

Research on the Relationship between Media Publicity and Green Consumption Behavior—Based on Social Cognitive Theory

Li Zhao, Jianxin Sun*, Ling Zhang

China University of Mining and Technology, Xuzhou 221116, China

* Corresponding Author: Jianxin Sun; sunjx1996@yeah.net

Abstract: Based on the social cognitive theory, this paper studies the relationship mechanism between media publicity and green consumption behavior through multiple regression analysis, and explores the intermediary role of self-efficacy and personal outcome expectation between media publicity and green consumption behavior. The empirical test results show that the traditional media has no significant impact on consumers' green consumption behavior, and the new media has a positive impact on consumers' green consumption behavior. At the same time, self-efficacy and personal outcome expectation play a complete intermediary role in the relationship between traditional media and green consumption behavior, and play a partial intermediary role in the relationship between new media and green consumption behavior.

Keywords: New media; Traditional media; Multiple regression analysis; Green consumption behavior; Social cognitive theory

1. Introduction

With the development of modern industrial society, environmental problems are becoming more and more serious. The development of human economy is at the cost of destroying the ecological balance. In the long run, it will not only cause the destruction of the environment and the depletion of the ozone layer, but also endanger the safety of human life and health. In this context, the Fifth Plenary Session of the 18th CPC Central Committee wrote “strengthening the construction of ecological civilization and building a beautiful China” into the five-year plan for the first time, and decided to implement the strictest environmental protection system. In addition to government policy support, enterprises also began to pay attention to and publicize the importance of green ecology and environmental protection. With the increase of media exposure and the enhancement of public awareness of environmental protection, consumers' green consumption behavior has become an important topic

Copyright © 2019 Li Zhao, *et al.*

doi: 10.18063/esp.v4i1.1389

This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0) (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Received: Jan 2, 2019; Accepted: Feb 14, 2019; Published online: Feb 24, 2019.

in marketing. By understanding consumers' consumption preferences, enterprises can produce more products to meet market demand, so as to enhance their own competitiveness. Therefore, deepening the research on green consumption has important theoretical value and practical significance. Green consumption behavior is the behavior of consumers to minimize the harm to the environment in the process of commodity purchase, use and post-treatment, so as to minimize the negative impact of individual consumption on the environment^[1]. With the rapid development of modern media technology and the operation of commercialization mechanism, many enterprises publicize through media.

It is said to establish the corporate social responsibility image, so as to enhance the market competitiveness of enterprises. At the same time, the government also realizes the government's guidance to consumers' low-carbon consumption behavior through low-carbon communication strategy. While traditional media such as television and radio publicize and guide green environmental protection behavior, emerging media such as the Internet have played an increasingly important role in the dissemination and behavior guidance of low-carbon information. Existing scholars have discussed the intermediary role of perceived environmental problem severity and perceived product value in the relationship between them^[2,3], and explained the impact mechanism of media publicity on green consumption from the perspective of enterprises or governments, but ignored the importance of individual self-cognition. According to Bandura's social cognitive theory (SCT), as the two most significant factors in individual cognitive factors, self-efficacy and outcome expectation are important links connecting environmental factors and individual factors^[4]. However, there is still a lack of research on green consumption behavior combining self-efficacy and outcome expectation in the literature. In addition, due to the differences in publicity channels and audience groups between the traditional media represented by television broadcasting and the emerging media represented by the Internet, there are also differences in the impact on consumers' consumption behavior. However, the existing research on media publicity and consumer behavior rarely distinguishes between traditional media and emerging media. In addition, the domestic research on the relationship between media publicity and green consumption behavior starts late and the research is not deep enough. Therefore, it is necessary to explore the relationship between media publicity and consumer green consumption behavior based on social cognitive theory.

Based on this, focusing on the core issue of "how media publicity affects consumers' green consumption behavior through individual factors", aiming at the general consumer group, this paper constructs the relationship model between media publicity, individual cognition and consumers' green consumption behavior based on Bandura's social cognition theory. Taking media publicity as the independent variable, green consumption behavior as the dependent variable, and individual factor self-efficacy and personal outcome expectation as the intermediary variable, this paper deeply explores the relationship path between media publicity and consumers' green consumption behavior. Through the research data, the theoretical model proposed in this paper is empirically tested, which makes the research conclusion more in line with the actual situation, and puts forward targeted suggestions for the product publicity strategy of enterprises and the education and guidance of the government on citizens' green consumption behavior.

2. Theoretical Basis and Research Assumptions

2.1. Theoretical basis

In 1971, Bandura put forward the theory of social learning, emphasizing the importance of observational learning and imitation learning. Observation learning is an important way to generate individual behavior. People

can not only generate learning through direct experience, but also trigger learning through indirect experience obtained through observation and simulation, and apply it to the generation of social behavior. In order to overcome the limitations of basic behaviorism, Bandura expanded the social learning theory, emphasized the predictive effect of subjective cognition on individual behavior, and gradually formed the social cognition theory. Bandura^[17] believes that individual behavior is not only unilaterally affected by external or internal factors, but also dynamically influenced and determined by individual behavior, subject cognition and social environment. The interaction between subject cognition and individual behavior shows that on the one hand, the subject's cognition affects the individual's final behavior, on the other hand, the results and feedback of behavior will react on the subject's ideological beliefs and emotional factors. The interaction between subject cognition and social environment shows that although individual cognitive skills and emotional state are the products of environmental effect, the effect and existence of environment are not absolute, but potential, and depend on the subject's cognitive grasp. The interaction between social environment and individual behavior shows that although the social environment determines the direction of behavior as the realistic condition of behavior, behavior will also change the objective environment to meet the needs of the subject. Among the individual cognitive factors, Bandura emphasizes two concepts: self-efficacy and individual outcome expectation. On the one hand, Bandura believes that whether an individual performs a certain behavior is affected by the individual's self-efficacy and personal goals. The sense of self-efficacy in an individual is the judgment of the ability of the actor to perform these actions when he needs a series of actions to achieve a set goal. Therefore, self-efficacy emphasizes the judgment of the individual's self-ability to achieve the task, not the skills possessed by the actor. On the other hand, Bandura interpreted outcome expectation as an individual's judgment of the possible outcome of completing the task. Result expectation mainly consists of three forms: physical result, social result and self-evaluation result. Different forms of results can regulate individual behavior, and positive result expectation will promote individual behavior. On the contrary, negative result expectation will lead to individual slackening and hinder the generation of behavior.

