

The Impact of Information Characteristics of Short Videos in Healthy Diet on Audience Sharing and Application Behavior

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Abstract. With the advancement of Internet technology and the development of new media platforms, the health knowledge of short video platforms has become an important source for users to obtain relevant information. Whether the information dissemination of short videos with healthy diets and which factors affect the communication effect all require research on audience behavior. Based on this, this study takes young people aged 15-40 as the research object and uses the information adoption model as the research model. The research method of questionnaire surveys is used to study the relationship between information characteristics, user perception usefulness, and user sharing and applied behavior. After the valid questionnaire was recycled, the data was analyzed using SPSS and Amos software, and the following conclusions were drawn: the information correlation, understandability, completeness and source professionalism of healthy diet short videos all positively affect audience sharing and application behavior. In the impact of information characteristics on sharing behavior, perceived usefulness plays a partial mediating role. In the impact of information characteristics on applied behavior, perceived usefulness does not meet the mediating effect conditions. This study analyzes the impact of the information characteristics of short videos in healthy diet on audience sharing and applied behaviors, in order to help short video bloggers create videos that are more in line with audience needs and higher quality, increase the audience's attention to healthy diet, and shape a "healthy" society.

Keywords: healthy diet, short video, behavior, perceived usefulness

1. Introduction

Since the outbreak of the new crown epidemic, public health awareness has been continuously improved, and dietary safety and health have also received more and more attention from the public, and the public's demand for health information has increased significantly [1]. Today, online networks around the world are developing rapidly, and short video platforms have attracted a large number of users with their own advantages and have become the main force in information transmission in the Internet era [2]. In addition to traditional paper media, various social media platforms are sharing a lot of information about healthy eating. Among them, healthy eating short videos spread through video sharing platforms can quickly reach a wide audience through social media, making them an important source of information for the public [3]. As the most influential

mobile short video social platform with the largest number of users, YouTube has attracted many healthy diet short video bloggers through the low threshold and low-cost content production. They spread health information through the platform and provide convenience for users in need. In recent years, many short video bloggers of healthy diets have emerged on major social media platforms, such as Massy, Kylie, Mari, etc. They focus on a healthy lifestyle and share healthy recipes and nutrition tips with users. Their videos have been loved and followed by a large number of users. The rise of healthy diet videos on short video platforms is the result of the interweaving of the Internet and health knowledge and is an important way to improve the health quality of our country [1]. In the Internet era, short video platforms play an important role in shaping a healthy society.

There have been many studies on healthy diets in literature, such as relevant scholars have found that healthy diet patterns enable the elderly to live a longer and healthier life [4]. A nationally representative study conducted by relevant scholars on the elderly over 50 years old in the United States found that the diet quality and healthy diet of the elderly positively affected their physical and mental health [5]. However, the research subjects of these studies are mainly elderly people, and there are relatively few studies on behavioural changes in young people after watching videos. Therefore, this study starts from the changes in behaviours of young people after watching short videos for healthy diets and explores the impact of such videos on young people, providing new ideas and new perspectives for health communication and short video research. This study analyses the impact of the information characteristics of healthy diet short videos on audience sharing and applied behaviour, in order to provide a reference for short video bloggers, create short videos in a targeted manner according to the audience's needs for healthy information types, and improve the quality and user satisfaction of short videos. The continuous dissemination of short videos on healthy diets will help improve the nutritional awareness level of overall society and promote the formation of a healthy lifestyle in the whole society.

2. Research design

2.1. Variable explanation

Relevant scholars divide the information quality evaluation system into two parts, among which the indicators of the information product evaluation dimension mainly include correlation, completeness, understandability, timeliness, expression sufficiency, consistency, and transparency [6]. There are also scholars who have found that the professionalism and credibility of the information provided by media influences have a positive impact on consumer attitudes and behaviours [7]. Therefore, this article selects four variables, including information correlation, understandability, completeness, and source professionalism as dependent variables. Correlation means that the information obtained by the audience is closely related to themselves and meets their own needs. Understandability refers to the presentation and expression of information that is easy for the audience to understand. Completeness means that the information has a good breadth and can fully express the needs of the audience. The professionalism of information sources means that information is reliable and authoritative.

Relevant research has found that students will interact and share information they obtain on social media platforms [8]. Some studies have found that online health information can affect user behaviour, such as promoting user vaccination behaviour [9]. It can be seen from previous research that users will share and apply the information they obtain. Therefore, this study selected information sharing and applied behaviour as the dependent variables. Information sharing

behaviour refers to users sharing, commenting and interacting with information they have watched, and information application behaviour refers to applying the acquired information to daily life.

