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# **Examining the Effect of Health Consciousness on Sports Product Purchase Behavioral Intention**

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#### **Abstract**

This study explores how health consciousness influences consumers' purchase behavioral intention toward sports products, employing the Theory of Planned Behavior (TPB) as the theoretical framework. Data were collected from 352 valid responses in Tainan, Taiwan, and analyzed using Structural Equation Modeling (SEM). The results demonstrate that health consciousness exerts significant positive effects on attitude, subjective norms, and perceived behavioral control. Among the TPB components, attitude and perceived behavioral control significantly enhance purchase behavioral intention, whereas the effect of subjective norms is not significant. Furthermore, health consciousness directly and indirectly affects purchase behavioral intention through attitude and perceived behavioral control, confirming its role as a key psychological antecedent. The findings validate the TPB's applicability in health-oriented consumption and extend the model by incorporating health consciousness as an exogenous variable. The study provides both theoretical implications—by deepening understanding of health-driven consumer behavior—and managerial insights for developing health-oriented brand positioning and marketing strategies in the sports industry.

## **JEL classification numbers:** M31, D91, I12.

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#### 1. Introduction

The rise of health consciousness has become a salient driver of contemporary consumer markets (Gould, 1990). Against the backdrop of escalating prevalence of noncommunicable disease—such as obesity, cardiovascular disease, and diabetes—consumers increasingly prioritize health promotion and self-care (Iovino et al., 2024). With the diffusion of preventive medicine and healthy lifestyle paradigms, health engagement has shifted beyond treatment-oriented care toward everyday practices that center on exercise participation, dietary management, and health-related product consumption (Wang, 2024).

According to the Global Wellness Institute (2022), the global health and fitness economy surpassed USD 4.4 trillion, indicating that health consciousness is reshaping lifestyles and purchase decision processes at scale (Talukder et al., 2025). This macrotrend is mirrored in growing preferences for health-oriented brands and the rapid expansion of markets for healthy foods, fitness technologies, and sports products. Empirical studies further suggest that health consciousness exerts significant influence on perceived value, attitudes, and purchase behavioral intentions (Balaji et al., 2025).

Research also shows that consumers evaluate health-related offerings not only for their functional benefits (e.g., performance enhancement, health improvement) but also for symbolic and affective value—including self-discipline, image cultivation, and social recognition (Balaji et al., 2025). In the post-COVID era, heightened risk perceptions surrounding health have positioned sports merchandise and fitness technologies as pivotal tools for sustaining physical and mental well-being (Liu, 2024). Consequently, health consciousness functions not merely as an attitudinal marker but as a concrete psychological force that propels actual purchase behavior. In Taiwan, official statistics indicate that weekly exercise participation among adults reached 83% in 2024, a historical high, suggesting that a healthy lifestyle has become a mainstream social value. As the notion of "investing in health" gains traction, consumption of sports and health products is increasingly routinized (Li, 2024). While health consciousness is widely recognized as a proximal antecedent of health behavior and product consumption, extant research has predominantly focused on healthy eating (Singh, 2022), medical devices, and dietary supplements (Barros et al., 2023). Systematic investigations into purchase behavioral intention for sports products remain comparatively scarce. Moreover, the pathways through which health consciousness shapes cognitive evaluation, attitude formation, and behavioral intention—ultimately translating into concrete purchase behavior require further empirical scrutiny.

To address these gaps, this study elucidates the mechanism by which health consciousness influences purchase behavioral intention for sports products. Grounded in the Theory of Planned Behavior (TPB), we examine the effects of health consciousness on attitude, subjective norms, and perceived behavioral control, and assess both its direct and indirect effects on purchase behavioral intention. The findings aim to refine the positioning of health consciousness within the sports product context and inform brand strategy and health-oriented marketing practice.

### 2. Literature Review

#### 2.1 Health Consciousness

Health consciousness denotes individuals' awareness of their health status and their proactive orientation toward health maintenance. It is one of the most central psychological constructs in health behavior research (Gould, 1990) and a robust predictor of health-related attitudes and behaviors (Chung and Hong, 2022). Conceptually, it encompasses health concern, health responsibility, self-awareness, and health action tendencies. Thus, health consciousness reflects both cognitive appraisal of health issues and the motivation and intention to enact health-oriented behaviors in daily life (Gould, 1990).

