The Mediating Effects of Ewom Intention in the Impact of Spokesperson's Source Credibility on Users' Behavioral Intention in Social Marketing

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Abstract: The study explores the mediating effects of electronic word-of-mouth (eWOM) intention in the relationship between spokesperson's source credibility and users' behavioral intention in social marketing based on source credibility and information-motive-behavior (IMB) skills model theories. Results of questionnaire surveys and Structural Equation Model (SEM) indicated that source credibility of spokesperson was significantly positively related to users' behavioral intention. EWOM intention was found to partially mediate the effect.

1. Introduction

Social marketing refers to the use of marketing principles to enable individual and collective ideas and actions to help society implement efficient, fair and sustainable changes [1]. Social marketing usually touches on health topics, guiding people's ideas and persuading behavioral changes through publicity information [2]. In order to catch users' eyes in mass information, commercials incorporate spokesmen to help merchants' views to be better accepted, and social marketing advertisements also begin to use such tools. Appropriate spokesmen can help improve the persuasive power of information, but choosing the right spokesmen is a complicated decision process, which is based on key factors such as the credibility of the source and its match with the spokesmen [3]. It has been acknowledged that effective publicity information can raise users' awareness and persuade them to take actions such as purchasing products or services. Despite plenty of research at home and abroad, there is a lack of in-depth research on the relationship between advertising spokesperson and user behaviors in the field of social marketing. Specifically, the research on behavioral intention is confined to product purchase intention, while there is little research on influencing factors of behavioral intention after advertising views under social marketing. Relevant research needs to be further deepened. The research commenced by detailed literature review on social marketing, credibility of sources, advertising endorsements to eastablish a theoretical model of the relationship between the source credibility of social marketing advertising spokesperson and user 's post-view behavioral intention based on consumer behaviour and information source theory and information-motivation-behavior skills theory[4]. Then the research carried on experiments and questionnaire surveys to collect data and tested the research model using structural equation model. The research intends to explore and broaden the cognitive scope of the spokesperson's advertising effect and user behavior decision-making process in social marketing theory. The practical significance is to help and guide the development of social marketing advertising in China.

2. Literature Review and Research Hypothesis

2.1 The Main Effect of Source Credibility on Behavioral Intention

At present, advertising effectiveness mainly measures user attitudes [5], and relatively few investigations measure user behaviors. At the theoretical level, associative learning theory and emotion transfer theory hold that memory is a network of various nodes linked by association. The advertising endorsement links the nodes in the two memory networks of the endorsement and the

advertising topic. After being stimulated by the advertisement, the information receiver's perception of the endorsement will be transferred to the advertising topic [6]. At the same time, Parasocial Interaction (PSI) theory believes that users naturally establish unilateral relationships with media roles through the process of parasocial interaction. In this process, users believe that the media role is directly communicating with them, so that they will empathize with the role and accept the role's perspective and point of view [7]. For example, some studies have confirmed that PSI is a mediating variable in the effects of spokesperson types and the weight of the audience on the audience's exercise and diet intention [8]. Based on the theories above, the user's attitude or relationship to the spokesperson will affect his attitude to advertisements [9]. At the same time, some studies show that the image of the spokesperson is positively related to the positive reaction of users. Research by Goldsmith, Barbara and Stephen (2000), Lafferty and Goldsmith (2004) found that the image of enterprises and spokesperson is positively correlated with the user's attitude towards advertising and brands[10, 11]. Ohanian(1991) found that the perceived image of the spokesperson is positively related to the consumer's purchase intention[12]. The credibility of the source is the internalization feature of the spokesperson's image, so we speculate that the higher the credibility of the source, the higher the user's willingness to act. According to the disease prevention scenario selected in this study, behavioral intention is specifically expressed as behavioral intention, and the following assumptions are put forward:

H1: The credibility of the source positively affects the willingness to act.

