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Factors Affecting Chinese Purchase Intention of Commercial Long-Term Care Insurance: A Consumer Cognition Perspective

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Abstract

Purpose: China has become the country with the largest elderly population and the fastest growth rate in the world; therefore, market demand for long-term care among Chinese consumers is growing increasingly large and urgent. To provide long-term care for consumers, commercial long-term care insurance is expected to become a new growth point for insurance companies as the state copes with an aging population. However, mechanisms that drive consumer cognition on purchase intentions of commercial long-term care insurance are still unclear. So taking the impact of consumer cognition on purchase intentions of commercial long-term care insurance as the core issue, this study explored how consumer cognition affected purchase intentions of commercial long-term care insurance.

Introduction: Based on the Theory of Planned Behavior (TPB), along with content from a literature review and expert consultation, seven dimensions of consumer cognition variables were incorporated into a research model, including performance expectancy, social influence, culture concept, insurance knowledge, risk perception, trust, and personal norms. Attitude, which was theorized to have the strongest predictive ability for behavioral intention, was selected as the mediating variable, and its role in the path relationship between consumer cognition and purchase intention was investigated. Finally, a consumer purchase intention model was constructed from the perspective of consumer cognition that verified the influence of consumer cognition on purchase intention of commercial long-term care insurance.

Methodology: In this study, an empirical analysis approach was employed. Permanent residents aged 45-59 in Henan Province were selected as the research subjects. For data collection, a survey method was adopted. Convenience sampling was used to distribute online questionnaires, and 400 valid questionnaires were recovered. For data analysis, a well-known statistical software package was used for descriptive statistical analysis, along with Partial Least Squares Structural Equation Modeling.

Findings: The results showed that consumer cognition had significant positive effects on purchase attitude (β= .80, $p < .001$) and purchase intention (β= .23, $p < .001$). Purchase attitude also exerted a significant positive influence on purchase intention (β= .67, $p < .001$). Meanwhile, purchase attitude (β= .53, $p < .001$) served as an important mediating variable in the impact of consumer cognition on purchase intention. The study's findings highlighted that enhancing consumer cognition of commercial long-term care insurance can significantly improve purchase attitude and intention.

Contribution: From the perspective of consumer cognition, the psychological mechanisms underlying consumers' purchase decisions for commercial long-term care insurance were explored. This study differed significantly from previous research on the purchase intention of commercial long-term care insurance by examining aspects such as consumers' health conditions, income, and the situation of their children, providing a new theoretical perspective for studying consumers' purchase intention of insurance products. Furthermore, "consumer cognition" was introduced as a leading factor influencing attitude. While following the core framework of TPB, these findings expand the understanding of the cognitively driven mechanisms that form attitudes and enrich the application value of TPB theory in the field of complex insurance products.

Furthermore, the research results provide a clear direction for insurance enterprises to optimize their marketing strategies from the perspective of enhancing consumer awareness. At the same time, they also offer a feasible solution for the country to encourage consumers to purchase commercial long-term care insurance to alleviate the social pressure of elderly care. The findings also have positive policy reference value for promoting the sustainable development of an aging society.

Recommendations: Insurance companies can enhance consumers' intention to purchase commercial long-term care insurance by raising their levels of cognition. To enhance consumer cognition, efforts can be made based upon the seven dimensions for measuring consumer cognition, namely performance expectancy, social influence, culture concept, insurance knowledge, risk perception, trust, and personal norms. Similarly, to alleviate the pressure of an aging society, the state can also formulate policies and guidelines from the perspective of consumer cognition to promote consumer purchases of commercial long-term care insurance.

Research Limitations and Future Research: In this study, Henan Province in China was selected as the target area, a convenience sampling method was used to collect data, and the influence of consumer cognition on purchase intention of commercial long-term care insurance was empirically analyzed. Future researchers could optimize three aspects of the research design, expanding it across other regions and cultures, along with increasing the sample size and number of influencing factors. This would enable a more comprehensive and detailed understanding of the driving mechanisms of consumers' purchase intentions.