Recent work positions health consciousness as a key psychological driver of lifestyle choices and purchase decisions (Eduardo et al., 2024). Individuals high in health consciousness are more inclined to purchase products that promote health, including organic foods (Parashar et al., 2022) and health supplements (Wathanakom, 2023); they are also more sensitive to health information and willing to invest time and money to sustain desired health states ("Health Consciousness," 2022). Within the sports and wellness industries, the diffusion of wearables and performance apparel has led health-conscious consumers to view product functionalities—e.g., heart-rate monitoring, calorie tracking, protection, and comfort—as instrumental to health maintenance (Gozali et al., 2022). Such consumers often use sports products to symbolize health values and self-management capability (Ribeiro et al., 2023) and continually monitor health status. Elevations in health consciousness can therefore promote individual health behavior and diffuse outward to shape a broader culture of health (Chung and Hong, 2022).

# 2.2 Theory of Planned Behavior (TPB)

The TPB (Ajzen, 1991) is among the most widely applied frameworks for explaining behavioral intention and behavior. The theory posits that behavioral intention is the most proximal predictor of behavior and is determined by three core constructs: attitude toward the behavior, subjective norms, and perceived behavioral control. Attitude reflects evaluative valence; subjective norms capture perceived expectations and social pressure from significant others; and perceived behavioral control denotes perceived capability and resource control to execute the behavior (Ajzen, 2002).

TPB has been extensively applied to health and consumer contexts. Studies show strong predictive power for exercise participation (de Bruijn, 2011) and healthy eating (Sogari et al., 2022). In sport and fitness settings, attitude, subjective norms, and perceived behavioral control all predict exercise intention (Mannetti et al., 2012), with perceived behavioral control components (e.g., self-efficacy, resource availability) playing particularly salient roles (Rhodes et al., 2006). Overall, TPB formalizes a attitude  $\rightarrow$  intention  $\rightarrow$  behavior pathway embedded in social interaction and perceived control, and it has proven useful for explaining modern consumer decision processes in health and sports product purchases.

## 2.3 Relationship Between Health Consciousness and TPB

Integrating health consciousness into the TPB offers a more complete account of health-oriented consumption. Health consciousness can function as an exogenous antecedent that shapes the three TPB components—attitude, subjective norms, and perceived behavioral control (Godin and Kok, 1996). Individuals with stronger health consciousness exhibit heightened sensitivity to health issues and clearer value orientations; consequently, they tend to form more favorable attitudes, perceive stronger social endorsement, and feel greater control, which together elevate purchase behavioral intention for sports products (Gould, 1990).

Regarding attitude formation, health consciousness influences both cognitive and affective evaluations. When consumers recognize the importance of health management, they are more likely to view sports products as necessary and worthwhile investments, strengthening favorable attitudes and purchase propensity (Gu and Encio, 2023). For subjective norms, highly health-conscious individuals may be more attuned to social and peer signals, particularly within cultures where "health is identity," thereby amplifying normative pressures that foster health-related purchasing (Buhrau and Ozturk, 2018; Pluta et al., 2023; Kim, 2025). With respect to perceived behavioral control, higher health consciousness is associated with greater health information, usage experience, and self-efficacy, which enhance confidence and perceived control over engaging in exercise or purchasing related products (Sheeran and Conner, 2019). In the context of wearable sports technology, for instance, health-conscious consumers better understand product functions and benefits, which in turn raises purchase behavioral intention (Wang et al., 2023).

In sum, health consciousness exerts upstream influence on the three TPB constructs and ultimately translates—via behavioral intention—into observable purchase behavior. This integrative perspective extends TPB applications in health-oriented consumption and clarifies the psychological mechanisms through which health consciousness shapes purchase behavioral intention for sports products (Yap and Noor, 2008). A deeper understanding of these pathways is consequential for advancing sustainable sports product marketing strategies and promoting health-oriented consumption (Li and An, 2025).