To sum up, according to Bandura's social cognition theory, as far as individual behavior is concerned, individual behavior is affected by two factors: external environment and subject cognition. The stimulation of external environment can also trigger individual imitation and learning of external factors by affecting individual's subjective perception, expectation and judgment, and then affect individual's actual behavior. In terms of theoretical application, Bandura (2001) used SCT theory to analyze how communication affects human thought, emotion and action, and applied SCT to career choice, organizational behavior, motivation and achievement. Now, social cognition theory has been widely applied to the understanding and prediction of individual or group behavior characteristics, such as community knowledge contribution behavior^[5-7], higher education^[8,9], information system and user behavior^[10], innovation and entrepreneurship, organization and employee management^[11], in order to find ways to change individual behavior. It is worth noting that Bandura used individual subjective moral choice to study the sustainable development of ecological environment. He believed that reducing the high consumption of life is conducive to the construction of harmonious ecology. Consumers' green consumption behavior is inseparable from environmental protection, and the protection of ecological environment is also an individual subjective choice behavior. After that, some scholars tried to introduce social cognition into the study of green consumption behavior. Wu and Chen^[22] established the relationship model between environment, individual, result expectation and green consumption behavior, and explored the relationship between different dimensions and their impact on consumption behavior. Li *et al.* explored the influence mechanism of subjective norms and public media on green consumption behavior with self-efficacy and outcome expectation as intermediary variables. But generally speaking, there are few literatures

using social cognitive theory to study consumers' green consumption behavior.

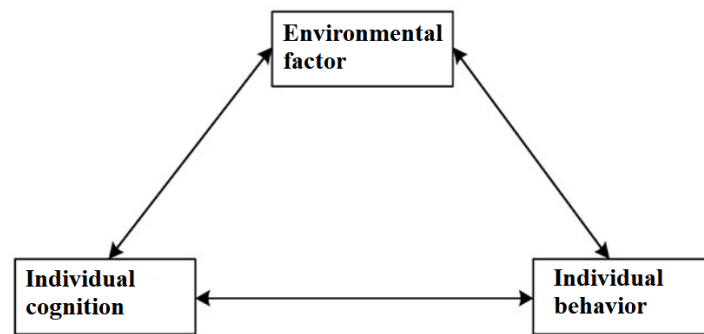


Figure 1. Basic model of social cognitive theory.

2.2. Research hypothesis

2.2.1. Media publicity and green consumption behavior

Media refers to the media that disseminate information. In the existing media forms, according to the means of communication, it can be divided into traditional media and new media.

In terms of community culture, we media also appeared. Since we media often spread by means of new media, we media belongs to a part of new media^[12]. The existing literature does not strictly divide the types of media, but they have great differences in communication forms, timeliness, regionality and interaction. Therefore, it is very necessary to divide the types of media and study the impact of traditional media and new media on consumers' green consumption behavior. By combing the existing literature and defining the concept, this paper divides media publicity into two dimensions: new media and traditional media. Social cognitive theory holds that external situational factors can directly affect the generation of individual behavior. Winett *et al.* believe that media publicity covers marketing, communication, social learning and behavior analysis, which constitutes an effective framework for behavior change. With the advent of the information age, social media has formed social norms and personal attitude norms through rapid and intensive sharing of information. At the same time, the interactivity, globality and rapid penetration of the media make personal norms and behaviors intertwined with the norms of others and even the whole society, and ultimately affect personal behavior^[13,14]. On social and public issues, this impact and correlation is more significant^[15]. Specifically, in terms of consumers' green consumption behavior, through media publicity, consumers will realize that green consumption behavior can realize the win-win of personal interests and social interests, and increase the value perception of the function and environment of green products^[3], thus affecting consumers' attitude and subjective norms towards green consumption. At the same time, the media's publicity of low-carbon environmental knowledge and the seriousness of environmental protection problems can improve consumers' acceptance and trust in environmental protection, which also indirectly affects consumers' green consumption behavior. It can be seen that the increase of media publicity and exposure will promote consumers' green consumption behavior^[16]. Therefore, the government can guide consumers' green consumption behavior through low-carbon communication strategy, and enterprises can also vigorously promote green consumption through media publicity, so as to improve product competitiveness and expand market share and sales^[2]. To sum up, the following research hypotheses are put forward:

H1: There is a positive correlation between media publicity and consumers' green consumption behavior.

H1.1: There is a positive correlation between traditional media publicity and consumers' green consumption behavior.

H1.2: There is a positive correlation between new media publicity and consumers' green consumption

behavior.

2.2.2. Self-efficacy and green consumption behavior

Among the structural mechanisms of human consciousness and behavior, self-efficacy has the strongest influence. Self-efficacy refers to the individual's belief that the individual can influence cognition through motivation, then promote the generation of behavior, and finally successfully perform a task^[17]. No matter how other factors guide and motivate, they all come from people's self-belief in their ability to produce the expected results. Therefore, self-efficacy in individual cognitive factors is an important factor to promote individual behavior. Individuals with higher self-efficacy will have more confidence in self-ability, so they can better control the implementation of self-behavior. At the same time, positive self-efficacy will increase the possibility of individuals implementing specific behaviors. Previous studies have shown that self-efficacy will promote the transformation of consumers' consumption attitude to actual consumption behavior^[1]. Ma^[11] believes that consumers' self-efficacy can increase the perceived value of products or services, directly affect consumers' attitude and adoption intention, and then affect their actual consumption behavior. In the field of green consumption, self-efficacy refers to consumers' confidence that they can contribute to the solution of specific social and environmental problems through individual consumption activities^[18]. When consumers think they have confidence and ability to improve the environment through their own consumption behavior, consumers' green consumption attitude will be more clear, and promote the transformation of consumers' environmental awareness of green consumption behavior^[19]; when individual consumers believe that they do not have the ability to improve the environment, environmental awareness will not be transformed into actual environmental protection behavior. Therefore, the higher the self-efficacy of environmental protection, the more likely consumers are to implement green consumption behavior. To sum up, the following research hypotheses are put forward:

H2: There is a positive correlation between self-efficacy and consumers' green consumption behavior.