Keywords: *Consumer cognition, long-term care insurance, purchase intention*

Introduction

According to the classification standards established at the 1982 United Nations World Assembly on Aging, individuals aged 60 and above are defined as the elderly population (United Nations, 1982). Currently, China has become the country with the largest and fastest-growing elderly population in the world (Li, 2024). China's elderly population (≥60 years) is projected to reach 509 million (39% of the total population) by 2050 (United Nations, Department of Economic and Social Affairs, Population Division, 2022). Among them, the population of the oldest (aged 80 and above) will reach 135 million, while the number of elderly individuals unable to care for themselves will rise to 11.59 million. A large elderly population and an increasing proportion of older adults have become the norm in human society (Peng, 2023). This has led to a tremendous demand for long-term care. However, alongside this trend, the traditional family-based caregiving function is gradually weakening. Older adults are receiving less support from their families, leading to an increasingly urgent and substantial demand for socialized care services.

Given the substantial and increasingly urgent market demand for long-term care among consumers, insurance companies have significant market opportunities by offering commercial long-term care insurance products that meet the needs of the elderly. The experiences of developed countries with large aging populations—such as the United States, Germany, and Japan—have demonstrated that commercial long-term care insurance is highly favored by consumers due to its ability to effectively address long-term care needs (Ding & Wei, 2016). However, research on long-term care insurance in China has primarily focused on aspects such as consumers' health conditions, income levels, and children's situations, lacking a micro-empirical and systematic exploration of the purchase intention of commercial long-term care insurance from the perspective of consumer cognition. Against this backdrop, this study aimed to address the following questions:

1. How does consumer cognition influence the purchase intention of commercial long-term care insurance?
2. How does consumer cognition affect attitude?
3. How does attitude influence purchase intention of commercial long-term care insurance?
4. How does attitude play a mediating role in the impact of consumer cognition on purchase intention?

Literature Review

Theory of Planned Behavior (TPB)

In 1991, Ajzen published an article entitled "*The Theory of Planned Behavior*", marking the official establishment of the TPB theory. This theory holds that attitude is one of the three key factors influencing an individual's behavioral willingness. Research has shown that when an individual holds a positive attitude towards a specific behavior, their behavioral intentions are significantly enhanced, and thus they are more likely to exhibit actual behavior. As the fundamental theoretical framework in the field of behavioral decision-making research, the TPB has demonstrated remarkable effectiveness in explaining and predicting individual behavioral decisions. It is notable that Ajzen and Driver (1991) emphasized that when applying this theory to a specific topic, researchers should appropriately expand the theoretical framework according to the research context and enhance its explanatory power and predictive effect by introducing new explanatory variables or path relationships.

Commercial Long-term Care Insurance

Commercial long-term care insurance is a branch of commercial health insurance that addresses disabilities resulting from old age or illness that require long-term care. Under normal circumstances, when the insured has difficulties in two or more standard daily living activities [such as bathing, dressing, eating, using the toilet, or transferring (getting out of bed or leaving the chair)], a claim will be triggered. (Cramer & Jensen, 2006). The payout can be insurance money or services aimed at assisting people with essential daily activities, such as medication management, shopping, household chores, and other health-related maintenance behaviors.

Consumer Cognition

Dori et al. (2017) defined cognition as the process by which consumers acquire, understand, and process knowledge through mental activities such as perception, thinking, and memory. Regarding consumer cognition of commercial long-term care insurance, Sun (2020) holds that consumer cognition is a multi-dimensional integrated concept. This study was based on integrating the Technology Acceptance Model with Katz's (1960) research, which posited that attitudes are formed by individuals based on their cognition of objects.

Consumer cognition is defined as their cognition, understanding, and evaluation of a series of factors that affect their willingness to purchase insurance, including a total of seven sub-dimensions: performance expectancy, social influence, culture concept, insurance knowledge, trust, risk perception, and personal norms. Consumer cognition is a kind of psychological construct that shapes an individual's attitudes and behavior towards purchasing insurance. Studies have shown that mental constructs are best measured by reflective indicators, because they are the fundamental factors that generate observational indicators (Hardin et al., 2008). In summary, consumer cognition is a reflective second-order variable, measured by a total of seven sub-dimensions: performance expectancy, social influence, culture concept, insurance knowledge, trust, risk perception, and personal norms.

1) *Performance Expectancy*. In this study, performance expectancy refers to consumer expectations regarding the effects of purchasing commercial long-term care insurance products. Yang (2021) found that performance expectancy had a significant positive impact on consumer intentions to purchase internet insurance. When Ma (2023) studied the impact of performance expectations on agricultural ecological security production behavior and grain growers' attitudes, performance expectancy was found to be an important factor influencing behavioral attitudes.