# 3. Research Hypotheses and Conceptual Model

# 3.1 Research Hypotheses

This study aims to examine the influence of health consciousness (HC) on consumers' purchase behavioral intention (PBI) toward sports products, adopting the TPB (Ajzen, 1991) as its theoretical foundation to construct an integrated research model. The model incorporates five latent constructs: health consciousness, attitude (AT), subjective norms (SN), perceived behavioral control (PBC), and purchase behavioral intention (PBI). Drawing on the literature reviewed, the proposed model posits that health consciousness not only exerts a direct effect on purchase behavioral intention but also influences it indirectly through the three TPB dimensions—attitude, subjective norms, and perceived behavioral control. In other

words, consumers with higher levels of health consciousness are expected to demonstrate more favorable attitudes, stronger social normative identification, and greater perceived behavioral control, thereby enhancing their intention to purchase sports products. Synthesizing prior theoretical and empirical evidence, the following seven hypotheses are proposed, as illustrated in Figure 1.

H1: Health consciousness (HC) positively influences attitude (AT) toward purchasing sports products.

H2: Health consciousness (HC) positively influences subjective norms (SN).

H3: Health consciousness (HC) positively influences perceived behavioral control (PBC).

H4: Attitude (AT) positively influences purchase behavioral intention (PBI).

H5: Subjective norms (SN) positively influence purchase behavioral intention (PBI).

H6: Perceived behavioral control (PBC) positively influences purchase behavioral intention (BI).

H7: Health consciousness (HC) positively influences purchase behavioral intention (PBI).

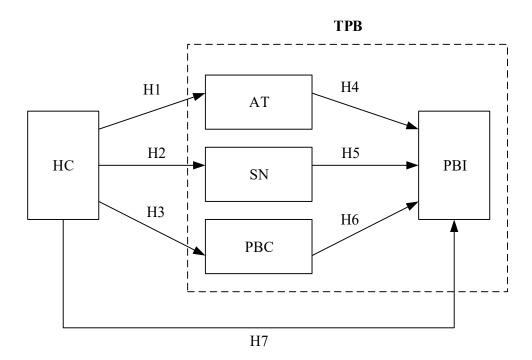


Figure 1: Conceptual Framework of the Study

## 3.2 Questionnaire Design

To empirically test the proposed hypotheses, a structured questionnaire was developed based on well-validated measurement scales drawn from previous studies, with minor adaptations to fit the context of sports product consumption. All items were measured using a five-point Likert scale, ranging from 1 = Strongly Disagree to 5 = Strongly Agree. The questionnaire comprised five sections corresponding to the study constructs: (1) Health Consciousness (HC), (2) Attitude (AT), (3) Subjective Norms (SN), (4) Perceived Behavioral Control (PBC), and (5) Purchase Behavioral Intention (PBI). Each construct contained multiple reflective indicators adapted from the relevant literature. The complete list of items is presented in Table 1.

**Table 1: Questionnaire items** 

Construct/Variable	Measuring Items				
Health Consciousness	s HC1: I often pay attention to my physical health condition.				
(HC)	HC2: I actively seek information about health and exercise.				
	HC3: I believe maintaining good health is my personal responsibility.				
	HC4: I avoid lifestyle habits or diets that are harmful to my health.				
	HC5: When I feel unwell, I immediately take action, such as exercising or adjusting my				
	behavior, to improve my condition.				
	HC6: I exercise regularly to maintain good health.				
	HC7: I think purchasing sports products to maintain my health is worthwhile.				
	HC8: I pay attention to newly released sports or health-related products.				
Attitude (AT)	AT1: I believe purchasing sports products is a wise decision.				
	AT2: I have a positive attitude toward purchasing sports products.				
	AT3: Using sports products improves my health and quality of life.				
	AT4: I believe sports products are worth the money.				
	AT5: I like to choose sports brands that help me stay healthy.				
	AT6: Purchasing sports products shows that I care about my health.				
	AT7: Purchasing sports products makes me feel confident or satisfied.				
	AT8: I think purchasing sports products is a behavior that should be encouraged.				
Subjective Norms	SN1: My family thinks purchasing sports products is a good thing.				
(SN)	SN2: My friends support me in purchasing sports products.				
	SN3: I care about what others think about my purchasing sports products.				
	SN4: People in my social circle (e.g., colleagues, gym partners) encourage me to use sports				
	products.				
	SN5: If I purchase sports products, I will receive positive evaluations from people around me.				
Perceived Behavioral					
Control (PBC)	PBC2: I can easily find sports products that meet my needs.				
	PBC3: I have enough knowledge and information to select appropriate sports products.				
	PBC4: If I want to purchase sports products, I am capable of making the right choice.				
	PBC5: I can overcome obstacles such as price or availability to purchase the sports products				
D 1 D 1 1 1	I want.				
Purchase Behavioral	PBI1: I am willing to purchase sports products in the future.				
Intention (BI)	PBI2: I will give priority to purchasing high-quality sports products that promote health.				
	PBI3:. If the price is reasonable, I will continue to purchase sports products.				
	PBI4: I will recommend trustworthy sports products to others.				