2.2.3. Personal outcome expectation and green consumption behavior

Bandura believes that personal outcome expectation refers to the expected outcome of an individual after performing a specific behavior. Studies have shown that when individuals believe that they can obtain positive benefits related to the expectation of results, they will increase their incentive motivation and willingness to implement individual behavior^[20,21], and promote individuals to turn consciousness into action. For consumers, individual expectations of the results of consumer behavior will improve consumers' satisfaction with the function and value of products and promote the implementation of consumer behavior. Consumers with high expectation of results will more significantly realize that green purchase and consumption behavior will bring good results such as comfort, comfort and health benefits to themselves, so they will increase their satisfaction with green products, and then concentrate more on purchasing behavior^[2]. Therefore, the higher the expectation of personal results is, the greater the possibility of taking actual consumption behavior will be. As far as green consumption is concerned, in addition to consumers' expectation that the implementation of green consumption behavior can bring comfort, peace of mind and other results to themselves, it also includes consumers' expectation that green consumption behavior can improve environmental quality and promote sustainable development. The research of Wu and Chen^[22] shows that the integration model of individual result expectation and green consumption result expectation has stronger explanatory power for the trigger mechanism of consumers' green consumption behavior. When consumers realize that their green consumption behavior can bring beneficial results to individuals and the whole environment, they will increase their satisfaction with green products, recognize the purchase and consumption of green products, and then take the actual green consumption behavior^[22]. To sum up, the following

research hypotheses are put forward:

H3: There is a positive correlation between personal outcome expectation and consumers' green consumption behavior.

2.2.4. Media publicity and self-efficacy

Bandura's motivation theory holds that the formation factors of individual self-efficacy mainly include achievement experience, substitution experience, imagination experience, oral persuasion, physiological state, emotional state and so on. According to the relevant research results at home and abroad, oral persuasion is one of the effective methods to improve self-efficacy. The interweaving of traditional media and new media has promoted the fundamental change of information diffusion and communication mechanism, and the impact on individual cognition is becoming stronger and stronger. In the consumer market, media publicity will trigger individual comparison of self and community, and improve self-efficacy through self-evaluation mechanism^[23]. In addition to causing individual self-evaluation, some social media will promote individual creative participation through publicity and interaction between communities, increase individual confidence in the effectiveness of behavior results in the process of serving others, and then realize the value of self-efficacy^[24]. In the field of green consumption, social media will attract individuals' attention to green consumption through prominent reports. In addition, the more information about green products released by the media, the more likely it is to enhance individuals' confidence in purchasing green products. Coupled with the innovation and uniqueness of green products, many consumers do not understand green products. The opinions, attitudes and emotions spread by the media will form a social norm, which will be recognized and followed by consumers. To sum up, the following research hypotheses are put forward:

H4: There is a positive correlation between media publicity and consumers' self-efficacy.

H4.1: There is a positive correlation between traditional media publicity and consumers' personal self-efficacy.

H4: There is a positive correlation between new media publicity and consumers' personal self-efficacy.

2.2.5. Media expectations and results

Social cognitive theory emphasizes the ternary reciprocal interaction among environment, individual and behavior. Therefore, environmental factors have an important impact on individual factors. As one of the main environmental factors, media publicity can stimulate competition or cooperation through public opinion publicity, so as to help users or consumers achieve sustainable results^[17]. Bandura proposed that media publicity generally affects people's thinking through two mechanisms: references and behavior. On the one hand, it urges people to directly encourage and guide change through information; on the other hand, media publicity is used to gather people into social networks and communities, and further provide incentives and personalized guidance to create changes in individual expectations for results. In terms of consumer behavior, media publicity mainly strengthens the individual's enthusiasm and effective perception of consumption, so as to increase the individual's expectation of the results of consumption behavior and promote the production of consumption or purchase behavior. In addition, some studies have shown that the publicity of social media will positively affect consumers' perception of the value of products, so as to improve brand awareness and affect consumers' expectation of the results of consumption behavior^[25]. Compared with ordinary products, the special value of green products lies in the environmental protection characteristics of products. Many studies show that the environmental protection value of green products is inseparable from the functional value of products. Therefore, the media is very effective in releasing the specific information of green products. Consumers can feel the media's support and references for green products, and directly reflect the positive attitude of the media on the expected results of purchasing green

products. To sum up, the following assumptions are put forward:

H5: There is a positive correlation between media publicity and consumers' personal outcome expectations.

H5.1: There is a positive correlation between traditional media publicity and consumers' personal outcome expectation.

H5.2: There is a positive correlation between new media publicity and consumers' personal outcome expectations.

2.2.6. The mediating role of self-efficacy and personal outcome expectation

According to social cognitive theory, the generation of individual behavior is determined by individual cognitive factors and external environmental factors. In individual cognitive factors, self-efficacy and outcome expectation are the intermediary mechanism of cognition and behavior. Previous studies have shown that self-efficacy is the intermediary of external situation, knowledge and behavior^[1,6]. Through the stimulation and guidance of individual cognition, the external environment stimulates the knowledge, experience and skills that individuals have, and then affects the individual's sense of self-efficacy, triggers the individual's evaluation and incentive of self-ability, and increases the possibility of behavior. As an important part of individual factors, result expectation also plays a central and bridge role between external environmental impact and individual behavior^[7]. Positive external publicity will increase the individual's perception of the benefits of behavior results, improve the individual's expectation of behavior results, and then improve the individual's satisfaction with behavior and object, and transform attitude and cognition into actual behavior. Based on the social cognitive theory, Wu and Chen^[22] studied consumers' green consumption behavior and found that the external environment can directly affect consumers' green consumption behavior, or affect consumers' green consumption behavior by affecting consumers' green consumption efficiency and result expectation. Through the above analysis, it can be seen that media publicity has a positive impact on consumers' self-efficacy and result expectation, and can also have a positive impact on consumers' green consumption behavior directly through consumers' self-efficacy and personal result expectation. Therefore, further assumptions are made:

H6: Self-efficacy plays an intermediary role in the relationship between media publicity and green consumption behavior.