2) *Social Influence*. Social influence refers to the phenomenon where social forces cause changes in individuals' attitudes and behavior. Deconinck and Swinnen (2015) found that social influence had a major effect on beer consumption behavior in Russia. Ma (2023) found that social influence had a large effect on the attitudes of grain growers towards ecological and safe production behaviors.

3) *Culture Concept*. Sun (2020) found that the traditional Chinese concept of elderly care culture significantly and negatively affected consumer attitudes and willingness to purchase commercial long-term care insurance.

4) *Insurance Knowledge*. Lin and Prince (2015) found that the more consumers knew about insurance products, the greater their insurance demand would be.

5) *Trust*. Chen (2024) used a structural equation research model and found that trust was an important factor influencing the purchase intention of commercial long-term care insurance among consumers in Nanning City. Brown et al.'s (2012) empirical analysis revealed that consumers' distrust of insurance companies restricted their enthusiasm for purchasing long-term care insurance.

6) *Risk Perception*. Bauer (1960) was the first to introduce risk perception from the field of psychology into consumer behavior analysis, proposing that consumers' subjective judgment and perception of risks were important factors determining their consumption behavior. Zhou and Chen (2013) found that risk perception can affect consumer demand for insurance products.

7) *Personal Norms*. Schwartz's (1977) Norm Activation Theory defined personal norms as self-expectations based on internalized values, which are an important factor influencing a person's will or behavior.

Attitude

Ajzen and Fishbein (1980) noted that attitude refers to the positive or negative evaluation that individuals hold towards performing a certain behavior, which is usually influenced by behavioral beliefs and outcome evaluations. Ajzen (1991) pointed out in the TPB that attitude is one of three major factors influencing an individual's behavioral willingness. An individual's beliefs about a certain behavior and their assessment of the outcome affect their attitudes towards performing that behavior and thereby influence their willingness to act. Many scholars have also confirmed that in addition to direct influence, behavioral attitudes can also serve as a mediating variable that affects behavioral willingness (Ebrahim et al., 2016).

In conclusion, based on the Theory of Planned Behavior, a research path of "Consumer Cognition–Attitude–Purchase Intention" was constructed to explore the psychological mechanism of consumers in the purchase decision-making of commercial long-term care insurance. To enhance the explanatory power of the TPB in specific situations, this study introduced "consumer cognition" as the antecedent variable of attitude. Seven sub-dimensions are proposed, including performance expectancy, social influence, culture concept, risk perception, insurance knowledge, trust and personal norm, revealing their influence on attitude and purchase intention. This research approach, while retaining the core structure of TPB, expands understanding of attitude formation mechanisms and enriches the application value of TPB theory to the field of complex insurance products.

Based on the above, the following hypotheses were proposed:

H_1: Consumer cognition positively influences purchase intention of commercial long-term care insurance.

H_2: Consumer cognition positively influences attitude.

H_3: Attitude positively influences purchase intention of commercial long-term care insurance.

H_4: Attitude mediates between consumer cognition and purchase intention of commercial long-term care insurance.

Research Methodology

Sample and Data Collection

This study targeted permanent residents aged 45–59 in Henan Province as the research population. As one of China's most populous provinces, Henan exhibits significant growth potential in the commercial long-term care insurance market. The permanent population aged 45–59 reached 21.82 million by the end of 2022 (Henan Provincial Bureau of Statistics, 2023).

Methodologically, a questionnaire survey approach was employed. A convenience sampling method was adopted for online questionnaire distribution. The minimum sample size was determined using Yamane's (1967) formula with a 95% confidence level and 5% margin of error, yielding a requirement of 400 valid responses. During fieldwork, 478 questionnaires were distributed, and 400 valid responses were ultimately collected, meeting the study's sampling adequacy criteria.

Data Analysis Methods

In this study, a popular software package was employed for descriptive statistical analysis, with particular focus on demographic characteristics. Additionally, a second statistical analysis software package was utilized for data processing. Based on partial least squares structural equation modeling (PLS–SEM), this software enabled comprehensive multidimensional analyses including convergent validity assessment, discriminant validity testing, path coefficient estimation, and mediation effect verification (Hair et al., 2021). Research has demonstrated that the PLS–SEM approach offers significant advantages in model adaptability and computational efficiency (Guenther et al., 2023), making it particularly suitable for theoretical development and hypothesis testing in exploratory studies (Rahman et al., 2023).

