates the relationship between visual experience of short videos and consumers 'clothing purchase intention.

H2b: Virtual touch mediates the relationship between auditory experience of short videos and consumers' clothing purchase intention.

H2c: Virtual touch mediates the relationship between audiovisual synchronization experience of short videos and consumers' clothing purchase intention.

Theoretical Model

This article takes short video experience as the independent variable, virtual tactile sensation as the mediator variable, and consumers' clothing purchase intention as the dependent variable, and finally constructs the theoretical research model as shown in Figure 1:

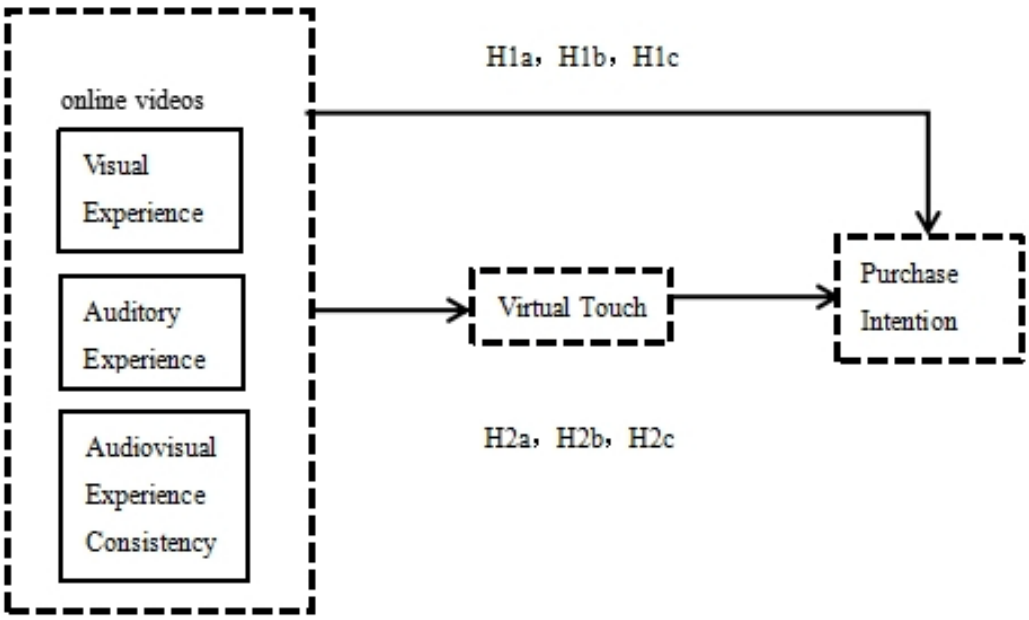

Figure 1. Research model

RESEARCH DESIGN

Selection and Measurement of Indicators

Jiang Ying and Zheng Rui conducted eye-tracking experiments on how wool sweater displays influence virtual tactile perception, revealing that three presentation methods—detailed display, flat holistic display, and three-dimensional model display—significantly enhance virtual tactile perception [67]. Wan Bicheng further suggests that dynamic visual cues, such as human-object interactions, can influence users' virtual tactile perception more effectively than static visual cues [63]. Synthesizing these scholarly perspectives on visual experience, this paper establishes four measurement indicators for visual experience, with specific metrics and references listed in Table 1.

Shen Qiwu and Song Jiachen emphasized that highly symbolic sounds in auditory experiences can awaken users' perception, convey information,and strengthen product impressions [43]. They also noted the key role of human voices in sound design, noting that hosts should comprehensively introduce product information and employ rhetorical techniques to deepen consumers' understanding. Xu Mingxiu and Liang Jianfang proposed that auditory experience metrics should include "dialogue delivery" and "expressive clarity" [37]. Integrating these perspectives, this study establishes five measurement indicators for auditory experience, supplemented by a self-designed metric (trial-wear experience), as detailed in Table 1.

Zuo Jingjing and Li Yingying described virtual tactile metrics as "feeling garments as if touched" and "perceiving textures realistically" [54], while Biocca et al. defined them as "tactile sensations" and "material textures" [68]. Synthesizing these perspectives on virtual haptics, this study proposes three measurement criteria, as detailed in Table 1.