H7: Personal outcome expectation plays an intermediary role in the relationship between media publicity and green consumption behavior. To sum up, the model of this paper is shown in **Figure 2**.

3. Research Design

Scale design and data source are as follows.

3.1. Sample source and characteristic description

The research data of this paper are collected by means of large sample questionnaire, and the subjects are social individual consumers. After the initial questionnaire design is completed, a pre survey is carried out first. A total of 60 samples were collected through the "questionnaire star". The pre survey subjects were mainly college teachers, classmates, relatives and friends where the researcher was located. According to the subjects' feedback and exploratory factor analysis, the description of the questionnaire items was revised and designed to form a formal questionnaire. The formal questionnaire is mainly composed of two parts, including the basic information of subjects and the measurement items of variables. The basic information of the subjects in the questionnaire includes gender, age, education level, family per capita monthly income level, family type and residential area.

The measurement variables include five variables: new media, traditional media, self-efficacy, personal outcome expectation and green consumption behavior, with a total of 23 items. This study adopts Likert 7-level measurement method, “1” means “very disagree” and “7” means “very agree”. Formal questionnaires are mainly collected online through WeChat, QQ, questionnaire mutual filling community, etc., and a small number of questionnaires are collected by on-site distribution. This research is mainly aimed at people who have conducted green consumption (including green purchase, use after purchase and waste treatment). A total of 547 questionnaires were collected in this survey, excluding blank questionnaires and invalid questionnaires. The total number of effective questionnaires was 483, with an effective rate of 88.3%. The main descriptive statistical characteristics of the sample are shown in **Table 1**.

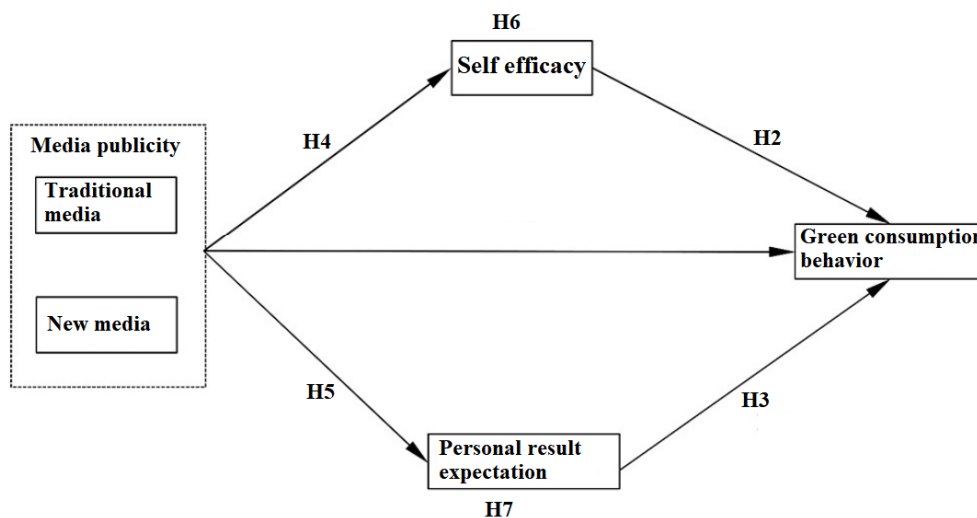


Figure 2. Theoretical model of this study.

3.2. Measuring tools

The design of all variable measurement indicators in this study refers to the existing authoritative journals at home and abroad, and makes situational treatment according to the characteristics of Chinese consumers.

Argument. Media publicity. Based on the “media environmental information exposure scale” developed by Lee^[26], and combined with the division of traditional media and emerging media by Han, this paper divides the independent variable media publicity into two dimensions: traditional media and emerging media according to the publicity channels. According to the definition of traditional media, this paper defines traditional media as newspapers, radio, outdoor and newspapers. As the emerging media is in the stage of vigorous development, there is no clear and unified division basis at present. Therefore, combined with the general definition of emerging media and referring to the division of new media in “Modern Advertising Planning: New Media Oriented Strategic Model” by Wei^[27], this paper divides new media into mobile phone, computer, outdoor new media and other mobile media according to the terminal type. A total of 8 measurement items are designed in the two dimensions of traditional media and new media.

Mediation variable. Self-efficacy. Referring to the scale developed by Compeau and Higgins^[28,29] and Bandura^[17,30], the one-dimensional structure mainly includes five dimensions: confidence in reducing unnecessary purchase, confidence in preferring green marked or recyclable products, confidence in reusing durable products, confidence in rational use and care of clothing, and confidence in recycling with correct methods.

Personal outcome expectations. The design of the variable measurement scale is based on the scale developed by Bandura^[17,30], Compeau and Higgins^[29], Bock and Kim^[20]. It has a one-dimensional structure, mainly including five dimensions: obtaining self-satisfaction, having a better and sustainable future, obtaining comfort and peace

of mind, being beneficial to one's own health and becoming an environmental protector.

Dependent variable. Green consumption behavior. Based on the scale of green purchase behavior developed by Lee^[26] and the scale of product use behavior and waste disposal behavior developed by Yong-Ki *et al.*^[31], the one-dimensional structure mainly includes five dimensions: viewing ingredient labels during purchase, preference for green products, tolerance of green product price, use of reusable products and disposal of waste articles.

Control variables. This paper refers to the existing relevant literature and takes gender, age and education level as control variables, so as to improve the accuracy of measurement and put forward more targeted suggestions.

Table 1. Construction of policy clusters studied in this paper

Category	Classification	Proportion%
Gender	Male	41
	Female	59
Age	<25 years old	50.2
	25-35 years old	39.9
	35-45 years old	6
	45-55 years old	3.5
	>55 years old	0.4
Degree of education	High school and below	3.2
	Junior college	7.4
	Undergraduate	49.1
	Graduate and above	40.3
Nature of service unit	Government-affiliated institutions	14.8
	Government office	4.9
	State-owned enterprise	15.5
	Foreign enterprise	7.4
	Private enterprise	16.6
	No occupation (including freelance and student)	40.6
Per capita monthly income level of households	<2,000 yuan	14.8
	2,000-4,000 yuan	22.3
	4,000-6,000 yuan	27.2
	6,000-8,000 yuan	15.9
	8,000-10,000 yuan	9.9
	>10,000 yuan	9.9

4. Empirical Analysis and Hypothesis Testing

4.1. Reliability and validity test

This paper adopts SPSS24.0 software was used to analyze the reliability and validity of the scale. Cronbach's Alpha coefficient and combined reliability CR were used to measure the reliability; The validity test adopts exploratory factor analysis, uses factor load to evaluate the discriminant validity of the scale, and uses latent variable extraction average variance extraction quantity AVE to evaluate the aggregate validity of variables.