Relevant scholars have found that perceived usefulness in social commerce positively affects consumers' willingness to use the platform to purchase [10]. Some scholars' research on the adoption of short video information on health science popularization has found that perceived usefulness is positively correlated with users' health knowledge adoption behaviour [11]. Therefore, this study takes perceived usefulness as a mediating variable and explores whether perceived usefulness plays a mediating role in independent and dependent variables.

2.2. Research hypothesis

This study adopts the information adoption model as theoretical model. The information adoption model comes from the technology adoption theory, and people will adopt technology, and similarly, people will adopt specific information. Sussman and Siegal proposed the earliest information adoption model, and later combined the perceived usefulness of the technical acceptance model based on the fine processing possibility model, and finally proposed the information adoption model. This model regards the process of the audience understanding, sharing and applying the information content after obtaining the information as the information adoption process. This process explains how the audience adopts the acquired information and then changes their own wishes and behaviours. In this study, by analysing the audience's adoption of short video information for healthy diets, this study explores whether the audience will be affected by short video information to adopt information and change their behaviour of eating healthily.

Based on the above analysis, this paper proposes three hypotheses.

H1: The information characteristics of short videos with a healthy diet (correlation, understandability, completeness, and source professionalism) positively affect audience sharing and applied behaviour.

H2: The information characteristics of short videos with healthy diet (correlation, understandability, completeness, and source professionalism) positively affect audience sharing behaviour, and perceived usefulness plays a mediating role.

H3: The information characteristics of short videos with healthy diet (correlation, understandability, completeness, and source professionalism) positively affect audience applied behaviour, and perceived usefulness plays a mediating role.

2.3. Research results

2.3.1. Correlation analysis

Table 1. Variable correlation

Variables	M	SD	-1	-2	-3	-4	-5	-6	-7
Correlation	3.65	1.09	-						
Understandability	3.74	1.1	0.288**	-					
Completeness	3.76	1.07	0.291**	0.286**					
Source professionalism	3.6	1.13	0.304**	0.264**	0.291**	-			
Perceived usefulness	3.79	1.05	0.290**	0.381**	0.275**	0.344**			
Sharing behavior	3.81	1	0.284**	0.387**	0.322**	0.322**	0.373**	-	
Applied behavior	3.88	0.93	0.281**	0.364**	0.273**	0.318**	0.324**	0.321**	-

** . Correlation is significant at the 0.01 level (2-tailed).

From Table 1, it can be seen that the four variables (correlation, understandability, completeness, and source professionalism) in the video information characteristics dimension in healthy diet short videos are significantly correlated with audience sharing behavior and audience application behavior. Perceived usefulness is significantly correlated with the other variables. Audience sharing behavior and audience application behavior are significantly correlated with all other variables.

2.3.2. Regression analysis

Table 2. Regression analysis results of information characteristics and audience sharing behaviour

Model	Variables	Standardized Coefficients Beta	R ²
STEP1	Gender	-0.131*	0.027
	Age	-0.061	
	Official academic credentials	0.121	
STEP2	Gender	-0.068	0.242
	Age	-0.060	
	Official academic credentials	0.069	
	Correlation	0.105*	
	Understandability	0.259***	
	Completeness	0.154***	
	Source professionalism	0.167***	

Dependent Variable: Sharing behaviour

*p<0.05,**p<0.01,***p<0.001

From Table 2, the adjusted R² is 0.242, indicating that the information characteristics can explain the audience sharing behavior to a greater extent. Among all variables, understandability, completeness and source professionalism all show significant positive effects on audience sharing behavior.

Table 3. Regression analysis results of information characteristics and audience applied behaviour

Model	Variables	Standardized Coefficients Beta	R ²
STEP1	Gender	-0.034	-0.003
	Age	-0.041	
	Official academic credentials	-0.023	
STEP2	Gender	0.029	0.209
	Age	0.038	
	Official academic credentials	-0.075	
	Correlation	0.122**	
	Understandability	0.250***	
	Completeness	0.122**	
	Source professionalism	0.188***	

Dependent Variable: Applied behaviour

*p<0.05,**p<0.01,***p<0.001

From Table 3, the adjusted R² is 0.209, indicating that the information characteristics can explain the audience's applied behavior to a greater extent. Among all variables, correlation, understandability, completeness and source professionalism all show significant positive effects on audience applied behavior.