## 3.3 Sample Characteristics

The empirical investigation targeted residents of Tainan City, Taiwan, who either had prior experience purchasing sports products or exhibited potential purchase behavioral intentions. Data were collected through convenience sampling using a self-administered questionnaire. Of the 400 questionnaires distributed, 352 valid responses were retained after excluding incomplete or invalid entries, yielding an effective response rate of 88.0%, which indicates satisfactory data quality.

Regarding gender distribution, 169 respondents were male (48.0%) and 183 were female (52.0%), reflecting a balanced sample composition representative of the general consumer population. In terms of age, the largest group comprised individuals aged 20–29 years (32.1%), followed by 30–39 years (30.1%), 40–49 years (20.2%), 50-59 years (11.9%), and those aged 60 and above (5.7%). This demographic pattern indicates that the sample primarily consists of young and middle-aged adults—consistent with the major consumer segments in the sports product market. With respect to monthly income, the most prevalent category was NT\$ 40,000–60,000 (32.1%), followed by NT\$ 60,000–80,000 (28.1%), NT\$ 20,000–40,000 (17.9%), NT\$ 80,000–100,000 (13.9%), and above NT\$ 100,000 (8.0%). Overall, the sample was dominated by middle-income respondents, aligning with the typical income distribution of consumers in Tainan City and representing the core purchasing power in the sports product sector. In terms of purchase behavior, most respondents had bought sports products one to three times in the past (over 75%), with an average purchase frequency of 2.4 times (SD = 1.3), suggesting moderate purchase experience but not high-frequency consumption. The most recent purchase amount ranged from NT\$ 200 to NT\$ 10,000, with an average of approximately NT\$ 3,000 (SD = 1,200), following a normal distribution.

These findings indicate that consumers in Tainan generally prefer mid-priced sports brands, emphasizing practicality and health benefits rather than luxury positioning. In summary, the sample demonstrates a balanced gender ratio, a reasonable age distribution, and a concentration in the middle-income class. Hence, the data effectively represent the main consumer group of sports products in Tainan City.

# 4. Empirical Results

# 4.1 Reliability and Validity Analysis

To ensure the reliability and validity of the measurement scales, a Confirmatory Factor Analysis (CFA) was conducted to examine item performance and the overall measurement quality of each construct. The results are summarized in Table 2. Regarding convergent validity, all standardized factor loadings ranged from 0.698 to 0.845, exceeding the recommended threshold of 0.60, indicating that the observed indicators effectively reflected their respective latent constructs. The Cronbach's  $\alpha$  coefficients ranged from 0.819 to 0.903, all above the 0.70 criterion, demonstrating strong internal consistency. The Composite Reliability (CR) values ranged from 0.874 to 0.922, and the Average Variance Extracted (AVE) values ranged from 0.565 to 0.596, both satisfying the standards proposed by Fornell and Larcker

(1981), namely CR > 0.70 and AVE > 0.50. These results confirm that all constructs exhibit satisfactory internal consistency, convergent validity, and measurement stability. Consequently, the measurement model meets the requirements for reliability and validity, providing a robust foundation for the subsequent structural model analysis.

