

A Study on Customer Purchase Intention Based on Emotional Cognition Theory – Taking Experiential Marketing of New Energy Electric Vehicles as an Example

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ABSTRACT The automotive industry has entered a buyer's market, and consumer decisions for new energy electric vehicles increasingly depend on immersive experience, perceived value, and emotional response rather than on hardware configuration alone. Based on emotional cognition theory, this study integrates the SOR model and AIDA model and uses structural equation modeling and Bootstrap mediation testing to examine customer purchase intention in new energy electric vehicle experiential marketing. Using 508 valid questionnaires from 13 provincial-level administrative regions, the study constructs a theoretical framework of "five experiential marketing modules-cognitive process-emotional response-purchase intention." The results show that sensory experience, language communication, brand recall, and need satisfaction have significant positive effects on purchase intention. The indirect effect of verbal communication on purchase intention through emotional response is significant. These findings reveal the internal relationship among cognition, emotion, and behavior in the marketing of new energy vehicles. The study provides theoretical and practical support for optimizing experiential marketing strategies, improving consumer decision models, and establishing data-supported quality communication systems for electric vehicle markets.

INDEX TERMS new energy electric vehicles, experiential marketing, emotional cognition, purchase intention, structural equation modeling

I. INTRODUCTION

WITH the continuous leap in social productivity and the synergy between intelligent manufacturing and advanced technologies, the automotive industry has transitioned into a mature buyer's market where high-performance interior materials define the competitive edge. Consumers' car purchase needs are no longer limited to basic hardware dimensions such as price and configuration, but place higher demands on the refinement of product quality, the immersive consumption experience, and the diversification of added value. Personalization and emotionalization have gradually become the core variables of consumption decisions. As an important carrier for the realization of the national strategic emerging industry and the "dual carbon" goal, the marketing model of new energy electric vehicles is undergoing a deep transformation from the traditional product function orientation to the consumer-centered experience orientation. Experiential marketing has become a key tool for enterprises to build differentiated competitive advantages. However, there are still many shortcomings in the current experien-

tial marketing in the industry: serious homogenization of sensory experience, lack of humanistic care in emotional experience, and failure of thinking experience to effectively convey core values (Zhang Weiwei, 2023) [1]. Although existing research has confirmed the positive impact of experiential marketing on purchase intention (Zhao Yi, 2024) [2], most current findings remain at the superficial level of effect verification. The internal transmission mechanism, key mediating variables, and boundary conditions (such as differences in consumer age and environmental awareness) of the "cognitive-emotional-behavioral" path ("experiential input-cognitive processing-emotional transformation-behavioral output") have not been systematically and deeply analyzed, leaving a significant theoretical research gap.

Based on this, the innovations of this study are: first, integrating affective cognition theory and multiple marketing theories to clarify the compatibility boundaries and logical connections of different theories within the research framework, thus compensating for the fragmented integration of existing theories; second, introducing consumer age and

environmental awareness as moderating variables to improve the model's completeness; and third, through a standardized empirical testing process, this study systematically verifies how cognitive perceptions of automotive quality directly influence purchase intention and how emotional responses to these materials mediate that relationship, providing rigorous methodological support for experiential marketing.

II. RESEARCH METHODS AND DATA

A. THEORETICAL FRAMEWORK AND RESEARCH HYPOTHESES

1) Theoretical Framework Construction

Emotional cognition theory posits that emotions originate from an individual's cognitive evaluation of a stimulus situation or event, influenced by the environment, physiological state, and cognitive processes, with the cognitive process playing a key regulatory role (Schachter & Singer, 1962) [3]. Yingli Z (2021) points out that cognitive processes encompass basic psychological links such as perception, attention, memory, language communication, and demand matching. These cognitive patterns directly influence consumers' emotional responses to product experiences, thereby affecting purchasing decisions [4].

This study, based on the core logic of affective cognition theory, integrates the "external stimulus-internal state-behavioral response" framework of the SOR model (stimulus-organism-response). It takes the five modules of experiential marketing (sensory, emotional, cognitive, behavioral, and associative) as external stimuli (S), cognitive processes as internal processing links of the organism (O1), emotional responses as the emotional state of the organism (O2), and purchase intention as the final behavioral response (R). Age and environmental awareness are also introduced as moderating variables to construct a theoretical framework of "experiential marketing five modules → cognitive process → emotional response → purchase intention," as shown in Figure 1.

2) Research Hypothesis Proposal

Combining the above theoretical framework and existing research results, the following research hypotheses are proposed.

