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The Influence of Health Literacy Level on the Purchasing Behavior of Health Products

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Abstract

The implementation of the Healthy China 2030 goals has led to the vigorous development of the health industry, including the rapid growth of the health product industry. Nevertheless, it is still unclear what factors influence consumers' propensity to buy health items. This study focuses on how consumers' propensity to buy health items is influenced by their level of health literacy. This article is based on the Theory of Planned Behavior, and a model is constructed with health literacy level as the independent variable, attitude toward the behavior, subject norm, perceived behavior control as mediating variables, and health items purchase intention as the dependent variable. The study employs questionnaire surveys and data model analysis to test the hypotheses are valid not. Through data analysis, it is concluded that attitude toward the behavior, subject norm, perceived behavior control, as partial mediating variables, significantly positively influence consumers' willingness to purchase health products by their health literacy level . This conclusion may help the factory which produces health products. From the outset of promotion, the aim should be to enhance consumers' health literacy level to expand the market. During sales and after-sales service, products should be introduced in a way that is closer to their actual effects and needs, thereby enhancing consumer trust and customer loyalty, and ultimately increasing purchase intention.

Keywords

health literacy, theory of planned behavior, health products, consumer behavior

1. Introduction

With the comprehensive implementation of the “Healthy China 2030” Planning Outline, China has been continuously exploring and developing its health industry, giving rise to new models of health services. Public awareness of health has also gradually increased, and purchasing health and wellness products has become a new social trend (The CPC Central Committee & The State Council, 2016). Various wellness industries have emerged, selling wellness products to meet the public's pursuit of health.

Some studies have investigated the factors influencing health-related consumption behavior among adolescents. The research indicates that health risk perception and health anxiety play mediating roles in the influence of media exposure on health-related

consumption behavior among young people, and that media exposure has a significant positive effect on health-related consumption behavior among young people (He & Liu, 2025). Additionally, related research has examined the factors influencing the customized purchasing intentions of wellness tourists. The study found that attitude toward the behavior, subject norm, perceived behavior control within the customized purchasing context are positively correlated with wellness tourists' customized product purchasing intentions; while information communication and disposable income within the decision-making context are also positively correlated with wellness tourists' customized purchasing intentions (Wang & Chen, 2019).

There are still exists some academic gap about how health affects consumers' propensity to buy wellness products. This study takes health literacy levels as the starting point to explore the psychological and behavioral influences of health literacy levels on consumer purchasing decisions. the study aims to use the results of psychological and behavioral research as theoretical basis for enterprises to optimize product design and marketing models, and to provide different services and marketing strategies for consumer groups at different stages of health literacy development through the Theory of Planned Behavior.

2. Research Design

2.1 Theoretical Basis

2.1.1 Health Literacy

In the 1990s, the term “health literacy” emerged to replace the previous term “health and literacy” (Koh et al., 2024). In different countries they have their own definition of health literacy. In Germany, health literacy means a person’s capacity to obtain, comprehend, evaluate, and put health-related information into use (Schaeffer et al., 2021). And in the eastern and middle-eastern cultures, health literacy refers to a concept used for evaluating people’s capacity to meet the growing health-related demands in a fast-changing society (Nair et al., 2016). In the meantime, the academic community defined “health literacy,” and the current consensus on the concept of health literacy is that health literacy defined as an individual’s capability, and it involves obtaining, understanding, and processing basic health information and services, and further applying these resources to formulate decisions that are beneficial for enhancing and sustaining one’s own health (Arias, 2014). The term “health literacy” has also been recognized and introduced into the academic community in China (Li, 2008).

However, there are significant differences between China and other countries in the assessment of health literacy levels. Overseas, they put more concentrate on the ability to read and understand health-related materials and complete tasks, while in China, there is a greater emphasis on health knowledge reserves, establishment of health-promoting behaviors, and the recognition of health skills (Wang, 2010).

2.2 Theory of Planned Behavior

The Theory of Planned Behavior consists of three levels: attitude toward the behavior, subject norm, perceived behavior control.

Consumer attitudes are based on Fishbein and Ajzen's Attitude-Belief-Value Theory. Different consumers may have different attitudes toward the same object. Fishbein argued that attitudes are one of the primary factors determining purchase intent. Research indicates a positive correlation between attitudes and purchase behavior (Yang, 2024). Subjective norms refer to the social influences consumers face when engaging in specific behaviors, such as the influence of others, including public opinion, trends, and market trends, which in turn affect consumers' purchase intentions and consumption behaviors. For example, the recent surge in

popularity of Labubu is attributed to consumers being influenced by social factors, such as marketing and trends on social media, leading to a significant increase in Labubu purchases (Song & Huang, 2025). Perceived behavioral control consists of control beliefs and perceived intensity, which are the positive or negative factors consumers believe influence their behavior and the extent of such influence (Duan & Jiang, 2008). When making purchasing decisions, the primary influencing factors are time, money, and opportunity.