Table 2: Results for factor loading, reliability, and validity

Constructs	Items	Factor Loading	Cronbach's α	CR	AVE
Health Consciousness (HC)	HC1	0.796	0.889	0.912	0.565
	HC2	0.789			
	HC3	0.751			
	HC4	0.763			
	HC5	0.698			
	HC6	0.745			
	HC7	0.699			
	HC8	0.765			
Attitude (AT)	AT1	0.750	0.903	0.922	0.596
	AT2	0.790			
	AT3	0.808			
	AT4	0.744			
	AT5	0.752			
	AT6	0.757			
	AT7	0.799			
	AT8	0.775			
Subjective norms (SN)	SN1	0.754	0.827	0.879	0.592
	SN 2	0.803			
	SN 3	0.743			
	SN 4	0.746			
	SN 5	0.799			
Perceived behavioral control	PBC1	0.769	0.819	0.874	0.580
(PBC)	PBC2	0.758			
	PBC3	0.748			
	PBC	0.787			
	PBC5	0.746			
Purchase Behavioral	BI1	0.845	0.853	0.900	0.963
intention (PBI)	BI2	0.824			
	BI3	0.842			
	BI4	0.819			

Note: CR: Composite reliability; AVE: Average variance extracted.

## 4.2 Structural Model and Hypothesis Testing

After establishing adequate reliability and validity of the measurement model, the Structural Equation Modeling (SEM) technique was employed to test the hypothesized relationships among health consciousness, attitude, subjective norms, perceived behavioral control, and purchase behavioral intention. The overall model fit indices demonstrated an excellent level of fitness: GFI = 0.90, AGFI = 0.88, RMSEA = 0.04, SRMR = 0.04, NFI = 0.97, CFI = 0.99, and PNFI = 0.89. All values met the recommended cut-off criteria suggested by Hair et al. (2022)—specifically, GFI > 0.90, CFI > 0.90, RMSEA < 0.08, and SRMR < 0.08—indicating that the model exhibits a well-fitting and theoretically sound structure. The hypothesis testing results are presented in Table 3 and Figure 2.

Hypothesis	<b>Hypothesized Path</b>	Path coefficient	Results
H1	HC→AT	0.71 ***	Supported
H2	HC→SN	0.54 ***	Supported
Н3	HC→PBC	0.57 ***	Supported
H4	AT→PBI	0.36 ***	Supported
H5	SN→PBI	0.07	Not Supported
Н6	PBC→PBI	0.28 ***	Supported
H7	HC→PBI	0.24***	Supported

Table 3: SEM analysis results and hypothesis verification

Note: \*\*\* p < 0.01

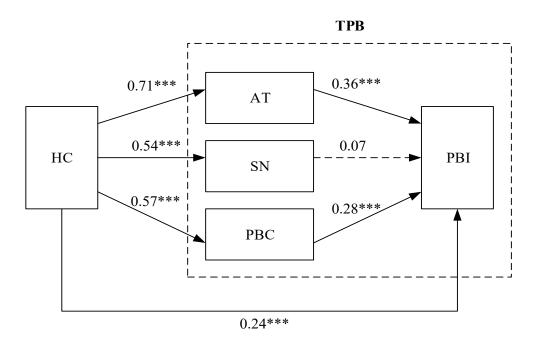


Figure 2: Results of the research model

Note: \*\*\* p < 0.01

First, with respect to the effects of health consciousness on the three TPB components, the results revealed that health consciousness positively affected attitude, suggesting that consumers with higher health consciousness tend to hold more favorable evaluations toward sports products. Similarly, health consciousness had a significant positive influence on subjective norms, indicating that individuals who are more health-conscious are more likely to perceive social approval and influence from important others. Moreover, health consciousness significantly affected perceived behavioral control, implying that individuals with greater health awareness feel more confident in their ability and resources to engage in purchasing behaviors. Thus, H1, H2, and H3 were supported. Second, the effects of the three TPB components on purchase behavioral intention showed mixed results. Attitude had a significant positive influence on purchase behavioral intention, indicating that consumers with more favorable evaluations of sports products exhibit stronger willingness to purchase. Perceived behavioral control also exerted a significant positive influence on purchase behavioral intention, confirming that when consumers believe they possess sufficient capability and resources, their likelihood of purchasing increases. However, the effect of subjective norms on purchase behavioral intention was not significant, implying that the respondents' purchase decisions were relatively autonomous and less dependent on social or peer influence. Accordingly, H4 and H6 were supported, whereas H5 was not supported. Finally, health consciousness directly and significantly influenced purchase behavioral intention, suggesting that beyond its indirect effects through attitude and perceived behavioral control, health consciousness also exerts a direct motivational effect on consumers' purchasing behavior. Therefore, H7 was supported.