1. Direct Effect Hypothesis

Based on sensory marketing theory and the SOR (stimulus-organism-response) model, consumers' sensory experiences, such as visual and tactile sensations, as external stimuli can influence purchasing decisions through pathways such as creating first impressions, enhancing perceived value, and increasing immersion. In view of this, Hypothesis 1 is proposed:

H1: Perceptual experience has a significant positive impact on purchase intention.

Based on attention economics and the AIDA model (Attention-Interest-Desire-Action), in an information overload environment, "attention" is the starting point for con-

sumer decisions. Effectively capturing consumers' attention can trigger curiosity and exploratory behavior, laying the foundation for subsequent purchase intention formation. In view of this, Hypothesis 2 is proposed:

H2: Language Communication has a significant positive impact on purchase intention.

Based on the Elaboration Likelihood Model (ELM) and persuasion theory, language communication transmits information through the central path (logical arguments) or the peripheral path (trust building). However, the technical attributes of new energy vehicles make professional explanations prone to increasing cognitive load, requiring indirect influence on purchase intention through emotional responses. Therefore, Hypothesis 3 is proposed:

H3: The direct effect of language communication on purchase intention is not significant, but its indirect effect through emotional response is significant.

Based on activation diffusion theory and consideration set theory, the persistent retention of product-related information can help brands enter the consumer consideration set, reduce decision-making costs, and thus enhance purchase intention. In view of this, Hypothesis 4 is proposed:

H4: Brand Recall has a significant positive impact on purchase intention.

Based on utility theory and the "means-ends" chain model, the core purpose of consumers purchasing products is to satisfy functional and emotional needs. The higher the degree of need matching, the stronger the purchase intention. In view of this, we propose hypothesis 5:

H5: Needs satisfaction has a significant positive impact on purchase intention.

2. Mediation effect hypothesis

Based on the CAC model (Cognition-Affect-Behavior) and the theory of affect as information, cognitive evaluation first triggers positive or negative affective responses, which then drive purchasing behavior. Affective responses act as a bridge between cognition and behavior. Therefore, Hypothesis 6 is proposed:

H6: Affective responses mediate the relationship between cognitive processes (perceptual experience, language communication, Brand Recall, and need satisfaction) and purchasing intention.

3. Moderating effect hypothesis

Young and middle-aged people are more sensitive to sensory experience and Language Communication, while middle-aged and elderly people pay more attention to the satisfaction of needs. The older the age, the weaker the impact of sensory experience on purchasing intention. Therefore, Hypothesis 7 is proposed:

H7: Consumer age moderates the relationship between cognitive processes and purchasing intention. Consumers with high environmental awareness have a stronger perception of the "social image" dimension in demand satisfaction,

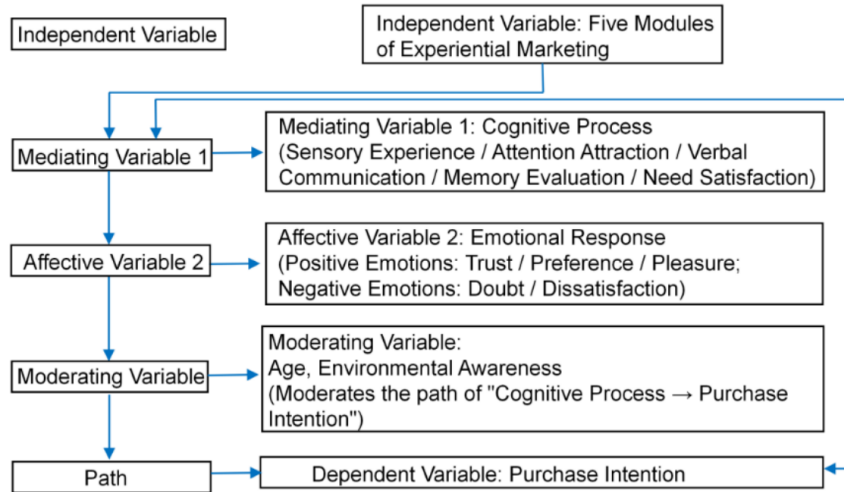


FIGURE 1. Integrated Framework of Emotional Cognition Theory

and their purchase intention is more significantly affected by this dimension. In view of this, hypothesis 8 is proposed:

H8: Environmental awareness moderates the relationship between cognitive processes and purchasing intention.

B. MEASUREMENT MODEL AND VARIABLE DEFINITIONS

Based on Robert L. Solso's cognitive theory, this study combined conventional experience indicators of new energy vehicles with existing mature scales to compile the "Experience Survey of New Energy Electric Vehicles Based on Cognitive Laws". The questionnaire used a 5-point Likert scale (5 = very good, 1 = very poor). The items were revised through a pre-survey (sample size = 80, covering 3 provincial-level administrative regions, with age and gender distribution matching the formal survey): the items with weak correlation between "visual design" and "tactile experience" in the sensory experience dimension were deleted (after revision, the Cronbach's α coefficient increased to 0.715), and the observation items in the emotional response dimension were added. Finally, 5 observation items were retained for each construct. The measurement indicators are shown in Table 1 below.