As shown in **Table 2**, the Alpha value of all facets is 0.82-0.86, both greater than the threshold value of 0.7; and the combined reliability CR value of each dimension is between 0.84-0.89, both greater than the threshold value of 0.7, indicating that the variable has high reliability. At the same time, the AVE value of each configuration surface is 0.56-0.60, both greater than the threshold value of 0.5. It shows that the aggregation validity of variables is good. At the same time, it can be seen from **Table 3** that the arithmetic square root of AVE value of each variable is greater than the correlation coefficient with other variables, indicating that the discrimination validity between scales is good, which can be used for subsequent structural equation model test.

Table 2. Reliability and validity analysis of measurement model

Variable	Cronbach' Alpha	Composite reliability	AVE value
Traditional media	0.833	0.86	0.60
New media	0.828	0.84	0.56
Self-efficacy	0.854	0.87	0.57
Personal result expectation	0.866	0.89	0.62
Green consumption behavior	0.859	0.86	0.56

Table 3. Mean, standard deviation and correlation coefficient of variables

Variable	Mean value	Standard deviation	Traditional media	New media	Self-efficacy	Personal result expectation	Green consumption behavior
Traditional media	4.80	1.13	(0.77)				
New media	5.07	1.04	0.399 ^b	(0.75)			
Self-efficacy	5.54	0.92	0.429 ^b	0.396 ^b	(0.75)		
Personal result expectation	5.59	0.93	0.311 ^b	0.379 ^b	0.599 ^b	(0.78)	
Green consumption behavior	4.96	1.04	0.441 ^b	0.567 ^b	0.562 ^b	0.524 ^b	(0.75)

Note: a: indicates $p < 0.05$, b: indicates $p < 0.01$; the square root of AVE value is in diagonal brackets.

4.2 Hypothesis test

4.2.1. Model fitting and hypothesis testing

AMOS23.0 as the research tool, the 483 valid questionnaire data obtained from the survey and the relationship mechanism between media publicity and consumers' green consumption behavior are fitted by structural equation model. The main fitness test indicators are as follows: The value of CMIN/DF is 1.615, ranging from 1 to 3, indicating that the CMIN/DF value belongs to a good range. The value of RMSEA is $0.047 < 0.05$, which shows that the observed data fit well with the measurement model. GFI = 0.905, CFI = 0.955, IFI = 0.956, TFI = 0.949, all > 0.9 . It shows that the adaptation test result of the model is good. The above fitness index test results show that the hypothetical model of this study has a good fitting effect with the actual survey data.

In order to facilitate observation and analysis, each hypothesis is numbered in this study (as shown in **Table 4**). The fitting results of the hypothetical model and survey data show that W2, W3, W5, W6 and W8 are all in $p < 0.001$ level is significant, indicating that new media has a significant impact on green consumption behavior, self-efficacy on green consumption behavior, traditional media on self-efficacy, new media on self-efficacy, and new media on personal outcome expectations. Hypothesis 1.2, hypothesis 2 and hypothesis 4.1, hypothesis 4.2, hypothesis 5.2 are supported by empirical tests. In addition, both W4 and W7 were $p < 0.05$ level, indicating that personal outcome expectation has a significant impact on green consumption behavior and traditional media's personal outcome expectation. Hypothesis 3 and hypothesis 5 of this study 1 supported by data survey. But the p value of W1 is $0.097 > 0.05$, hypothesis 1.1 did not pass the test of data survey, that is, the impact of traditional media on green consumption behavior is not significant.

4.2.2. Intermediary effect test

In this paper, the test steps of intermediary effect are as follows: the first step is to test the indirect effect, direct effect and overall effect between variables. That is, the indirect effect, direct effect and overall effect between traditional media, new media and self-efficacy, traditional media, new media and result expectation, traditional media, new media, self-efficacy, personal result expectation and green consumption behavior (see **Table 5**). The results show that traditional media and new media have a direct impact on self-efficacy, personal

outcome expectation and green consumption behavior, and traditional media and new media also have an indirect impact on green consumption behavior. The direct impact of traditional media on green consumption behavior is 0.114, the indirect impact is 0.151, the total effect is $0.151 + 0.114 = 0.265$. The direct impact of new media on green consumption behavior is 0.409, indirect impact is 0.166, the total effect is $0.409 + 0.166 = 0.575$.

Table 4. Fitting results and hypothesis test of theoretical model

Hypothesis	Estimate	S. E.	C. R.	Conclusion	Label
H1.1: Traditional media→green consumption behavior	0.112	0.067	1.658	Not support	W1
H1.2: New media→green consumption behavior	0.435 ^c	0.079	5.525	Support	W2
H2: Self-efficacy→green consumption behavior	0.314 ^c	0.090	3.495	Support	W3
H3: Personal result expectation→green consumption behavior	0.213 ^a	0.074	2.875	Support	W4
H4.1: Traditional media→self-efficacy	0.329 ^c	0.069	4.786	Support	W5
H4.2: New media→self-efficacy	0.306 ^c	0.073	4.190	Support	W6
H5.1: Traditional media→personal result expectation	0.210 ^a	0.073	2.881	Support	W7
H5.2: New media→personal result expectation	0.378 ^c	0.082	4.622	Support	W8

Note: a: indicates $p < 0.05$, b: indicates $p < 0.01$; c: indicates $p < 0.001$.