Results

Descriptive Statistics

The views of permanent residents aged 45–59 in Henan Province were studied. Among the 400 valid questionnaires collected, the sample comprised 193 males (48%) and 207 females (52%). Regarding educational attainment, 208 respondents (52%) had completed education at or below the high school/secondary school level, a characteristic consistent with the study's focus on the 45–59 age cohort. Occupational distribution showed enterprise employees as the largest group (*n* = 134, 34%), followed by self-employed individuals (20%) and freelancers (15%). Monthly income levels were predominantly clustered between ¥3,000–¥8,000 (*n* = 216, 54%), with 154 respondents (39%) reporting incomes exceeding ¥8,000.

Factor Loadings

According to Hair et al. (2016), the threshold for factor loadings in research projects should be set at .50, whereby items with loadings above this value are retained, while those below .50 are deleted. In this study, it was observed that the factor loading of Culture Concept on the second-order variable of consumer cognition fell below the .50 threshold, negatively impacting the overall results, consequently leading to the removal of Culture Concept from the model. All other measurement items demonstrated factor loadings exceeding .50 across their respective constructs, meeting the retention criteria without requiring elimination, as detailed in Table 1 (on the following pages).

Reliability Analysis

As presented in Table 2, both first-order and second-order constructs in this study demonstrated Cronbach's alpha coefficients and composite reliability (CR) values exceeding the recommended threshold of .70. These results confirmed adequate reliability for all measured constructs in the study.

Table 2 *Construct Reliability*

	Cronbach's Alpha	Composite Reliability
Step I: First-Order		
AT	.92	.92
IK	.92	.93
PE	.88	.88
PI	.92	.92
PN	.84	.85
RP	.82	.84
SI	.89	.89
TR	.93	.93
Step II: Second-Order (Consumer Cognition)		
CC	.95	.89

Note. RP: Risk Perception; PE: Performance Expectancy; PN: Personal Norm; SI: Social Influence; IK, Insurance Knowledge; TR: Trust; AT, Attitude; PI: Purchase Intention; CC: Consumer Cognition

Table 1 *Factor Loadings*

Step I: First-Order

	AT	IK	PE	PI	PN	RP	SI	TR
AT1	.87							
AT2	.93							
AT3	.93							
AT4	.87							
IK1		.84						
IK2		.66						
IK3		.89						
IK4		.92						
IK5		.91						
IK6		.89						
PE1			.84					
PE2			.87					
PE3			.85					
PE4			.86					
PI1				.93				
PI2				.93				
PI3				.93				
PN1					.86			
PN2					.76			
PN3					.77			
PN4					.89			
RP1						.61		
RP2						.83		
RP3						.82		
RP4						.77		
RP5						.76		
SI1							.88	
SI2							.91	
SI3							.89	
SI4							.79	
TR1								.85
TR2								.83
TR3								.85
TR4								.89
TR5								.89
TR6								.82

Step II: Second-Order (Consumer Cognition)

	CC
RP	.61
PE	.81
PN	.86
SI	.87
IK	.69
TR	.76

Note. RP: Risk Perception; PE: Performance Expectancy; PN: Personal Norm; SI: Social Influence; IK, Insurance Knowledge; TR: Trust; AT, Attitude; PI: Purchase Intention; CC: Consumer Cognition

Convergent Validity

As evidenced in Table 3, all constructs in the present study demonstrated average variance extracted (AVE) values exceeding the established threshold of .50. This meant that all measured variables exhibited satisfactory convergent validity, confirming that the indicators sufficiently represented their respective theoretical constructs.

Table 3 *Construct Convergent Validity (AVE)*

	Average Variance Extracted (AVE)
Step I: First-Order	
AT	.81
IK	.73
PE	.73
PI	.86
PN	.67
RP	.58
SI	.75
TR	.73
Step II: Second-Order (Consumer Cognition)	
CC	.60

Note. RP: Risk Perception; PE: Performance Expectancy; PN: Personal Norm; SI: Social Influence; IK, Insurance Knowledge; TR: Trust; AT, Attitude; PI: Purchase Intention; CC: Consumer Cognition

Fornell and Larcker Criterion

Fornell and Larcker (1981) established that discriminant validity is achieved when the square root of a construct's average variance extracted (AVE) exceeds the correlation coefficients of all the other constructs. As demonstrated in Table 4, all measured variables in this study satisfied the Fornell-Larcker criterion, thereby confirming adequate discriminant validity among the constructs. It should also be noted that the square root of the AVE value of variable PN (.82) was only slightly lower than its correlation coefficient with variable PE (.84), and that the other reliability and validity indicators of variable PE and PN (such as Cronbach's alpha, CR) were all good. Therefore, it can be reasonably explained that although the concepts of these two variables were similar, there were still differences, and they were still acceptable in practical applications. Hair et al. (2019) pointed out that when the square root of AVE is slightly lower than the correlation coefficient, it is acceptable as long as other measurement indicators are satisfactory and there is theoretical support.