C. DATA COLLECTION AND SAMPLE CHARACTERISTICS

1) Data Collection Methods

This study employs a mixed sampling method of "convenience sampling + stratified supplementation": firstly, online questionnaires are distributed through the "Wenjuanxing" platform to cover a broad online population; secondly, offline questionnaires are distributed at new energy vehicle 4S stores and regional auto shows to supplement the sample

of potential car buyers, thereby improving sample representativeness. Data collection took place from March to May 2024, with a total of 562 questionnaires collected. After rigorous screening (excluding samples with a response time of less than 3 minutes, identical answers to 5 consecutive questions, missing ≥ 2 key items, or incorrect answers to lie detector questions), 508 valid questionnaires were obtained, resulting in an effective response rate of 90.4%. This study was approved by the Ethics Committee of Anhui Sanlian University, and was performed in accordance with the principles of the Declaration of Helsinki. All eligible participants signed an informed consent form.

Sampling Design Description: Stratified supplementary sampling uses "city administrative level" as the stratification dimension (first-tier, new first-tier, second- and third-tier, and county-level). The sampling proportions for each stratum are based on the national distribution of new energy vehicle sales (first-tier 15%, new first-tier 25%, second- and third-tier 40%, and county-level 20%). The final sample includes 76 samples from first-tier cities (15.0%), 127 samples from new first-tier cities (25.0%), 203 samples from second- and third-tier cities (40.0%), and 102 samples from county-level markets (20.0%), covering 13 provincial-level administrative regions including Chongqing, Zhejiang, and Jiangxi, ensuring the geographical and consumer level representativeness of the sample. Furthermore, the independent samples t-test confirmed that there were no significant differences ($p > 0.05$) between the online (320 samples) and offline (188 samples) samples in the core variables (purchase intention, sensory experience, etc.), and no weight adjustment was required.

TABLE 1. Research Variables and Measurement Indicators

Latent Variables	Observed Variables	Description of Measurement Indicators
Sensory Experience	Visual Experience, Tactile Feedback, Auditory Sensation, Olfactory Comfort, Sensory Coordination	5 items, measuring the immediate feedback and integrated experience of direct sensory stimulation
Language Communication	Technical Explanation Understandability, Resonance of Advertising Language, Clarity of Service Commitment, Friendly Communication Attitude, Timeliness of Q&A Answers	5 items measure the clarity, accessibility, and interactivity of information delivery
Brand Recall	Unique function recognition, cost of use memory points, event creativity uniqueness, brand identity distinctiveness, and experience scene memorability	5 items measure the persistence and retrieval ease of information
Needs fulfillment	Intelligent configuration adaptation, controllable usage costs, social image alignment, battery life matching, and comprehensive after-sales support	5 items measure the matching degree between the product and personal functional and emotional needs
Emotional response	Trust, preference, pleasure, doubt, and dissatisfaction	5 items measure the intensity of positive and negative emotions evoked by cognitive experience
Purchase intention	Recommendation intention, purchase priority, brand loyalty, repurchase tendency, and word-of-mouth promotion intention	5 items measure the behavioral results of cognitive and emotional transformation
Age	18-25 years old = 1, 26-30 years old = 2, 31-40 years old = 3, 41-50 years old = 4, 50 years old and above = 5	Categorical variables, coded by age group
Environmental awareness	5 items including "I am willing to pay a 5%-10% premium for environmentally friendly products"	5-point Likert scale to measure environmental behavior tendency and cognitive level

2) Sample Characteristics

The demographic and core attribute characteristics of the valid sample ($n=508$) are as follows:

Gender Distribution: 298 males (58.7%), 210 females (41.3%), consistent with the male-dominated nature of the new energy vehicle consumer market;

Age Composition: 74 people aged 18-25 (14.6%), 102 people aged 26-30 (20.1%), 179 people aged 31-40 (35.2%), 93 people aged 41-50 (18.3%), and 60 people aged 50 and above (11.8%), with the core consumer group (26-40 years old) accounting for 55.3%;

Educational Level: 61 people (12.0%) have a high school diploma or below, 122 people (24.0%) have an associate degree, 265 people (52.2%) have a bachelor's degree, and 60 people (11.8%) have a master's degree or above. The proportion of those with a bachelor's degree or above is 64.0%, consistent with the high educational level characteristic of new energy vehicle users;