Table 5. Direct, indirect and overall effects of the research model

Potential dependent variable	Potential independent variable	Indirect effect	Direct effect	Total effect
Self-efficacy	Traditional media		0.381	0.381
	New media		0.328	0.328
Personal result expectation	Traditional media		0.227	0.227
	New media		0.378	0.378
Green consumption behavior	Traditional media	0.151	0.114	0.265
	New media	0.166	0.409	0.575
	Self-efficacy		0.276	0.276
	Personal result expectation		0.201	0.201

The second step is to test the mediating effect of the model. In this paper, the bootstrap method of SEM is used to test the intermediary effect of the model, that is, the direct and indirect effects of traditional media and green consumption behavior, new media and green consumption behavior. The evaluation standard is to see whether the upper and lower limits of the bias correction confidence interval of bootstrap contain 0 (see **Table 6**). Firstly, the 95% confidence interval of the direct effect of traditional media on green consumption behavior is $[-0.025, 0.273]$, with a significance of 0.102, indicating that the direct impact of traditional media on green consumption behavior is not significant. The 95% confidence interval for the indirect effect of traditional media on green consumption behavior is $[0.033, 0.324]$, the significance is 0.008, the confidence interval does not contain 0, indicating that there is a mediating effect between self-efficacy and personal outcome expectations between traditional media and green consumption behavior. Because the direct impact of traditional media on green consumption behavior is not significant, self-efficacy and personal outcome expectation play a complete intermediary role between traditional media and green consumption behavior. Secondly, 95% confidence in the direct effect of new media on green consumption behavior, the interval is $[0.264, 0.647]$, the significance is 0.000, indicating that new media significantly affects consumers' green consumption behavior. The 95% confidence interval for the indirect effect of new media on green consumption behavior is $[0.070, 0.338]$, the significance is 0.003, the confidence interval does not contain 0, indicating that there is a mediating effect between self-efficacy and personal outcome expectations between new media and green consumption behavior. Because the direct impact of new media on green consumption behavior is significant, self-efficacy and personal outcome expectation play a partial intermediary role between new media and green consumption behavior. To sum up, the mediating effect of self-efficacy and personal outcome expectation between media publicity and green consumption behavior exists, and hypotheses 6 and 7 are tenable.

Table 6. Intermediary effect analysis results

Effect	BC 95% confidence interval		Tail significance
	Lower limit	Upper limit	
Traditional media→green consumption behavior	-0.025	0.273	0.102
Traditional media→self-efficacy	0.120	0.582	0.005
Traditional media→personal outcome expectations	0.004	0.479	0.046
Self-efficacy→green consumption behavior	0.054	0.570	0.019
Result expectation→green consumption behavior	0.010	0.422	0.041
Traditional→intermediary→consumption behavior	0.033	0.324	0.008
New media→green consumption behavior	0.264	0.647	0.000
New media→self-efficacy	0.080	0.554	0.011
New media→personal outcome expectations	0.122	0.656	0.006
New media→intermediary→consumer behavior	0.070	0.338	0.003

5. Conclusion and Enlightenment

Based on Bandura's social cognitive theory and taking individual consumers who have carried out green consumption as the research object, this paper explores the relationship between media publicity and consumers' green consumption behavior through empirical research, and draws the following research conclusions.

There are differences in the relationship between traditional media and new media publicity and consumers' green consumption behavior. New media publicity has a direct impact on consumers' green consumption behavior. With the rapid development of information network and the popularization of new media, consumers are more and more aware of the importance and necessity of implementing green consumption behavior through the green publicity of new media. At the same time, new media publicity can also stimulate consumers' green consumption behavior by increasing consumers' sense of environmental efficiency and perception and expectation of green consumption results and benefits. Compared with emerging media, the direct impact and direct promotion of traditional media on consumer behavior are not obvious. With the development and popularization of network technology and the transformation of new lifestyle, the public has more opportunities and time to contact the Internet than traditional media such as radio. The digital information of network technology has achieved the convenience characteristics such as anytime, anywhere and focus that traditional media do not have. Traditional media is difficult to directly affect consumers green consumption behavior. It can only indirectly affect consumers' green consumption behavior through personal result expectation and self-efficacy. Social cognitive theory can predict and explain consumers' green consumption behavior. In addition to the planned behavior theory, the social cognitive theory characterized by self-efficacy and outcome expectation plays an important role in analyzing and explaining the relationship between external situational factors such as media publicity and consumer behavior. Social cognitive theory shows that individual cognition is the antecedent variable of individual behavior. The empirical results of this paper also further confirm that self-efficacy and personal outcome expectation have a positive impact on consumers' green consumption behavior. The media publicity of the external environment will trigger the individual evaluation mechanism, affect consumers' cognition and expectation of the results of green consumption behavior, as well as the self-efficacy of individual behavior to improve the environment, and then affect consumers' green consumption behavior.

According to social cognitive theory, self-efficacy and personal outcome expectation are the most important components of individual cognitive factors. The stimulation of external environment such as media publicity can not only affect consumers' green consumption behavior through an intermediary variable in self-efficacy and result expectation, but also guide and affect consumers' green consumption behavior through the double intermediary model of the combination of the two. Self-efficacy and personal outcome expectation play a complete intermediary role between traditional media publicity and green consumption behavior, and play a

partial intermediary role between new media publicity and green consumption behavior. This further confirms that the operation of self-regulation mechanism needs the joint action of self-efficacy and personal outcome expectation. Consumers will match the expected results of their own behavior with their own goals, and conduct self-assessment and affirmation at the same time. When the two fit well, they will eventually produce the actual green consumption behavior.

According to the above research conclusions, combined with China's national conditions, this paper obtains the following research enlightenment in the aspects of green environmental protection publicity channels, enterprise strategic positioning and government policy guidance, and provides some feasible countermeasures and suggestions for enterprises and the government.

First, adopt appropriate media publicity channels and publicity strategies. With the increasing popularity of digital media, the influence of traditional media is weakening day by day. When carrying out product publicity, enterprises should adopt appropriate media for specific groups. For high-age consumers, enterprises can appropriately adopt traditional media such as television and radio, while for middle-aged and young consumers, enterprises should adopt new media such as Internet. At the same time, differentiated publicity strategies can be adopted for adults and minors. For adults, we can deepen consumers' perception of the seriousness of current environmental problems by increasing the frequency of media publicity, improve consumers' benefits and personal cognitive ability of green consumption, and convert passive green consumption into active and conscious green consumption. For minors, relevant government departments should seize the shaping period of minors' values and outlook on life, educate them and beat around the Bush, guide them to establish the concept of green consumption and low-carbon life, and avoid their "rebellious" psychology.