Table 1. Measuring indicators and sources

Dimensions	Variable codes	Measurement items	Sources
Visual Experience	VE1	(Dynamic interaction) Through interaction with the fabric, the characteristics of the fabric are dynamically displayed.	[63] [67]

	VE2	(Overall) Visually presents the garment's complete look	
	VE3	(Details) Clearly show the details of the clothing fabric	
	VE4	(3D)Through live try-on, the characteristics of clothing fabrics are displayed in three dimensions	
Auditory Experience	AE1	(Height Symbol) Through the sounds of fabric interaction, it recreates the auditory experience of offline shopping.	[37] [43]
	AE2	(Comprehensive Information) The video provides a detailed description of the tactile characteristics of clothing.	
	AE3	(Dialogue expression)The video vividly and graphically describes the touch and texture of the clothing.	
	AE4	(Express clearly and explicitly)The video provides a clear and understandable explanation of the characteristics of clothing fabrics	
	AE5	(Real-life try-on experience) The video captures authentic impressions of live clothing trials.	
Synchronization of Audiovisual Experience	AES1	Audiovisual experience is consistent	Developed by authors
	AES2	Visual and auditory experience match	
	AES3	Based on the video, the host's explanation is appropriate	
Virtual Touch	VT1	It's like feeling the touch of the clothes	[54] [68]
	VT2	It's like feeling the texture of the clothing	
	VT3	It's like touching the clothes on display	
Purchase Intention	PI1	I might want to buy this brand	[53]
	PI2	I would like to buy this brand	
	PI3	I would recommend this brand to people around me	

Questionnaire Design and Collection of Sample Data

First, all human participants in this study provided informed consent for participation and publication, and participant anonymity was ensured.

Second, at the beginning of the questionnaire distribution, screening questions were included to ensure that respondents had previously watched clothing short videos, which improved questionnaire validity and stimulated respondents' recall of past viewing experiences.

Finally, the survey questionnaire adopted a five-point Likert scale ranging from 1 to 5, representing attitudes from strongly disagree to strongly agree. The questionnaire was distributed online, with 316 questionnaires collected, of which 303 were valid, resulting in a response rate of 95.9%.

Descriptive Statistical Analysis

The basic information of the survey samples is shown in Table 2. The gender ratio is nearly 1:1, with 89.4% of respondents under 45 years old, predominantly middle-aged and young adults, which aligns well with the age characteristics of online shoppers. 79.2% have college degrees or higher, and the occupations are evenly distributed. The average monthly clothing expenditure ranges between 101 to 300 yuan.

Table 2. Sample descriptive statistics

Measure	Item	Frequency	Percentage/%
Gender	Female	159	52.5
	Male	144	47.5
Age	Younger than 18 years old	47	15.5
	18~30 years old	158	52.2
	31~45 years old	66	21.8
	45~60 years old	19	6.3
	More than 40 years old	13	4.3
Education level	High school or below	63	20.8
	Junior college(In process or graduated)	133	43.9
	Bachelor (In process or graduated)	63	20.8
	Master (In process or graduated)	33	10.9
	Doctoral degree or above	11	3.6
Occupation	Government-funded institutions	29	9.6
	Private sector	73	24.1
	State-owned sector	115	38
	Student	64	21.1
	Others	22	7.3
Average monthly clothing consumption	Less than 100 yuan	50	16.5
	101~300 yuan	163	53.8
	301~500 yuan	60	19.8
	More than 501 yuan	30	9.9

Reliability and Validity Testing

Reliability Testing

The reliability of the questionnaire was tested by SPSS27, and the results showed that the Cronbach's α of the questionnaire was 0.887, which indicated that the questionnaire was reliable. The α values of the visual experience, auditory experience, synchronization of audiovisual experience, virtual tactile and consumer purchase intention of the short video were 0.905,0.921,0.878,0.862 and 0.863 respectively, all of which were above 0.8, indicating that the questionnaire was reliable.

Validity Testing

Validity Testing Factor analysis using SPSS27 was employed to assess structural validity. Exploratory factor analysis yielded an overall KMO value of 0.870 and the Bartlett's test for sphericity showed a p-value of 0.000, with measured dimensions aligning with the predefined constructs, indicating good structural validity. Specific results are presented in Table 3.

Table 3. Validity test

Variable codes	Dimensions				
	VE	AE	AES	VT	PI
VE1	0.864				
VE2	0.848				
VE3	0.882				
VE4	0.837				
AE1		0.869			
AE2		0.829			
AE3		0.818			
AE4		0.823			
AE5		0.859			
AES1			0.873		
AES2			0.878		
AES3			0.860		
VT1				0.899	
VT2				0.909	
VT3				0.847	
PI1					0.883

PI2	0.906
PI3	0.870

HYPOTHESIS TESTING

Multiple Regression Analysis

Building on this foundation, we conducted a multiple regression analysis in SPSS to test the research hypotheses, with the results presented in Table 4.

Table 4. Results of the multiple regression analysis

	PI(1)	PI(2)	VT(3)	PI(4)
VE	0.176***		0.138***	0.151***
	(0.054)		(0.055)	(0.054)
AE	0.189***		0.230**	0.147***
	(0.054)		(0.055)	(0.055)
AES	0.256***		0.117**	0.234***
	(0.054)		(0.055)	(0.053)
VT		0.265***		0.183***
		(0.056)		(0.055)
R^2	0.132	0.070	0.086	0.163
F	15.183	22.761	9.378	14.485

Note: This table does not report regression coefficients for constant terms; ** and * indicate significance levels of 1% and 5% respectively, with SE values in parentheses.