2.2 The Mediating Role of Ewom Intention

Online word-of-mouth refers to the informal communication between users about the experiences and viewpoints of the products, services or institutions generated on the internet [13]. With the popularization of the internet, smart phones and social networking websites have gradually become important channels for many users to seek advice and for government enterprises and public health organizations to release publicity information. Relying on the network structure of interpersonal relationships, social networking sites can help information spread quickly and widely, reaching a large number of users in a short period of time, and effectively persuading users to change their activities or behaviors. Information-Motivation-Behavioral Skills Theory (IMB) was proposed by Fisher and Fisher (2000) in response to changes in health behaviors. It is believed that information and motivation directly affect behaviors. When an individual's interest in a problem is successfully aroused, his participation behaviors will be activated [4]. In this theory, "information" refers to the information conveyed in advertisements, "motivation" includes personal motivation (such as attitude) and social motivation (such as social norms), while "behavior" focuses on the performance of individual self-efficacy in healthy behaviors. This model has been applied to various scenarios in advertising research, such as cardiovascular diseases [14] and cervical cancer[5]. Despite the popularity of eWOM, related research is still in its infancy. Existing studies have developed the measurement construct of eWOM based on real-life communication in social networks incorporating dimensions of "like", "save", "repost", and "comment" [15]. The influence of eWOM behavior is based on peer influence theory [8] and positive reinforcement theory[16]: When one receives positive response from peers or the environment, he/she tends to continue the behaviors.

In the face of social marketing advertisements on subjective topics such as outlook on life, disease or health, the high cost and risk perception of actual actions (such as changing inherent habits and receiving treatment) encourage users communicate on the internet before taking actual actions. Therefore, eWOM intention may become an important link in the process from the audience watching the advertisement to the actual behavioral change. This study speculated that when the user's motivation (eWOM intention) is successfully stimulated by information (source credibility), the behavior (behavioral intention) will be activated.

Research confirms that information source characteristics affect users' eWOM intention [11]. He Aizhong and Tang Jiefu (2017) found that product design, product evaluation and product emotion affect users' word-of-mouth recommendation willingness [17]. Shen Lu et al. (2014) found that the

information characteristics of brand posts in social networks affect users' comments and forwarding behaviors [18]. The content of user comments in health advertisements is significantly positively related to users 'attitudes and behavioral intentions for vaccination [19]. Therefore, the hypothesis is proposed:

H2: eWOM intention mediates the impact of source credibility on users' behavioral intention.

Based on the above hypotheses, the theoretical model of this study was constructed (see Figure 1).
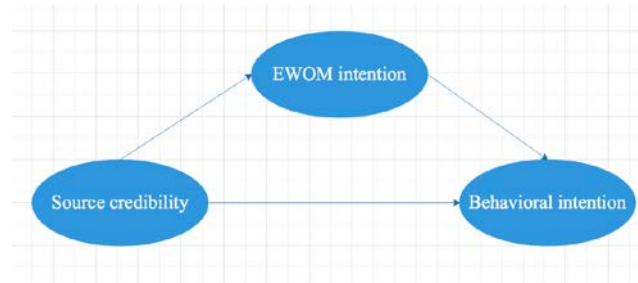

Fig.1 Theoretical Model

3. Research Design

This study firstly reviewed literature and conducted explorative factor analysis (EFA) to confirm measurement scales of source credibility, eWOM intention and behavioral intention. It then proposed the research hypothesis and theoretical model of the relationship between spokesperson source credibility and behavioral intention under the background of social marketing. Secondly, questionnaires were distributed to 447 respondents to collect data to verify the theoretical model. The researchers used SPSS21.0 software for scale reliability analysis, normality test, descriptive analysis, and correlation analysis, and Amos21.0 software for structural equation model analysis.

3.1 Stimuli

The researchers created three experimental stimuli for different advertisement spokesperson (celebrities, experts and expert celebrities and manipulated gender, age and other characteristics of spokesmen and advertising media characteristics. Three groups of subjects were asked to watch the advertisements played by celebrities, experts and experts respectively, and fill in online questionnaires.

3.2 Pre-Test

Based on the scales of Phua and Tinkham(2016) and other scholars, the researchers constructed a pre-test to measure source credibility, eWOM intention and behavioral intention. 60 subjects were invited, among which 73.33% were female and 26.67% were male, and the 96.67% were 18-25 years old. According to the EFA and the feedback of the subjects from group interviews, the formal experimental scale (see Table 1) was determined after deleting the items such as "sexy", "beautiful" in attractiveness (for CITC value and commonality value were lower than 0.4).

3.3 Sample Description and Manipulation

The study used convenient sampling to obtain the final scale data of 447 randomly assigned subjects. 469 questionnaires were distributed, 453 were returned, with a return rate of 96.59%. 447 valid questionnaires were adopted, with an effective response rate of 98.68%. Of the 447 subjects, 81.4% came from Sichuan, 71.1% were students, and 67.3% had an annual income of less than 12,000 yuan. Among them, 77.9% were undergraduates, 91.5% were Han nationality, 73.2% were women, 26.4% had marriage history, and the average age was 25.21 years old (SD = 0.457). Only 46 (10.29%) of the respondents said they had seen the advertisement, indicating the experiment control was successful.