Table 4 *Fornell & Larcker Criterion First-Order*

	AT	IK	PE	PI	PN	RP	SI	TR
AT	.90							
IK	.45	.86						
PE	.68	.30	.86					
PI	.85	.43	.65	.93				
PN	.72	.41	.84	.70	.82			
RP	.43	.21	.58	.45	.59	.76		
SI	.70	.48	.70	.68	.75	.49	.87	
TR	.66	.62	.42	.59	.48	.20	.57	.86

Note. RP: Risk Perception; PE: Performance Expectancy; PN: Personal Norm; SI: Social Influence; IK, Insurance Knowledge; TR: Trust; AT, Attitude; PI: Purchase Intention; CC: Consumer Cognition

Hypothesis Testing Results

Path coefficients and *p*-values were generated by a statistical software package to test the hypothesized model, with analytical results confirming the validation of all proposed hypotheses (H_1–H_4). In accordance with Hair et al.'s (2010) methodological recommendations, the structural model

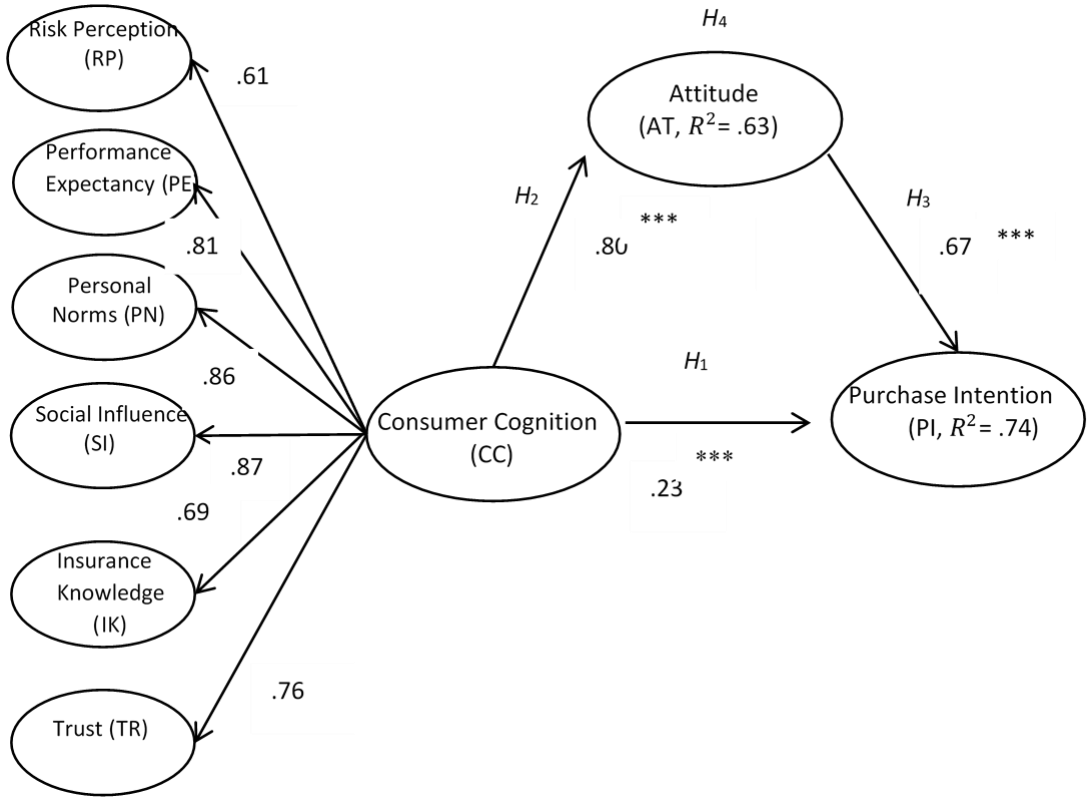
quality was assessed using the coefficient of determination (R^2), revealing that purchase intention demonstrated an R^2 value of .74, while attitude showed an R^2 value of .63. Based on conventional R^2 evaluation standards (where .25 = weak, .50 = moderate, and .75 = substantial), these findings indicated that consumer cognition exhibits moderate to high explanatory power regarding commercial long-term care insurance purchase intentions in the current research context. The overall consumer cognition-based purchase intention model for commercial long-term care insurance achieved satisfactory predictive efficacy, as detailed in Table 5.