Second, enterprises should change their development strategy and business model. The results of this study show that the direct relationship between green consumption behavior and individual self-efficacy. Therefore, in terms of external market expansion, when enterprises obtain competitive advantage through green marketing methods such as price or brand, they aim at consumers with high self-discipline or high self-confidence and requirements, so as to establish a trust relationship with consumers, increase consumers' confidence and revenue perception to help solve environmental problems, establish the enterprise's green image and enhance the enterprise's reputation through brand publicity. In terms of organizational practice, enterprises should strengthen internal management practice and increase the compliance of production and operation. Firstly, innovate and change the production process design, optimize the production line design, and carry out green innovation from the source. Secondly, change the organizational structure model of the enterprise, especially the enterprise leadership model, give employees more voice, encourage employees to make suggestions for enterprise green innovation, and improve employees' self-efficacy and personal expectation of green consumption.

Third, the government should guide citizens to establish the values of advocating green consumption. Because personal factors such as self-efficacy and personal outcome expectation play an important role in consumption, the government should not only formulate relevant environmental protection laws and regulations, but also realize the importance of self-awareness to green consumption behavior. Through the slogan of improving the self-efficacy of green consumption, we can increase consumers' confidence in implementing green consumption, so as to promote residents' interest in green consumption behavior and control of green consumption behavior. The government can give quantitative points to residents' daily green consumption behavior and their contribution to the environment, and reward residents according to the quantitative points, so as to improve residents' expectation of the results of implementing green consumption behavior. Pay attention to the publicity and guidance of the media and the supervision of public opinion, and popularize the green consumption behavior, so as to improve the residents' green consumption self-efficacy.

This study also has the following deficiencies: first, regional heterogeneity is not considered. The samples of this study are mainly concentrated in Shandong, Jiangsu, Guangzhou, Beijing and other eastern developed regions. The number of samples from the central and western regions is small, which leads to the lack of universality of the research conclusion. In future research, we should consider the differences of residents' green consumption behavior in different regions, so as to make the research conclusion more universal. Second, this study did not compare different statistical characteristics such as different age groups and different educational backgrounds. Future research can be grouped according to different statistical characteristics to draw more targeted conclusions. Third, the mediation of this study mainly adopts the double mediation model of self-efficacy and personal outcome expectation to study their mediation effects respectively, without testing the intermediary variables, that is, the path relationship between self-efficacy and personal outcome expectation. In future research, we can analyze and study the path relationship between self-efficacy and personal outcome expectation, so as to have a more thorough grasp and understanding of the impact mechanism of green consumption behavior at the individual level.

Conflict of Interest

No conflict of interest was declared by the authors.

Acknowledgement

National Natural Science Foundation of China Youth Fund Project “Research on the Influence Mechanism of Enterprise Technology Path Locking Effect on Innovation Performance under the Scenario of Transitional Economy” (71402180); Jiangsu Provincial Department of Education Social Science Project “Enterprise Knowledge Management Capability and Technology Innovation Performance—Organization Agile Research on the Role of Sexuality” (2017SJB0930); the Central Universities Fundamental Research Fund Project “Research on Technology Lock-in and Reversal Mechanism of Latecomer Enterprises” (2017WB13); Jiangsu Graduate Research Innovation Program Project “Can the Public Participation Constrain from the Perspective of Heterogeneity? Promote green technology innovation in enterprises?” (KYCX20_2072); China University of Mining and Technology Graduate Innovation Program Project “Can public participation constraints promote green technology innovation in enterprises from the perspective of heterogeneity?” (2020WLJCRCZL028).

References

1. Sun J, Zhao L. Shejiao Meiti Shiyong Nengfou Tuidong Lvse Xiaofei Xingwei?—Ziwo Xiaoneng he Geti Jiegou Qiwan de Lianshi Zhongjie Xiaoying (Can Social Media Use Promote Green Consumption Behavior?—The Chain Mediating Effect of Self-Efficacy and Individual Outcome Expectation). *Journal of Lanzhou University of Finance and Economics* 2020; 36(6): 81-92.
2. Yang X, Zhang L. Meiti Shuofu dui Chengshi Jumin Xiaofei Xingwei de Yingxiang—Jianlun “Tuomin” Xianxiang (The Influence of Media Persuasion on the Green Consumption Behavior of Urban Residents—Also on the Phenomenon of “Desensitization”). *China Business and Market* 2018; 32(2): 107-114.
3. Zhao L, Sun J. Ganzhi Jiazhi Erjie Shijiao xia Lvse Xiaofei Yiyuan Qudong Yinsu Yanjiu—Chanpin Leibie de Tiaojie Zuoyong (Research on the Driving Factors of Green Consumption Willingness from the Second-Order Perspective of Perceived Value—the Moderating Effect of Product Categories). *Economic Forum* 2020; (8): 121-133.