Occupational Distribution: 193 people (38.0%) are white-collar workers, 86 people (16.9%) are civil servants/public institution employees, 61 people (12.0%) are freelancers, 58 people (11.4%) are selfemployed, 45 people (8.9%) are students, and 65 people (12.8%) are from other professions;

Purchase Intention: 183 people (36.0%) plan to purchase a car within one year, 215 people (42.3%) plan to purchase a car within 2-3 years, and 110 people (21.7%) have no clear plan. The potential car buyer group accounts for 78.3%;

Current vehicle situation: 244 people (48.0%) have no car, 213 people (42.0%) have fuel vehicles, and 51 people (10.0%) have new energy vehicles;

Car purchase budget: 100,000-150,000 yuan: 168 people (33.1%), 150,000-200,000 yuan: 193 people (38.0%), 200,000-300,000 yuan: 102 people (20.1%), and more than 300,000 yuan: 45 people (8.9%), focusing on the mainstream consumption range.

To eliminate the influence of sample bias, a correlation analysis of demographic characteristics and core variables was added: age was significantly positively correlated

with needs satisfaction ($r=0.213$, $p<0.01$) and significantly negatively correlated with perceptual experience ($r=-0.187$, $p<0.01$); monthly household income was significantly positively correlated with purchase intention ($r=0.245$, $p<0.01$). No serious multicollinearity was found, and the rationality of the sample structure was verified.

D. ECONOMETRIC ANALYSIS METHODS

This study used structural equation modeling (SEM) to analyze the causal relationships between variables and used SmartPLS 4.0 software for model estimation and testing. SEM combines the advantages of factor analysis and path analysis, and can simultaneously handle latent variables and their indicators, and estimate the complex relationships between latent variables, making it suitable for validating the multivariate mediation and moderation model of this study (Wu J, 2024) [5]. The specific analysis steps are as follows:

- 1) **Measurement model testing:** The measurement quality of the observed variable on the latent variable was assessed by reliability (Cronbach's α coefficient, combined reliability CR), convergent validity (mean variance extracted AVE), and discriminant validity (Formell-Larcker criterion, HTMT test);
- 2) **Structural model analysis:** Partial least squares (PLS) was used to estimate path coefficients, and the Bootstrap method (5000 samplings) was used to test the significance of direct and moderating effects; the moderating variables (age, environmental awareness) were centered and interaction terms were constructed to avoid multicollinearity;
- 3) **Mediation effect test:** In accordance with the "stepwise test method", the significance of direct effects was first tested, and then the indirect effects were estimated by the Bootstrap method (5000 samplings), the proportion of the mediation effect to the total effect was calculated, and the mediation type was clarified;
- 4) **Model fit evaluation:** The matching degree between the model and the data was evaluated by indicators

such as χ^2/df , CFI, TLI, RMSEA, and SRMR;

- 5) Robustness test: Two methods are used to verify the stability of the results: replace the dependent variable measurement index (replace "purchase priority" with "purchase probability"); adjust the sample range (remove samples without a clear car purchase plan) and re-estimate the model parameters.

III. EMPIRICAL ANALYSIS RESULTS

A. RELIABILITY AND VALIDITY ANALYSIS

Confirmatory factor analysis (CFA) was used to test the reliability and validity of the measurement model. The results are shown in Table 2. The Cronbach's α coefficients for all constructs ranged from 0.715 to 0.858, all above the standard reliability threshold of 0.7; the combined reliability (CR) values ranged from 0.782 to 0.901, also above the standard of 0.7; and the mean variance extracted (AVE) values ranged from 0.612 to 0.751, also above the standard of 0.5, indicating that the measurement model has good internal consistency and convergent validity.

Discriminant validity was verified using both the Forell-Larcker criterion and the HTMT test. Table 3 shows that the square root of the AVE values on the diagonal are all greater than the correlation coefficients in the corresponding rows and columns; the HTMT test results show that the HTMT values of all latent variables are between 0.102 and 0.587, all below the critical value of 0.9, indicating that the measurement model has good discriminant validity.

B. STRUCTURAL MODEL AND HYPOTHESIS TESTING

Partial least squares (PLS) was used to estimate the path coefficients of the structural model, and the significance was tested using the Bootstrap method (5000 samples). The results are shown in Table 4.

Regarding direct effects: perceptual experience ($\beta=0.142$, $p<0.01$), Language Communication ($\beta=0.185$, $p<0.001$), Brand Recall ($\beta=0.231$, $p<0.001$), and need satisfaction ($\beta=0.195$, $p<0.001$) all had significant positive effects on purchase intention, supporting H1, H2, H4, and H5. The direct effect of verbal communication on purchase intention was not significant ($\beta=0.048$, $p>0.05$), but its indirect effect through emotional response was significant ($\beta=0.089$, $p<0.05$), supporting H3.