2.3 Model Design

The application of planned behavior theory has the following premises. The behavior itself needs to meet the controllability and goal. The core assumption of TPB is that individual behavior is driven by intention, and intention can be transformed into actual action through the control of behavior, so the first premise of its application is that behavior must have properties that can be controlled by individuals autonomously.

According to the previous article, the level of health literacy can be set as an independent variable. The reason is that for behavioral controllability, individuals have the leading power to initiate, implement, and terminate their own health literacy level, and are not absolutely limited by uncontrollable external factors. Moreover, for targeting, an individual's health literacy level is something that is specific, definable, and has clear implementation boundaries.

This study employed a Likert scale questionnaire survey method for data collection and analysis. Based on the above research, this study uses health literacy level as the independent variable, attitude toward the behavior, subject norm, perceived behavior control as mediating variables, and purchase intention as the dependent variable, forming the model framework shown in Figure 1. Among these, the independent variable, health literacy level, is assessed based on three dimensions: health knowledge reserves, health behavior formation, and health skill cognition. In light of the above, this paper put forward the following hypotheses:

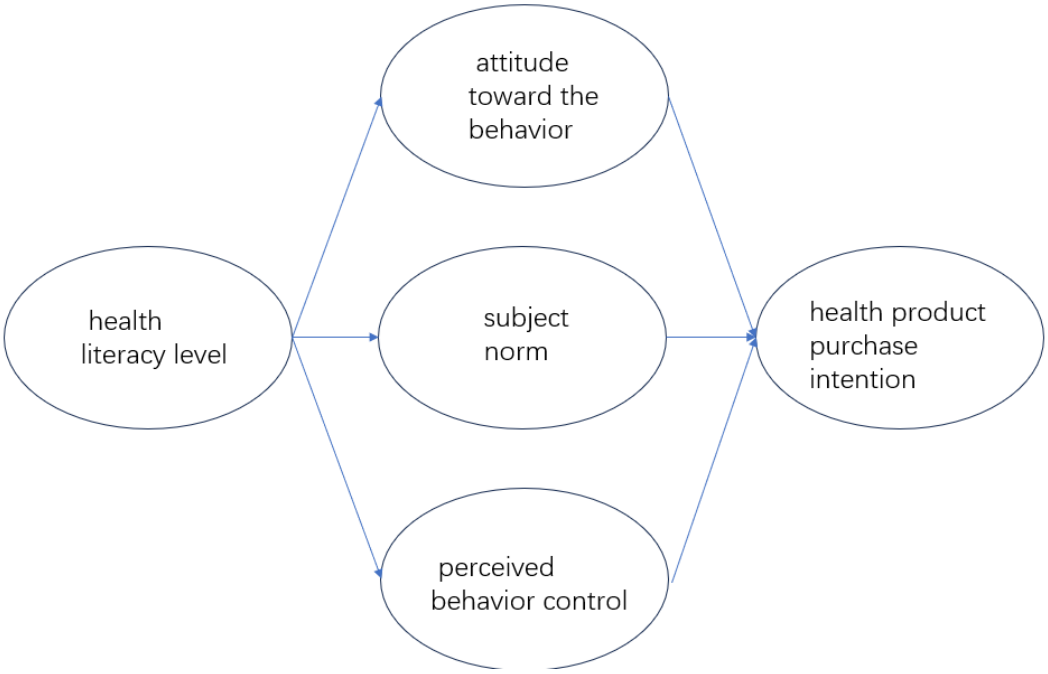
H1: Higher health literacy levels increase consumers' purchase intentions for health products.

H2: Consumers' attitudes toward health products influence their purchase intentions for health products. The higher consumers' attitudes toward health products, the stronger their purchase intentions.

H3: Consumers' subjective norms toward health products influence their purchase intentions for health products. The higher consumers' subjective norms toward health products, i.e., the greater the social influence they receive, the stronger their purchase intentions.

H4: Perceived behavioral control among consumers influences their willingness to buy health products, with higher levels of such control corresponding to stronger intentions to make purchases.

Figure 1: Model of the relationship between variables



3. Results

The data survey was conducted using Questionnaire Star, with five variables and 16 questions which used Likert scale by ranging the choices from strongly agree to strongly disagree. A total of 285 valid responses were collected. Among these 285 valid answers, 76% of our country's provinces and cities have a certain number of answer sheets, which can reflect the applicability of the results of this data. What's more, through reliability analysis, the Cronbach's alpha coefficient was found to be 0.926, and it is far exceeding the threshold of 0.7 which indicate reliability of this survey. The questionnaire also demonstrated good internal consistency, making it suitable for further research.