Table 4. Regression analysis results of information characteristics and audience applied behavior

Model	Variables	Standardized Coefficients Beta	R ²
STEP1	Gender	-0.083	0.001
	Age	0.025	
	Official academic credentials	0.001	
STEP2	Gender	-0.019	0.227
	Age	0.021	
	Official academic credentials	-0.053	
	Correlation	0.118**	
	Understandability	0.260***	
	Completeness	0.109*	
	Source professionalism	0.211***	

Dependent Variable: Perceived usefulness

*p<0.05,**p<0.01,***p<0.001

From Table 4, the adjusted R² is 0.227, indicating that the information characteristics can explain the perceived usefulness to a greater extent. Among all variables, correlation, understandability, and source professionalism all show significant positive effects on perceived usefulness.

Table 5. Regression analysis results of perceived usefulness and audience sharing behavior

Model	Variables	Standardized Coefficients Beta	R ²
STEP1	Gender	-0.131**	0.027
	Age	-0.061	
	Official academic credentials	0.121**	
STEP2	Gender	-0.100*	0.159
	Age	-0.070	
	Official academic credentials	0.121*	
	Perceived usefulness	0.367***	

Dependent Variable: Sharing behaviour

*p<0.05, **p<0.01, ***p<0.001

From Table 5, the adjusted R² is 0.159, indicating that perceived usefulness has a certain impact on audience sharing behavior.

Table 6. Regression analysis results of perceived usefulness and audience application behavior

Model	Variables	Standardized Coefficients Beta	R ²
STEP1	Gender	-0.034	-0.003
	Age	0.041	
	Official academic credentials	-0.023	
STEP2	Gender	-0.008	0.099
	Age	0.033	
	Official academic credentials	-0.024	
	Perceived usefulness	0.322***	

Dependent Variable: Applied behaviour

*p<0.05, **p<0.01, ***p<0.001

From Table 6, the adjusted R² is 0.099, indicating that perceived usefulness has a certain impact on audience applied behaviour.

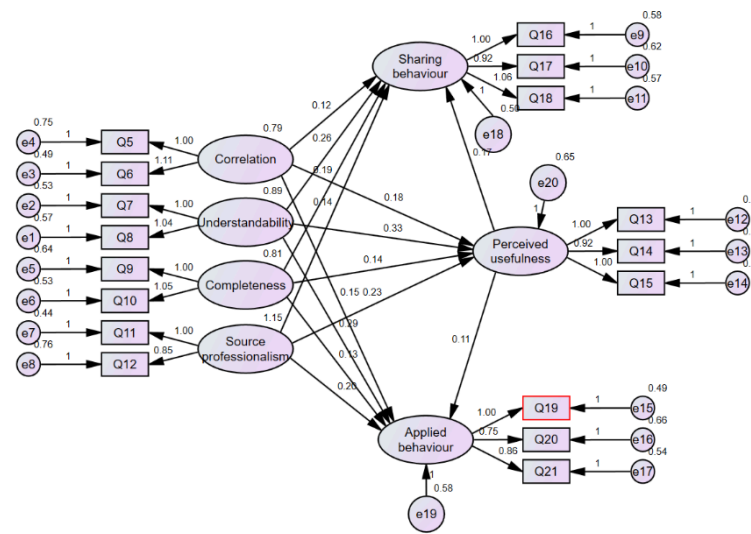


Figure 1. Amos model diagram of this study

Figure 1 is a diagram of the Amos model of this study. From the coefficients from independent variables to mediating variables, it can be seen that the four independent variables can positively affect the perceived usefulness, among which the understandability has the strongest impact. From the coefficients from the mediating variable to the dependent variable, it can be seen that perceived usefulness has a positive effect on sharing behavior and applied behavior, but the effect is not large and has a slightly stronger impact on sharing behavior. From the coefficients from independent variables to dependent variables, it can be seen that independent variables can directly drive sharing and applied behavior.

2.3.3. Mediation effect test

Table 7. Test of the mediating effect of sharing behavior

Independent variable	Indirect effect value	Direct effect value	Total effect value	Type of intermediary
Correlation	0.030	0.117	0.147	Some intermediaries (20.4%)
Understandability	0.055	0.263	0.318	Some intermediaries (17.3%)
Completeness	0.024	0.195	0.219	Some intermediaries (11.0%)
Source professionalism	0.039	0.136	0.175	Some intermediaries (22.3%)

Table 7 is a test of the mediation effect of sharing behavior. From Table 7, it can be seen that among the effects of all independent variables on sharing behavior, perceived usefulness plays a partial mediating role, with indirect effects accounting for 11% to 22%. Among them, the intermediary effect of source professionalism accounts for the highest proportion and the proportion of completeness is the lowest.