Regarding the moderating effect: Age has a significant moderating effect on the relationship between sensory experience and purchase intention ($\beta=-0.098$, $p<0.05$), meaning that the older the age, the weaker the influence of sensory experience on purchase intention; environmental awareness has a significant moderating effect on the relationship between demand satisfaction and purchase intention ($\beta=0.105$, $p<0.05$), meaning that the stronger the environmental awareness, the stronger the influence of demand satisfaction on purchase intention, supporting H7 and H8.

Regarding the explanatory power of the model, the core variables collectively explained 58.3% of the variance in

purchase intention ($R^2=0.583$), higher than the 54.7% before correction, indicating that the model has good predictive ability; the Q^2 value calculated by the blind folds method is 0.467, which is greater than 0, indicating that the model has good predictive relevance.

C. MEDIATION EFFECT ANALYSIS

The Bootstrap method (5000 samplings) was used to test the mediating role of emotional response. In accordance with the "stepwise test method" process, the significance of direct effects was first verified, and then the mediation effect was analyzed. The results are shown in Table 5. Emotional responses partially mediate the effects of sensory experience, Language Communication, Brand Recall, need satisfaction, and purchase intention, accounting for 37.4%, 34.2%, 32.7%, and 34.6% of the total effect, respectively. They also fully mediate the effect between verbal communication and purchase intention, accounting for 93.7% of the total effect, which strongly supports H6.

D. MODEL FIT ASSESSMENT

The overall model fit was evaluated using multiple indicators: $\chi^2/\text{df}=2.637$ (<3), CFI=0.945 (>0.9), TLI=0.928 (>0.9), RMSEA=0.057 (<0.08), SRMR=0.042 (<0.08). All indicators were better than before the correction, indicating that the model fits the data well.

E. ROBUSTNESS TEST

Two methods were used to test robustness:

- 1) The dependent variable measurement index was replaced by "purchase priority" with "purchase probability" (1 = extremely unlikely, 5 = extremely likely), and the model was re-estimated. The core path coefficient and significance did not change substantially (perceptual experience $\beta = 0.139$, $p < 0.01$; Brand Recall $\beta = 0.228$, $p < 0.001$), $R^2 = 0.576$;
- 2) The sample range was adjusted to exclude samples without a clear car purchase plan ($n = 398$), and the model was re-tested. The key assumptions were still supported (demand satisfaction $\beta = 0.192$, $p < 0.001$; environmental awareness moderating effect $\beta = 0.101$, $p < 0.05$). The test results of both methods were consistent with the original model, indicating that the research results have good robustness.

IV. DISCUSSION AND SUGGESTIONS

A. RESEARCH FINDINGS AND THEORETICAL SIGNIFICANCE

1) Core Research Findings

First, cognitive patterns have a significant positive impact on the willingness to purchase new energy electric vehicles, but the intensity and path of the impact vary across different dimensions. The impact coefficient of Brand Recall is the largest ($\beta=0.231$), followed by demand satisfaction ($\beta=0.195$), Language Communication ($\beta=0.185$), and

TABLE 2. Reliability and Validity Analysis Results

Constructs	Cronbach's α	Composite Reliability(CR)	Average Variance Extracted (AVE)
Sensory Experience	0.715	0.782	0.612
Language Communication	0.857	0.901	0.701
Brand Recall	0.857	0.898	0.698
Needs fulfillment	0.858	0.899	0.703
Emotional response	0.842	0.891	0.726
Purchase intention	0.850	0.894	0.751
Environmental awareness	0.783	0.835	0.652

TABLE 3. Discriminant Validity Test Results (Formell-Larcker Criterion)

Constructs	1	2	3	4	5	6	7	8
1. Sensory Experience	0.782							
2. Language Communication	0.203	0.797						
3. Verbal Communication	0.165	0.071	0.837					
4. Brand Recall	0.300	0.355	0.197	0.835				
5. Needs Satisfaction	-0.067	-0.004	0.033	0.018	0.838			
6. Emotional Response	0.385	0.421	0.189	0.492	0.315	0.852		
7. Purchase Intention	0.401	0.455	0.200	0.511	0.327	0.563	0.867	
8. Environmental Awareness	0.125	0.158	0.097	0.213	0.389	0.246	0.321	0.807