3.4 Measurement

The items in the questionnaire were scored with a 7-level Likert scale (1= very different meaning/willingness/acceptance, 7= very agree/willingness/acceptance). Source credibility was based on the scale from Ohanian(1990) and Phua and Tinkham(2016) and included 7 items[8, 7]. EWOM intention was based on the scale from Phua and Tinkham(2016), containing 4 items[8]. Behavioral intention was based on the scale from Fung(2017), which included 4 items[5] (Table 1). The measurement scale has high reliability and good validity (Tables 1 and 2). According to the normality test, the absolute value of the skew coefficient of all variables was less than 2, the absolute value of the Kurtosis coefficient was less than 5, and the critical ratio (c.r.) was less than 2, which basically conformed to the rule of normal distribution.

Table 1 Measurement Scales and Reliability

Variable	First order factor	Measurement items	Cronbach's Alpha	
Source credibility (A)	Attractiveness (A1)	Elegant (a11)	0.885	0.919
		Noble (A12)		
		Attraction (A13)		
	Professionalism (A2)	Professional qualification (A21)	0.984	
		Professional ability (A22)		
		Expertise (A23)		
		Professionals (A24)		
EWOM intention (B)	EWOM intention (B)	Repost (B1)	0.929	
		Comment (B2)		
		Save (B3)		
		Like (B4)		
Behavioral intention (C)	Behavioral intention (C)	Screening (C1)	0.945	
		Acceptance of vaccination concept (C2)		
		Vaccination (C3)		
		Acceptance of screening concept (C4)		

Table 2 Measurement Scales' Validity

Rotation component matrix[a]					Common factor variance		KMO	Probability of significance of Bartlett's spherical test	Cumulative variance interpretation rate (%)
	Ingredients				Initial	Extract			
	1	2	3	4			0.894	0.000	86.804
professional qualifications	.947				1.000	0.970			
Professional ability	.931				1.000	0.959			
professional knowledge	.930				1.000	0.960			
professional	.921				1.000	0.926			
forward		.894			1.000	0.871			
evaluate		.892			1.000	0.871			
Collection		.819			1.000	0.797			
give the thumbs-up		.815			1.000	0.772			
Screening			.913		1.000	0.894			
Concept of receiving vaccination			.901		1.000	0.862			
Receive vaccination			.880		1.000	0.829			
Accept screening concept			.880		1.000	0.851			
grace				.844	1.000	0.841			
noble				.830	1.000	0.824			
attractive force				.777	1.000	0.794			
Extraction method: principal component. Rotation method: orthogonal rotation method with Kaiser standardization.									

a. The rotation converges after 5 iterations.					

4. Data Analysis

The study chose source credibility as the independent variable, behavioral intention as the dependent variable, and eWOM intention as the mediating variable, and constructed a structural equation model. Using bootstrap sampling 5000 times, 95% confidence interval, the default probability value of the default model constructed by the study was P = 0.000 <0.05, and the model did not fit the sample data. The researchers modified the model according to the modification index (MI) and build e9-e10, e5-e12, e14-e15, e5-e7, e5-e6, e1-e3, e10-17, e11-e13, e7-e16, and e6-e16 paths successively. The revised model (see Figure 2 and Table 3) contained 44 free parameters (NPAR), the relative chi-square (CMIN / DF) was 1.152, the norm fitting index (NFI), the relative adaptation index (RFI), value-added The adaptation index (IFI), non-standard adaptation index (TLI) and comparative adaptation index (CFI) were 0.989, 0.984, 0.999, 0.998, and 0.998 respectively, The root mean square error (RMSEA) was 0.076 and significance probability value P was 0.172> 0.05. Therefore, the revised model was judged as fit the sample data well (see Figure 2 and Table 3). The lower limit, upper limit and two tailed significance test results of the standardized estimation of the total effect using the bias corrected method of BC (bias corrected) showed that the total effect of the independent variable (source reliability) on the dependent variable (behavioral intention) was significant (P < 0.000), supporting H1. The single analysis showed that all the varable had a strong positive correlation with the first-order factors. Using bootstrap method to get the standardized estimate and standard error, the AB path coefficient a = 0.508, the corresponding standard error S_a = 0.052, P = 0.000, BC path coefficient b = 0.398, the corresponding standard error s_b = 0.051, P = 0.000. The path coefficient c'= 0.142, the corresponding standard error $S_{C'}$ = 0.054, P = 0.008(< 0.05), which supported H2. The path coefficient of the main effect of AC was c= 0.344, the standard error S_C = 0.049, the proportion of mediating effects to total effect was a × b / c = 0.508 × 0.398 / 0.344 = 0.588, suggesting the proportion of mediating effects to total effect was about 58.8%.