Table 8. The influence of perceived usefulness on the dependent variable

Dependent variable	Path coefficient	P value	significance
Sharing behaviour	0.168	0.004	significant
Applied behaviour	0.108	0.082	non-significant

Table 9. The direct effect of the independent variable on the dependent variable

Independent variable	Sharing behavior	Applied behavior
Correlation	0.117*	0.148*
Understandability	0.263***	0.293***
Completeness	0.195***	0.133*
Source professionalism	0.136**	0.201***

**. Correlation is significant at the 0.01 level (2-tailed).

Tables 8 and 9 are tests for applied behavioral mediation effects. From Tables 8 and 9, it can be seen that the path from perceived usefulness to applied behavior is not significant and does not meet the mediation effect conditions. The effect of independent variables on applied behavior is mainly explained by direct effects.

3. Results and recommendations

From the research results, it can be seen that the information characteristics of H1 healthy diet short videos are positively affected by audience sharing and applied behavior. Audiences prefer to watch short videos of healthy eating that are highly correlated, understandable highly completeness and source professionalism. Compared with the four characteristics, the audience pays more attention to understandability, completeness and source professionalism. This shows that the audience prefers a healthy diet short video with complete, broad and easy-to-understand information content. Compared with other characteristics, the impact of correlation on the audience is weaker, which reminds short video creators to deeply understand the audience's needs when creating videos, create more works closely related to the audience's lives, and allow the audience to obtain a sense of satisfaction that is related to their own short videos and meet their own needs. Assuming that the information characteristics of short videos with healthy diets in H2 positively affect audience sharing behavior, the perceived usefulness plays a mediating role.

This shows that after the audience perceives the value of video information, they will share and spread the video to other audiences, or like and comment on the video, and share the value of short videos with each other in the comment area. When forwarding videos, audiences can use concise and clear words to explain the value of the video, helping other audiences quickly perceive the usefulness of information content and improve the possibility of video sharing. Short video platforms can give users who share videos some rewards, which not only stimulates users' behavior of actively spreading short videos, but also enhances users' sense of participation. Hypothesis 3 The information characteristics of short videos of healthy diet positively affect audience applied behavior, and the perceived usefulness plays a mediating role is not valid, and the perceived usefulness does not meet the mediating effect conditions. This shows that when users convert video information into actual actions, they may be more affected by factors such as eating habits, social norms, and economic conditions, which weakens the mediation role of perceived usefulness. Short video creators can conduct in-depth research on other factors that affect audience applied behavior in addition to perceived usefulness, such as the audience's health awareness, the diet atmosphere of social circles, the convenience of healthy diet products, etc. through questionnaires and user interviews, and establish a more comprehensive influencing factor model. Short video platforms can use the personalized recommendation mechanism of big data to provide users with personalized healthy diet short videos based on user's dietary habits, health goals, consumption preferences and

other data, and provide relevant diet plans, food purchasing links and other services to enhance user experience and further promote the occurrence of application behavior.

4. Conclusion

Based on the information adoption model and previous research, this study proposed corresponding variables and put forward the hypotheses of this study. This study used a questionnaire survey method and conducted a questionnaire survey on young people aged 15-40 who focused on their diet as the survey subjects. After removing the invalid samples, a total of 474 valid questionnaires were collected, and SPSS software was used to perform correlation analysis and regression analysis on each variable, and Amos was used to test mediation effects. The analysis results show that the information characteristics of short videos of healthy diets positively affect audience sharing and applied behaviors. In the influence of information characteristics on audience sharing behaviors, perceived usefulness plays a partial mediating role, and in the impact of information characteristics on audience applied behaviors, perceived usefulness has a weak impact. Finally, based on the research results, reference suggestions are provided for short video creators of healthy diets and short video platforms. This study hopes to provide some clues to the current development of short videos for healthy eating, so that more and more audiences can learn about reasonable diet methods in short videos and share the information learned in the video with others or apply it to their own real life, helping to shape a beautiful home of "healthy eating, green life".

This study only explores users who have watched related short videos. Users who have not watched related videos but have contacted or learned about healthy communication are also worth digging in depth. Future research can focus on these groups, study group differences, explore the causes of differences, etc.

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