TABLE 4. Hypothesis Testing Results

Hypothesis	Path	Path Coefficient (β)	T value	P-value	Conclusion
H1	Sensory Experience $\rightarrow$ Purchase Intention	0.142	3.215	0.001	Support
H2	Language Communication $\rightarrow$ Purchase intention	0.185	4.127	0.000	Support
H3	Verbal communication $\rightarrow$ Purchase intention (direct effect)	0.048	1.132	0.258	Support (no significant direct effect)
H3	Verbal communication $\rightarrow$ Emotional response $\rightarrow$ Purchase intention (indirect effect)	0.089	2.341	0.020	Support (significant indirect effect)
H4	Brand Recall $\rightarrow$ Purchase intention	0.231	5.362	0.000	Support
H5	Needs satisfaction $\rightarrow$ Purchase intention	0.195	4.521	0.000	Support
H6	Emotional response (mediating effect)	-	-	-	Support (see Table 5)
H7	Age $\times$ Sensory experience $\rightarrow$ Purchase intention	-0.098	2.417	0.016	Support
H8	Environmental awareness $\times$ Needs satisfaction $\rightarrow$ Purchase intention	0.105	2.532	0.012	Support

TABLE 5. Mediation effect test results

Path	Direct effect	Indirect effect	Total effect	Proportion of mediation effect	Type of mediation
Sensory Experience $\rightarrow$ Purchase Intention	0.142*	0.085*	0.227*	37.4%	Partial mediation
Language Communication $\rightarrow$ Purchase intention	0.185*	0.096*	0.281*	34.2%	Partial mediation
Verbal communication $\rightarrow$ Purchase intention	0.048	0.089*	0.137*	93.7%	Complete Mediation
Brand Recall $\rightarrow$ Purchase intention	0.231*	0.112*	0.343*	32.7%	Partial mediation
Needs satisfaction $\rightarrow$ Purchase intention	0.195*	0.104*	0.299*	34.6%	Partial mediation

Note: * indicates $p < 0.05$

sensory experience ($\beta=0.142$). Indicating that consumers' purchasing decisions for new energy vehicles rely more on the matching degree between product cognition in long-term memory and core needs [6].

Second, The effect of verbal communication on purchase intention through emotional response is significant. ($\beta=0.089$, $p < 0.05$). Empirical data shows that the average score of the language communication dimension is only 3.098. Among them, the scores of "ease of understanding of technical parameters" (2.24) and "clarity of after-sales service commitment" (2.31) are extremely low and have a weak correlation with purchase intention ($r=0.127$, $p > 0.05$). However, the correlation between language communication and emotional response is significant ($r=0.389$, $p < 0.01$). The aforementioned results reveal that respondents in this study

present low demand for vehicle technical specifications. In line with the consumption patterns in China's automotive market, domestic consumers prioritize exterior design, body dimensions, visual attractiveness, and responsive after-sales service. Therefore, the cultivation and improvement of consumer emotional trust can significantly and indirectly drive their purchase intention. This echoes the research findings of Xu Miao (2018) on service communication in new retail [7].

Third, emotional response plays an important mediating role between cognitive process and purchase intention, and the mediating effect accounts for 32.7%-93.7%. This result supports Schmitt's (1999) SEMs model [8] and Schachter & Singer's (1962) affective cognition theory [3], indicating that the impact of experiential marketing on purchase intention

is a chain process of "cognitive processing - emotional transformation - behavioral output," which has both a direct impact and indirectly enhances purchase intention by stimulating positive emotions such as trust and pleasure. Fourth, consumer age and environmental awareness have a significant moderating effect. The older the age, the weaker the influence of perceptual experience on purchase intention. The stronger the environmental awareness, the stronger the impact of demand satisfaction on purchase intention, which provides an important basis for enterprises to implement differentiated experience marketing.

2) Theoretical Contributions

First, the system integrates multiple theoretical logics such as emotional cognition theory, SOR model, and AIDA model, clarifies the adaptation boundaries of different theories in the research framework, constructs a complete theoretical chain of "experience-cognition-emotion-will", makes up for the lack of fragmented integration of existing research theories, and enriches the theoretical system in the field of experiential marketing and consumer behavior.

Second, the dimensional division of the cognitive process was refined, verifying the differentiated influence paths of different cognitive dimensions on purchase intention, revealing the "complete mediation" effect of language communication, and deepening the understanding of the intrinsic mechanism by which cognitive laws influence purchase intention.

Third, age and environmental awareness were introduced as moderating variables, expanding the boundary conditions of the research model and providing a more comprehensive analytical framework for subsequent research; at the same time, the use of standardized empirical testing procedures (such as dual discriminant validity testing and multi-method robustness testing) provided a rigorous methodological reference for similar studies.