Table 5 *Path Analysis*

	Path Coefficient	Standard Deviation (SD)	*t* statistics (|O/SD|)	*p* values	Adjusted *R*-Squared
CC -> AT	.80	.02	35.23	.000	.63
CC -> PI	.23	.04	5.37	.000	
AT -> PI	.67	.04	15.45	.000	.74
CC -> AT -> PI	.53	.04	13.70	.000	

Note. AT: Attitude; PI: Purchase Intention; CC: Consumer Cognition

Figure 1 *Structural Model*



Source: PLS-SEM (Bootstrapping results)

Discussion

Through the above empirical analysis, it was concluded that consumer cognition had a significant positive impact on both attitude (β = .80, p < .001) and purchase intention (β = .23, p < .001). This was consistent with the research results of Chen et al. (2024), Ma (2023), Noon et al. (2020), Sun (2020), Wang (2020), Wang (2023), and Yang (2021). This indicated that the higher the level of consumer cognition, the more positive their attitudes towards purchasing commercial long-term care insurance,

and the higher their intentions to purchase. Furthermore, attitude had a significant positive impact on consumers' purchase intention (β = .67, p < .001), once again verifying the important conclusion proposed by Ajzen (1991) in the Theory of Planned Behavior that attitude is an important factor influencing an individual's behavioral intention. Finally, the results of this study also indicated that attitude played a mediating role in the influence of consumer cognition on their purchase intention (β = .53, p < .001). This was consistent with the research results of Ebrahim et al. (2016) and Sun (2020). Specifically, based on consumer cognition of commercial long-term care insurance, they would first form an attitude judgment towards taking such an action, and then generate a purchase intention.

Theoretical Implications

From the perspective of consumer cognition, this study explored consumers' psychological mechanisms related to purchase intentions of commercial long-term care insurance. This was different from previous research on the purchase intention of commercial long-term care insurance from aspects such as consumers' health conditions, income, and children's situations, providing a new theoretical perspective for studying consumers' purchase intention of insurance products. Furthermore, "consumer cognition" was introduced as a leading factor influencing attitude. While following the core framework of TPB, these findings expand the understanding of the cognitively driven mechanisms that form attitudes and enrich the application value of TPB theory in the field of complex insurance products.

Managerial Implications

Consumers are the main purchasers of commercial long-term care insurance. Analyzing the internal driving factors of their intention to purchase commercial long-term care insurance from the perspective of consumer cognition, identifying their cognitive biases and demand pain points regarding commercial long-term care insurance, can not only provide information for insurance companies to develop commercial long-term care insurance products but also offer a basis for them to formulate relevant marketing strategies. In addition, China has been piloting long-term care insurance in the country since 2016, with the aim of alleviating the problem of population aging through long-term care insurance policies. Based on this study's conclusions, relevant departments can formulate policies at the national level to encourage and guide residents to purchase commercial long-term care insurance. From this perspective, this study provides new ideas for the country to alleviate the problem of an aging society.

Conclusion

Through empirical research, this study found that consumer cognition had a significant positive impact on the purchase intention of commercial long-term care insurance, and that attitude played a mediating role. This conclusion provides a clear direction for insurance enterprises to optimize their marketing strategies by enhancing consumer cognition of their products. At the same time, it shows the need for the state to advocate that consumers purchase commercial long-term care insurance to alleviate the social pressure of elderly care. It also has positive policy reference value for promoting the sustainable development of an aging society.

Limitations and Future Research

In this study, Henan Province of China was selected as the target area, a convenience sampling method was used to collect sample data, and the influence of consumer cognition on the purchase intention of commercial long-term care insurance was analyzed. Future researchers could improve three aspects of the research design, expanding it across other regions and cultures, along with increasing sample size and the number of influencing factors. This would enable a more comprehensive and detailed understanding of the driving mechanisms of consumers' purchase intentions.

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