Collectively, these findings demonstrate that health consciousness serves as a critical antecedent of consumers' purchase behavioral intention for sports products. Individuals with higher health consciousness form stronger positive attitudes and greater self-efficacy, thereby increasing their purchase likelihood. Conversely, the relatively weak influence of subjective norms suggests that consumers in Tainan tend to base their purchase decisions on personal health needs and self-assessment rather than external social pressure. This study not only confirms the applicability of the TPB in the context of sports product consumption but also highlights the central psychological role of health consciousness in health-oriented markets. Overall, health consciousness influences purchase behavior intention both indirectly—via attitude and perceived behavioral control—and directly, serving as a key psychological driver of consumer behavior. From a managerial standpoint, the results imply that sports brands and marketers can leverage health-oriented communication, educational campaigns, and community engagement to strengthen consumers' health consciousness and perceived self-efficacy, thereby enhancing their intention to purchase health-related sports products.

# 5. Conclusion

Grounded in the TPB, this study examined the mechanism through which health consciousness influences consumers' purchase behavioral intention toward sports products. Using SEM, the findings demonstrate a satisfactory overall model fit and strong explanatory and predictive validity, with most hypothesized paths supported. The empirical results reveal that health consciousness significantly and positively affects attitude, subjective norms, and perceived behavioral control. This indicates that when consumers possess a higher level of health awareness and personal responsibility toward well-being, they tend to develop a more proactive and healthoriented attitude and are more inclined to translate such awareness into concrete behavioral action. Furthermore, both attitude and perceived behavioral control exert significant positive influences on purchase behavioral intention, while the effect of subjective norms is not statistically significant. These results suggest that consumers who hold favorable evaluations of sports products—and who believe these products contribute to health promotion—are more likely to express purchase behavioral intentions. Likewise, when consumers perceive that they have sufficient resources, knowledge, and ability (e.g., financial means, information, or time), their willingness to purchase health-oriented products increases. This pattern reflects a rational decision-making process in which consumers assess their personal capacity and perceived benefits rather than relying solely on the opinions of others. The nonsignificant effect of subjective norms merits additional attention. As the sample primarily consisted of young and middle-aged adults, this demographic tends to have greater access to information and higher self-determination, leading them to make consumption decisions based on personal health needs and individual value orientations rather than social approval. This finding mirrors a broader cultural shift in Taiwan toward self-directed and intrinsically motivated health consumption, wherein purchasing sports products is primarily driven by internal health goals and lifestyle attitudes rather than by external social pressure.

In addition, the findings indicate that health consciousness exerts both direct and indirect effects on purchase behavioral intention, confirming its role as a central driving factor within the model. Specifically, health consciousness not only fosters favorable attitudes and enhances perceived behavioral control but also directly stimulates consumers' purchasing motivation. This dual pathway underscores the pivotal role of health consciousness as both a cognitive and motivational determinant of health-oriented consumer behavior. From a theoretical perspective, the results validate the applicability of the TPB in the domain of health-oriented consumption and extend the model by introducing health consciousness as an exogenous variable. This integration strengthens the model's predictive power and provides new insights into how psychological antecedents shape consumer intention and behavior in wellness-related markets. From a managerial standpoint, several practical implications emerge. First, firms in the sports and wellness industries should enhance health-oriented brand positioning by integrating health education and promotional activities to build consumer trust and emotional attachment to the

brand. Second, marketers should design products and services that strengthen consumers' self-efficacy and perceived control, such as smart wearables, fitness analytics applications, or personalized exercise solutions, thereby reinforcing consumers' confidence and sustained engagement with the brand.

In summary, this study demonstrates that health consciousness functions as a key psychological driver of sports product consumption behavior. It influences purchase behavioral intention both directly and indirectly through attitude and perceived behavioral control, shaping a rational and self-determined decision-making process. These findings provide empirical support for health-oriented marketing strategies and lay the groundwork for extending TPB applications to other health-related industries in future research.

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