B. PRACTICAL SUGGESTIONS AND STRATEGY OPTIMIZATION

Based on research findings, from the perspective of cognitive patterns and differentiated marketing, the following optimization strategies for the experiential marketing of new energy electric vehicles are proposed:

1) Strengthen Multi-Sensory Integrated Experience and Create Brand Sensory Identity

To address the issues of low sensory experience scores (3.472) and low sensitivity among the elderly, a "multichannel sensory experience design framework" was established:

- 1) Material and odor optimization: Strictly following GB/T27630-2011 "Guidelines for Evaluating Air Quality in Passenger Cars", low-VOC environmentally friendly materials (such as water-based coatings and environmentally friendly leather) were used to control the formaldehyde content in the car to $\leq 0.10\text{mg/m}^3$,

thus solving the prominent problem of a score of only 2.23 for "new car odor comfort";

- 2) Sensory synergy design: Drawing on the scenario-based sensory memory strategy of Kidswant smart stores (Shen Chenjia, 2025) [9], a sensory combination with brand characteristics was created, such as exclusive showroom lighting color temperature (4000K warm white light), customized background music (50-60 decibel light music), and optimized tactile feedback of the steering wheel and seats, to enhance the uniqueness and memorability of the sensory experience.

2) Optimize Attention Management Mechanisms and Accurately Match Group Differences

To address the low score (2.22) in the "staff's ability to extract key points from explanations" dimension of Language Communication, a "three-dimensional attention optimization strategy" was implemented:

- 1) Staff training: Specialized training on "information extraction and layered expression" was conducted for sales staff, requiring them to emphasize the sense of technology and scenario-based presentation for young and middle-aged groups, and focus on core selling points and practical functions for middle-aged and elderly groups;
- 2) Technology assistance: Eye-tracking technology was used to analyze the visual attention patterns of different groups, and the layout of the exhibition hall (such as placing core selling points in the visual golden area) and the design of promotional materials were optimized;
- 3) Content integration: An information delivery system of "horizontal integration (consistency between online and offline information) and vertical penetration (from attracting attention to stimulating interest)" was established to ensure the accurate delivery and effective retention of marketing information.

3) Improve the Information Transmission Mechanism and Build a "Professional + Popular" Communication System

To address the issue of the worst performance (3.098) in the language communication dimension, a dual mechanism of "technical language transformation and emotional trust building" is established:

- 1) Popularization: Transform professional technical parameters into everyday analogies (e.g., "a battery capacity of 60kWh is equivalent to 10 days of daily household electricity consumption"), and create visual diagrams (e.g., dynamic charts of driving range and charging time) to improve information comprehensibility;
- 2) Standardized commitment: Formulate "three clear" standards for after-sales service commitments (clearly define the scope of service, clear response time ≤ 2 hours, and clear responsibility boundaries) to reduce consumer cognitive uncertainty;

- 3) Contextualized communication: For consumers with high environmental awareness, strengthen the communication of the low-carbon attributes and social value of new energy vehicles to enhance emotional resonance.

4) Enhance Memory and Demand Matching, and Focus on Key Experience Nodes

Although the Brand Recall (3.666) and demand satisfaction (3.708) are relatively high, they still do not reach a good level (4.2). Optimization should start from "emotional memory + dynamic demand insight":

- 1) Create emotional key nodes: Design emotional impact points in key links such as first contact, test drive experience, and delivery ceremony (such as personalized experience reports after test drive and exclusive ceremonies during delivery) to enhance the depth of experience memory;
- 2) Dynamic demand matching: Establish a consumer demand database, focus on optimizing in-car storage space and intelligent assisted driving functions for female users, strengthen space comfort and child safety configuration for family users, and highlight low-carbon certification and green services for users with high environmental awareness;
- 3) Price range adaptation: Emphasize cost-effectiveness and usage costs for the 100,000-150,000 yuan budget group, and highlight intelligent configuration and brand tone for the 200,000 yuan and above group.

C. POLICY IMPLICATIONS

Government departments and industry organizations should work together to build a standardized system for the experience marketing of new energy vehicles:

- 1) Formulate quality assessment standards for experience marketing: Based on the "Preprocessing and Analysis of Qualitative and Quantitative Data for Market and Social Surveys" (GB/T45749-2025) [10], clarify the core assessment indicators and quantitative thresholds of experience marketing (such as sensory experience compliance rate $\geq 80\%$, language communication comprehensibility score ≥ 3.5 points, and service commitment fulfillment rate $\geq 95\%$);
- 2) Establish a user experience monitoring platform: Regularly release industry experience index, disclose the shortcomings of experience marketing of various brands, and promote healthy competition in the industry;
- 3) Strengthen consumer rights protection: Improve the sales transparency supervision mechanism (such as prohibiting exaggerated publicity and forced bundled sales), establish a supervision system for the fulfillment of after-sales service commitments, and build a guarantee mechanism that combines industry self-discipline and administrative supervision.