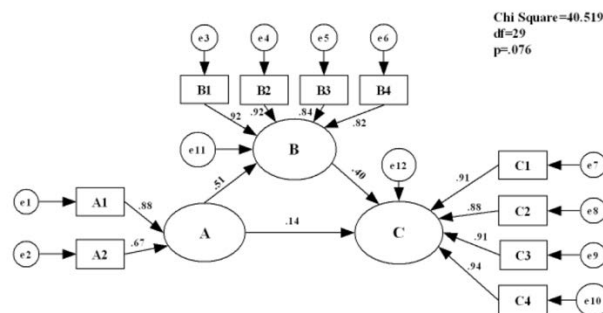Fig.2 Path Diagram of Sem

Table 3 Path Coefficient and Significance of Sem

	Standardization coefficients	Unstandardized Coefficients	S.E.	C.R.	P
B<---A	0.508	0.609	0.069	8.843	***
C<---A	0.142	0.146	0.057	2.544	*
C<---B	0.398	0.341	0.047	7.325	***
B1<---B	0.921	1.000			
B2<---B	0.921	0.973	0.030	32.126	***
B3<---B	0.839	0.850	0.033	25.814	***
B4<---B	0.819	0.838	0.034	24.686	***
C1<---C	0.914	1.000			
C2<---C	0.879	0.916	0.030	30.100	***
C3<---C	0.914	1.032	0.033	30.867	***
C4<---C	0.936	1.003	0.030	33.135	***
A2<---A	0.668	1.000			

| A1<---A | 0.884 | 1.006 | 0.115 | 8.713 | *** |

Note: * * * means significant at P <0.001, ** means significant at p <0.01, and * means significant at p <0.05.

5. Conclusion and Suggestions

This research explores the impact path of spokespersons' source credibility on users' behavioral intention in social marketing advertising based on structural equation models. The following conclusions are drawn on the relationships stated in the theoretical model based on the data analysis results. It is confirmed that eWOM intention has an incomplete mediating effects in the influence of the source credibility of the spokesperson on users' behavioral intention. The results of the structural equation model constructed by the study further corroborate that the relationship between social marketing advertising spokespersons and advertising effectiveness conform to the information-motivation-behavioral skills theory. When exposed to views from social advertisements, users intend to verify information from multiple sources online to ensure the authenticity of the information and obtain more information before taking real actions. It is recommended that: relevant governments, institutions or enterprises consider the various characteristics and indicators of the spokesperson comprehensively when choosing a spokesperson for social marketing advertisements, measure the spokesperson's credibility before choosing he/her. Some activities can be carried out to raise the spokesperson's credibility perceived by the target group. For example, governments, institutions or enterprises can organize more professional training seminars and charity activitiess for spokespersons [20] and select most trusted spokespersons of the target group. Secondly, governments, institutions or enterprises should increase concept marketing. Drawing on the exposure effect, relevant organizations should make full use of the internet, especially social networks, explore effective ways of social marketing from integrated marketing approaches to increase the exposure rate of topics like health and moral behavior advocacy. Organizations should stimulate users frequently and attract their attention in the huge amount of information they receive daily. Governments, institutions or enterprises should cater for sufficient information, technical convenience and discussion space for users to carry out electronic word-of-mouth. Governments, institutions or enterprises should guide consumers to conduct every step in the decision making process, so as to help consumers implement practical actions as soon as possible.

6. Contribution and Limitations

This study establishes and verifies the measurement scales of source credibility and eWOM intention in the background of social marketing. The study proposes and verifies the conceptual model of mediating effects of eWOM intention in the relationship between source credibility and behavioural intention, which expands the theoretical knowledge of advertising spokesmen effects and the decision-making process of user behaviors in social marketing, and confirms that advertising spokesmen can stimulate users' behavioural intention by triggering users'eWOM intention. The main limitation of the study is that the data is self-report cross-sectional study, and the behaviour intention is not equivalent to real behaviors. Future research can consider longitudinal research on real behavioral changes.

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