3.1 Descriptive Analysis

First, the mean values for all five variable dimensions were greater than 3. Specifically, the mean values for health literacy were 3.45, for attitude 3.36, for subjective norms 3.36, for perceived behavioral control 3.33, and for purchase intention 3.34. From the mode data of the five variable dimensions, it can be seen that the mode values are all greater than 3, with the mode mean for health literacy being 4.5, the mode mean for attitude being 4.33, the mode mean for subjective norms being 4.67, the mode mean for perceived behavioral control being 4.33, and the mode mean for purchase intention being 4.67. Based on the mean and mode data, it can be concluded that the target audience has a strong purchasing intention for health products, indicating that health products have market potential and that the audience has a high level of interest in health products.

3.2 Regression Analysis

Regression analysis operates as a statistical technique, its primary purpose being to verify the presence of a correlation among variables. In the summary model table, the adjusted R^2 value indicates the explanatory power of the model. In the coefficient table, significance determines whether there is a causal relationship between variables; if the significance level is <0.01, it indicates a significant relationship. In the coefficient table, the unstandardized coefficients represent the constant and coefficients of the data model describing the relationship between variables.

Health literacy levels are positively correlated with the intention to purchase health items ($r^2 = 0.567$, $p < 0.001$), showing that the assumption H1 holds water. Moreover, health literacy levels is positively correlated with attitudes ($r^2 = 0.556$, $p < 0.001$), subjective norms ($r^2 = 0.507$, $p < 0.001$) and perceived behavioral control ($r^2 = 0.539$, $p < 0.001$). The above data indicate that the assumptions H2, H3, and H4 hold true. The data indicates that health literacy level exerts an influence on consumers' intention to purchase health products, with higher health literacy levels being associated with stronger purchase willingness. In addition, elevated health literacy is linked to more favorable attitudes toward health products among consumers, increased influence of subjective norms, and enhanced perceived behavioral control.

Under the condition of controlling health literacy levels, testing the relationship between the mediating variable and the dependent variable (purchase intention) aims to determine whether the mediating variable is a partial mediator or a full mediator. The B values in the coefficient table represent the constant and coefficients. If the controlled variable decreases, it indicates a partial mediator; if the B value is exactly 0, it indicates a full mediator. As shown in the Table 1, it shows whether the mediating variable is a partial mediator or not.

The relationship between attitude and purchase intention is positively correlated, and attitude is a partial mediator. The health literacy level decreased from 0.765 to 0.549, indicating that attitude is a partial mediator. The constant is 0.487, health literacy is 0.549, and attitude is 0.284. A positive correlation exists between one's attitude and their intention to purchase. The data indicates that health literacy levels partially influence consumers' attitudes toward health products, thereby affecting purchase intention, and both have a promotional effect.

A positive correlation exists between subject norms and their intention to purchase, and subjective norms act as a partial mediating variable. The health literacy level decreased from 0.765 to 0.494, indicating that subjective norms act as a partial mediating variable. The constant is 0.441, health literacy is 0.494, and subjective norms are 0.354. Subjective norms have a positive correlation with purchase intention. The data indicates that health literacy levels partially influence consumers through subjective norms, which in turn influence purchase intention, and all have a promotional effect.

A positive correlation exists between perceived behavioral control and their intention to purchase, and perceived behavioral control serves as a partial mediating variable. The value of health literacy levels decreased from 0.765 to 0.568, indicating that perceived behavioral control acts as a partial mediating variable. The constant is 0.476, health literacy is 0.568, and perceived behavioral control is 0.271. Perceived behavioral control has a positive correlation with purchase intention. The data indicates that health literacy levels partially influence consumers' perceived behavioral control, which in turn affects purchase intention, and both have a promotional effect.

Table 1: Table of intermediate variable types

		B	significance
1	constant	.698	<0.01
	health literacy level	.765	<0.01
2	constant	.487	<0.01
	health literacy level	.549	<0.01
	attitude toward the behavior	.284	<0.01
3	constant	.441	0.01
	health literacy level	.494	<0.01
	subject norm	.354	<0.01
4	constant	.476	0.01
	health literacy level	.568	<0.01
	perceived behavior control	.271	<0.01

4. Recommendations

Research indicates that health literacy levels influence purchasing intent through attitude, subjective norms, and perceived behavioral control as outlined in the Theory of Planned Behavior. Based on existing research findings, this study offers recommendations for the health product industry to enhance market share and sales. The health product industry should optimize product design and implement targeted marketing strategies for health products. By analyzing the purchasing preferences of different health literacy groups, companies can precisely target their customer base, develop health products that better align with consumer needs, and formulate precise market strategies to enhance product competitiveness.