4. Bandura A. Negative Self-Efficacy and Goal Effects Revisited. *Journal of Applied Psychology* 2003; 88(1): 87-99.
5. Lin C, Chiu C, Liu N. Developing Virtual Team Performance: An Integrated Perspective of Social Exchange and Social Cognitive Theories. *Review of Managerial Science* 2019; 13(4): 671-688.
6. Shang Y, Ai Z, Wang F. Jiyu Shehui Renzhi Lilun de Xuni Shequ Chengyuan Zhishi Gongxiang Xingwei Shizheng Yanjiu (An Empirical Study on Knowledge Sharing Behavior of Virtual Community Members Based on Social Cognitive Theory). *Science and Technology Progress and Countermeasures* 2012; 29(7): 127-132.
7. He D, Guo D. Jiyu Shehui Renzhi Lilun de Yidong Shequ Geti Zhishi Gongxian Yingxiang Yinsu Yanjiu (A Study on the Influencing Factors of Individual Knowledge Contribution in Mobile Community Based on Social Cognitive Theory Mediated by Individual Result Expectation). *Information studies: Theory & Practice* 2016; 39(9): 82-89.
8. Ghoreishi MS, Vahedian SM, Jafari A, *et al.* Self care Behaviors in Patients with Type 2 Diabetes: Education Intervention Base on Social Cognitive Theory. *Diabetes & Metabolic Syndrome* 2019; 13(3): 2049-2056.
9. Qi B. Yituo Xiangmu Waiyu Jiaoxue de Shehui Renzhi Lilun Jichu (The Theoretical Basis of Social Cognition in Foreign Language Teaching Based on Project). *Journal of Zhejiang International Studies University* 2013; (5): 31-37.
10. Lin M, Zhang D. Guke Zhuguan Zhishi dui Wangluo Koubei de Yingxiang—Jiyu Shehui Renzhi Lilun Shijiao (The Influence of Customer Subjective Knowledge on Online Word-of-Mouth—Based on the Perspective of Social Cognition Theory). *China Business and Market* 2016; 30(7): 106-114.
11. Zhu G, Ma L, Sunanda S, *et al.* Jiyu Shehui Renzhi Lilun de Xiaofeizhe Caiyong Moxing yu Shizheng Yanjiu (Consumer Adoption Model and Empirical Research Based on Social Cognitive Theory). *Nankai Business Review* 2010; 13(3): 12-21.
12. Ding D, Chen W. Ziwo Xiaonenggan dui Geti Jixing Zuoyong Jizhi Yanjiu—Jiyu Geti Jieguo Qiwang de Zhongjie Zuoyong ji Zuzhi Zhichi de Tiaojie Zuoyong (Study on the Mechanism of Self-Efficacy on Individual Improvisation: Based on the Mediating Effect of Individual Outcome Expectations and the Moderating Effect of Organizational Support). *Forecasting* 2017; 36(1): 21-27.
13. Zeng F, Li H, Dou W. Social Factors in User Perceptions and Responses to Advertising in Online Social Networking Communities. *Journal of Interactive Advertising* 2009; 10(1): 1-13.
14. Chu SC, Kim Y. Determinations of Consumer Engagement in Electronic Word-Of-Mouth (eWOM) in Social Networking Sites. *International Journal of Advertising* 2011; 30(1): 47-75.
15. Kropp F, Lavack AM, Silvera DH. Values and Collective Self Esteem as Predictors of Consumer Susceptibility to Interpersonal Influence among University Students. *International Marketing Review* 2005; 22(1): 7-33.
16. Gong X, Ye Z, Wu Y, *et al.* Zhibo Changjing Fenwei Xiansuo dui Xiaofeizhe Chongdong Yiyuan de Yingxiang Jizhi (Research on the Influence Mechanism of Atmospheric Clues in Live Streaming Scenes on Consumers' Impulsive Consumption Willingness). *Journal of Management* 2019; 16(6): 875-882.
17. Bandura A. Self-Efficacy Mechanism in Human Agency. *American Psychologist* 1982; 37(2): 122-147.
18. Lin HY, Hsu MH. Using Social Cognitive Theory to Investigate Green Consumer Behavior. *Business Strategy and the Environment* 2015; 24(5): 326-343.
19. Berger IE, Corbin RM. Perceived Consumer Effectiveness and Faith in Others as Moderators of Environmentally Responsible Behaviors. *Journal of Public Policy & Marketing* 1992; 11(2): 79-89.
20. Bock G, Bock GW, Kim Y, *et al.* Breaking the Myths of Rewards: An Exploratory Study of Attitudes about Knowledge Sharing. *Hershey: IGI Global*; 2002.
21. Liu R, Cao H, Liu L. Shehuihua Shangwu xia Geti Xinli Yinsu dui Xinxi Gongxiang Xingwei de Yingxiang Yanjiu—Dawurenge de Tiaojie Zuoyong (Research on the Influence of Individual

- Psychological Factors on Information Sharing Behavior under Socialized Business—The Moderating Role of the Big Five Personalities). *Soft Science* 2017; 31(12): 101-107.
22. Wu SI, Chen JY. A Model of Green Consumption Behavior Constructed by the Theory of Planned Behavior. *International Journal of Marketing Studies* 2014; (5): 119-132.
 23. Zhou J. Shehui Shangwu Beijing xia de Yonghui Nianxing (User Stickiness in the Context of Social Commerce: The indirect Influence and Moderating Effect of User Interaction). *Management Review* 2015; 27(7): 127-136.
 24. Zhao L, Sun J, Zhang L. Shejiao Meiti Beijing xia Guke Canyu dui Zhongxiaoqiye Chuangxin Jixiao de Yingxiang—Yige Shuangtiaojie Moxing (The Influence of Customer Participation on the Innovation Performance of Small and Medium-Sized Enterprises in the Context of Social Media—A Dual Moderation Model). *Science & Technology Progress and Policy* 2020; 37(23): 91-99.
 25. Yu W, Mao Z. Guanggao Xinxi Kuangjia dui Youji Shipin Goumai Yiyuan de Yingxiang Jizhi Yanjiu (Research on the Influence Mechanism of Advertising Information Framework on Organic Food Purchase Intention). *Soft Science* 2019; 33(1): 130-133.
 26. Lee K. The Green Purchase Behavior of Hong Kong Young Consumers: The Role of Peer Influence, Local Environmental Involvement, and Concrete Environmental Knowledge. *Journal of International Consumer Marketing* 2011; 23(1): 21-44.
 27. Wei J, Gu Y. Xiandai Guyanggao Cehua: Xinmeiti Daoxiang Celue Moshi (Modern Advertising Planning: New Media Oriented Strategic Model). Beijing: Capital University of Economics and Business Press; 2017.
 28. Compeau DR, Higgins CA. Computer Self-Efficacy: Development of A Measure and Initial Test. *Management Information Systems Quarterly* 1995; 19(2): 189-211.
 29. Compeau DR, Higgins CA, Huff S. Social Cognitive Theory and Individual Reactions to Computing Technology: A Longitudinal Study. *Management Information Systems Quarterly* 1999; 23(2): 145-158.
 30. Bandura A. Social Foundations of Thought and Action: A Social Cognitive Theory. *Journal of Applied Psychology* 1986; 12(1): 169.
 31. Lee YK, Chol JG, Kim MS, *et al.* Explaining Pro-Environmental Behaviors with Environmentally Relevant Variables: A Survey in Korea. *African Journal of Business Management* 2012; 6(29): 8677-8690.