Regression (1) in Table 4 shows that, at the 99% confidence interval, the visual experience, auditory experience, and synchronization of audiovisual experience in short videos all significantly positively influence consumers' clothing purchase intention, with the synchronization of audiovisual experience having a particularly strong impact. Hypotheses H1a, H1b, and H1c are supported. Regression (2) in Table 4 reveals that virtual tactile experience significantly positively affects clothing purchase intention at the 99% confidence interval. Meanwhile, Regression (3) demonstrates that the visual experience, auditory experience, and synchronization of audiovisual experience in short videos all positively influence virtual tactile experience at the 95% confidence interval. Regression (4) confirms that both the visual experience, auditory experience,

synchronization of audiovisual experience, and virtual tactile experience in short videos significantly positively affect clothing purchase intention. Comprehensive analysis indicates that virtual tactile experience partially mediates the influence of virtual spokesperson traits on clothing brand purchase intention. Hypotheses H2a, H2b, and H2c are supported.

Bootstrap Test

Building on this, the study employs the Process plugin for Bootstrap mediation effect testing (Bootstrap size: 5000,95% confidence interval).

As shown in Table 5, the effect sizes of virtual tactile feedback on consumers' clothing purchase intention for visual, auditory, and synchronizationof audiovisual experience of short videos are 0.034,0.054, and 0.028, respectively. The confidence intervals for all values are outside the 0 threshold, indicating significant mediating effects of virtual tactile feedback, consistent with the multiple regression results.

Table 5. Bootstrap mediating effect test

Path	Direct Effect	Indirect Effect	LLCI	ULCI	se	Result
VE→VT→PI	0.142***	0.034	0.004	0.071	0.017	Partial mediating effect
AE→VT→PI	0.135***	0.054	0.020	0.097	0.020	Partial mediating effect
AES→VT→PI	0.228***	0.028	0.001	0.063	0.016	Partial mediating effect

Note: *** denotes significance at the 0.01 level; ** at 0.05; * at 0.1.

DISCUSSION AND CONCLUSION

This study examines the relationship between short video experience, virtual touch, and consumers' clothing purchase intention based on theoretical foundations in short video experience and virtual touch. Empirical results show that visual, auditory, and synchronization of audiovisual experience in short videos significantly positively influence clothing purchase intention, with virtual touch serving a mediating role. Accordingly, the paper proposes the following recommendations:

1) Enhancing visual engagement in short videos. To optimize visual presentation, short videos should use dynamic and static visual techniques to demonstrate garments' tactile qualities. For example, close-up shots

can highlight fabric textures and patterns, while simulated friction tests can demonstrate mechanical properties. In addition, live-streamers can provide fitting demonstrations, allowing viewers to observe garments' drape and other characteristics firsthand. This immersive experience enhances purchase intention by creating a more tangible shopping environment.

2) In terms of auditory engagement, short video content can recreate the tactile experience of physical shopping and convey authenticity. For instance, retailers may demonstrate fabric authenticity through controlled fabric tearing to signal consumers of its genuine cotton quality. Streamers can further enhance immersion by describing garments' tactile properties and sharing wearing impressions, helping consumers visualize the tactile experience and increasing purchase willingness.

3) Multisensory coherence effectively enhances consumers' integration and use of sensory information. Beyond improving visual quality and audio clarity, live streamers should align their explanations with visual content. For example, when describing fabric details, camera footage should synchronize with narration. This audiovisual consistency enriches consumers' virtual tactile experience, ultimately boosting their purchase intent.

This study has several limitations. First, the sample mainly consists of consumers from China, which limits applicability to other countries. Second, consumers' memories of viewing clothing-related videos may be vague, leading to incomplete judgments in the survey. Finally, the study focuses on clothing, a product with high tactile involvement, which limits generalizability to other online contexts. Therefore, future research could collect data with broader applicability to examine how short videos enhance virtual tactile sensation and purchase intention across cultural contexts. In addition, more objective data could be obtained through methods such as EEG observation while ensuring logical consistency. Finally, further research could be conducted on low-tangibility products or other e-commerce categories to enhance the generalization of the conclusion.

Author Contributions

Conceptualization – Ma X; methodology – Ma X, Qu H; formal analysis – Ma X, Qu H; investigation – Ma X, Qu H; writing-original draft preparation – Ma X; writing-review and editing – Qu H. All authors

have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

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Human Research Subjects

This study was conducted in accordance with relevant regulations, and all subjects signed the informed consent form.

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