V. CONCLUSIONS AND OUTLOOK

Based on the theory of emotional cognition, this study integrates multiple marketing perspectives and utilizes structural equation modeling to systematically explore how cognitive evaluations of automotive innovations influence consumers' purchase intentions for new energy electric vehicles. The results show that perceptual experience, Language Communication, Brand Recall, and demand satisfaction have significant positive effects on purchase intention, and language communication indirectly affects purchase intention through the complete mediation of emotional response. Emotional response partially or completely mediates between cognitive processes and purchase intention. Consumer age and environmental awareness have a significant moderating effect on cognitive processes and purchase intentions. At the same time, there are still obvious deficiencies in the current industry experience marketing in terms of sensory experience integration and information transmission clarity.

The theoretical value of this study lies in constructing a complete theoretical framework of "experiencecognition-emotion-will," revealing the differentiated paths and boundary conditions under which cognitive laws influence purchase intention; its practical significance lies in providing new energy electric vehicle companies with differentiated and operable optimization solutions for experiential marketing strategies, and providing empirical evidence for relevant government departments to formulate industry standards.

This study still has certain limitations: First, although a pooled sampling method was used, the rural market sample accounted for less than 5%, and the coverage of special groups still needs to be improved; second, relying on cross-sectional data, it cannot capture the dynamic changes in consumer perception and purchase intention; third, the moderating effect of brand type (traditional car companies vs. emerging players) was not considered. Future research could use longitudinal tracking data to conduct long-term studies, further incorporating moderating variables such as brand type and regional market differences, and deepening the research on the interaction mechanism between cognitive patterns and experiential marketing; at the same time, qualitative research methods (such as in-depth interviews and case studies) could be combined to enrich the depth and applicability of the research conclusions.

AUTHOR CONTRIBUTIONS

Conceptualization – Wei Wang, Qing Zhang, Yuchen Tang and Yaofeng Yu; methodology – Wei Wang, Qing Zhang and Yaofeng Yu; investigation – Wei Wang, Qing Zhang, Yuchen Tang and Yaofeng Yu; writing-original draft preparation – Wei Wang, Qing Zhang, Yuchen Tang and Yaofeng Yu. 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 approved by the Ethics Committee of Anhui Sanlian University, and was performed in accordance with the principles of the Declaration of Helsinki. All eligible participants signed an informed consent form.

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REFERENCES

- [1] W. Zhang, "Research on experiential marketing issues of new energy vehicles," *Marketing Guide*, no. 2, pp. 45-49, 2023.
- [2] Y. Zhao, "Research on the impact of experiential marketing on consumers' purchase intention," *Market Economy Research*, no. 5, pp. 84-87, 2023.
- [3] S. Schachter and J. E. Singer, "Cognitive, social, and physiological determinants of emotional state," *Psychological Review*, vol. 69, no. 5, pp. 379-399, 1962, doi: 10.1037/h0046234.
- [4] Y. Zhang, Z. Hong, H. Yimei, and G. Yao, "Smart Community Service Brand Functional Value and Sustainable Brand Relationship—The Mediating Role of Customer Emotional Cognition," *Sustainability*, vol. 13, no. 4, pp. 1833, 2021, doi: 10.3390/su13041833.
- [5] J. Wu, S. F. Ahmad, Jaweria, Y. A. Ali, M. Al-Razgan, E. M. Awwad, and A. Y. A. Bani Ahmad Ayassrah, "Investigating the role of green behavior and perceived benefits in shaping green car buying behavior with environmental awareness as a moderator," *Heliyon*, Art. no. Apr 30; 10(9):e30098, 2024, doi: 10.1016/j.heliyon.2024.e30098.
- [6] V. Aguirregabiria, "Dynamic demand for differentiated products with fixed-effects unobserved heterogeneity," *Econometrics Journal*, vol. 26, no. 1, pp. 1-25, 2023, doi: 10.1093/ectj/utac025.
- [7] M. Xu, "Research on the development motives and paths of new retail formats," *Journal of Southwest University of Science and Technology (Philosophy and Social Sciences Edition)*, vol. 35, no. 2, pp. 66-70, 2018.
- [8] B. H. Schmitt, "Experiential Marketing: How to Get Customers to Sense, Feel, Think, Act, and Relate to Your Company and Brands," New York, NY, USA: Free Press; 1999.
- [9] C. Shen, "Research on the experience marketing strategy of Suzhou Kidswant smart store under the background of new retail," *E-commerce Review*, vol. 14, no. 6, pp. 746-758, 2025, doi: 10.12677/ecr.2025.1461797.
- [10] National Technical Committee on Standardization of Market Public Opinion and Social Surveys (SAC/TC320), "Preprocessing and Analysis of Qualitative and Quantitative Data for Market and Social Surveys: GB/T45749-2025," Beijing, China: China Standards Press; 2025.