4.1 The Level of Health Literacy Is the Fundamental Reason for Purchase Intention

For health product companies, since it is known that health literacy promotes consumer purchasing intent for health products, improving public health literacy through corporate outreach is an effective method to expand the market and increase market share. In China, health literacy levels are assessed across three key areas: health knowledge reserves, the formation of healthy behaviors, and the recognition of health skills. Therefore, when promoting products, companies can effectively educate the public by linking health knowledge to their wellness products. Starting with the most easily accessible health knowledge reserves, companies can use educational content about wellness products in advertising and promotions to help consumers quickly acquire health knowledge, thereby improving their health literacy and encouraging product purchases.

4.2 Marketing and Publicity

Marketing and promotional activities should be grounded in real-world effects, avoiding exaggeration, and should directly address product functionality, supported by data, to lower decision-making barriers. The L'Oréal brand was ordered to stop the illegal act and fined 200,000 yuan for the fictitious use of the "8-day miracle" advertisement in France. The marketing of this brand is a counterexample to proper marketing, which not only has lost users trust but also diminished brand credibility. Simple and straightforward marketing content can not only gain the trust and understanding of those with high health literacy but also reduce information misconceptions among those with low health literacy. This avoids misleading information caused by overly exaggerated advertising claims, such as “take one pill and feel better immediately,” which could lead to a loss of trust in wellness products. Customer satisfaction further influences loyalty, so taking the first step to gain consumer trust is the prerequisite for establishing user-industry stickiness (Hussain et al., 2025).

4.3 Sale

When making sales, relevant sales personnel should guide consumers from the customer's perspective, tailor promotions to address the customer's specific issues, enhance the customer experience, build trust, leave a professional and effective impression, and increase customer loyalty. In China, the brand of Fat Donglai is welcomed by consumers. The sales staff at Donglai Fat will explain to customers how to ripen bananas, how to feed infant formula, how to wear socks, etc. This thoughtful service makes customers feel respected and cared for. Their sales personnels attitude is one of the most important reason that makes Fat Donglai success.

4.4 Product After-sales

After consumers purchase health products, customer service and after-sales staff who have received training on health product-related health knowledge should be available to assist consumers. Kantar provides after-sales services such as door-to-door cooking guidance,

online community Q&A, and live demonstration explanations. In the online community Q&A, we explain the usage of products and address cooking difficulties; the live demonstration begins with the product's specific functions, introducing the differences between various functional modes and the culinary options available, helping users to gain a deeper understanding of the product. For the health products after-sales, customer service should provide support both in terms of product usage and emotional well-being, thereby increasing consumers' reliance on and trust in the company. Additionally, during the after-sales process, they should help improve consumers' health literacy and dispel misconceptions.

4.5 Seize the Demand

When conducting social outreach, efforts should align with societal needs and resonate with national policies. Capitalize on social trends related to health products for marketing purposes, communicate from the consumer's perspective, and use authentic and sincere messaging to resonate with consumers. Prioritize product quality, as all efforts should be grounded in the excellence of the product itself. In the current landscape of evolving health product enterprises, capturing consumer demand is a key factor in determining market competitiveness. As sales figures rise, consumer feedback becomes increasingly critical. Companies should conduct surveys on consumer needs, feed the results back to the R&D department, and update products to further meet consumer demands.

5. Conclusion

This study investigates the health product industry within the health sector, exploring the influence of health literacy levels on the willingness to purchase health products. Based on the Theory of Planned Behavior, a model was constructed with health literacy level as the independent variable, attitude, subjective norm, and perceived behavioral control as mediating variables, and willingness to purchase health products as the dependent variable. Using a sample of 285 data points, the study examines the mechanisms through which health literacy levels influence the willingness to purchase health products. The research findings are as follows: Higher levels of health literacy exert a marked positive influence on individuals' willingness to buy health-related products. The higher the health literacy level, the stronger the intention to purchase health products; health literacy levels have a positive impact on the attitudes, subjective norms, and perceived behavioral control within the Theory of Planned Behavior; these variables act as partial mediating variables, enabling digital health literacy to exert a positive influence on the intention to purchase health products.

This study provides recommendations for health product-related enterprises regarding the influence of health literacy levels on the intention to purchase health products. It suggests optimizing processes at each stage to enhance trust between the health product industry and consumers, thereby increasing consumer loyalty to the enterprise. By aligning with national policies, this approach aims to enhance brand awareness, expand the market, and increase sales.

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Conflicts of Interest

The authors declare no conflict of interest.

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