Research on Factors Influencing Health Information Sharing Behavior among Elderly Users in Mobile UGC Communities

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Abstract. Based on the theory of planned behavior and the health belief model, this paper constructs a research model, adopts network questionnaire to investigate middle-aged and elderly users in mobile UGC community, uses linear regression analysis to verify the influencing factors of users' behavioral willingness to share health information, and analyzes each factor and its influencing path. The results show that in mobile UGC communities, the general process of behavioral willingness to share health information is affected by behavioral attitude, social identity, perceived benefits and other factors. This study enriches the current research on factors influencing behavioral willingness to share health information in mobile UGC communities.

Keywords: UGC; Health information; Willingness to share behavior; Health communication

1   Introduction

According to the latest data from the 51st China Statistical Report on Internet Development, the number of elderly Internet users aged 60 and above in China has reached 153 million, accounting for 14.3%. The proportion of elderly people aged 60 and above in China is growing rapidly, and as they age, various chronic diseases and cancers are increasingly evident among middle-aged and elderly people. This trend not only has a profound impact on China's social and economic development but also poses new challenges to the health and well-being of the elderly.

In this context, user-generated content (UGC) communities serve as an important platform for people to access and utilize online information, providing a convenient way for the elderly to manage their health. By using mobile devices, the elderly can easily access and share health information, improving their understanding and management of their own health. Additionally, mobile UGC communities can provide social and information support, enhancing social connections and happiness among elderly people.

Based on this, this article uses quantitative research methods to explore whether there are other factors affecting the sharing of health information among mobile UGC

community users, providing specific and detailed guidance for elderly people in managing their health information and contributing to improving the effectiveness and quality of health information management in mobile UGC communities.

2   Theoretical foundation

The Theory of Planned Behavior (TPB) was proposed by I. Ajzen in 1985, based on the Rational Action Theory.This holds that human behavior is influenced not only by attitude and subjective norms but also by the perception of behavior control, such as the opportunities and resources individuals possess. [1] TPB is used to explain the relationship between the decision-making process and behavioral outcomes in human behavior.

The Health Belief Model (HBM) was initially proposed by Hochbaum in 1958 to study the relationship between human health behavior and health beliefs. It was gradually refined by Backer and other social psychologists. The HBM includes six main variables: perceived susceptibility, perceived benefits, perceived severity, perceived barriers, cues to action, and self-efficacy. It is one of the earliest theoretical models used to explain individual health behavior and preventive health behavior and remains one of the most widely applied health behavior theories today. [2]

3   Research hypothesis and model construction

In this study, the Theory of Planned Behavior and the Health Belief Model were chosen as the basis for integrating theoretical models. This decision was based on several considerations.

The perception of behavioral benefits in the HBM is similar to the concept of behavioral beliefs in the Theory of Planned Behavior. The self-efficacy component in the HBM overlaps with the concept of control in the Theory of Planned Behavior. Therefore, while the HBM and the Theory of Planned Behavior have some similarities and differences, combining them can complement each other and enhance the degree of explanation and prediction of health-related behavior. [3]

Therefore, based on the perceived benefits variable in the Health Belief Model, the attitude, perceived behavioral control, and subjective norm variables in the Theory of Planned Behavior, and incorporating the variables of altruism and social identity, this paper constructs a cognitive motivation research model for the health information sharing behavior of elderly users in mobile UGC communities.

Thus, the following hypotheses are proposed:

1. The individual cognition of middle-aged and elderly users affects their willingness to share health information.

● Attitude refers to the user's positive or negative attitude towards adopting health information in mobile UGC communities. [4]

H1: There is a positive correlation between the attitude of middle-aged and elderly users and their willingness to share health information.

● Perceived behavioral control refers to the individual's perception of the difficulty or ease of adopting a specific behavior. [5]

H2: There is a positive correlation between the perceived behavioral control of middle-aged and elderly users and their willingness to share health information.

2. The influence of value factors on the willingness of middle-aged and elderly users to share health information:

● Perceived benefits. Perceived benefits refer to a person's judgment of the benefits they can obtain from adopting healthy behaviors. [6]

H3: There is a positive correlation between the perceived behavioral benefits and the willingness of middle-aged and elderly users to share health information.

● Altruism. Middle-aged and elderly people are in a social circle of acquaintances who have known each other for many years.

H4: Altruism is positively correlated with the willingness of middle-aged and elderly users to share health information.

3. The influence of social environment on the willingness of middle-aged and elderly users to share health information:

● Subjective norms. Behavioral expectations of others can affect subjective norms, which originate from social environments such as family, friends, colleagues, media, and individual perceptions and interpretations of these social environments.

H5: There is a positive correlation between subjective norms and the willingness of middle-aged and elderly users to share health information.

● Social identity. Sharing health information can help others better understand health knowledge and behaviors, thereby positively impacting one's health.

H6: There is a positive correlation between social identity and the willingness of middle-aged and elderly users to share health information.

In summary, this article has preliminarily constructed a model of the influencing factors on the willingness of middle-aged and elderly users in a mobile UGC community to share health information (see Figure 1), to better integrate theories of health information sharing behavior among this population, and to conduct empirical testing.
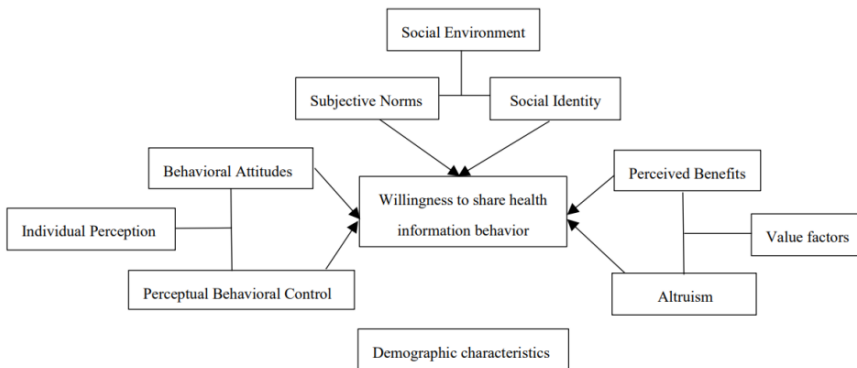

Fig. 1. A model of factors influencing older users' willingness to share health information behavior in mobile UGC communities.

4   Research method and design

This study adopted a snowball sampling survey to investigate the factors influencing the health information-sharing behavior intention of middle-aged and elderly users in mobile UGC communities. The design of the survey questions was mainly adapted and developed from existing literature's questionnaire indicators. In addition to basic information, the measurement indicators of this study were assessed using the Likert 5-level scoring method, ranging from strongly disagree, disagree, neutral, agree, and strongly agree, with scores ranging from 1 to 5.

5   Data analysis and hypothesis testing

The demographic characteristics of the survey sample are described as follows: The distribution of the research sample is relatively balanced, with 45.67% (137 people) male and 54.33% (163 people) female. Most users are between 45-55 years old, with a high school or technical degree and an income concentration of 3000-5000 yuan. The respondents generally perceive themselves as being relatively healthy.

The SPSSAU software was used to test the sample reliability of 25 questions in the questionnaire. The values of Cronbach's for this sample were all greater than 0.8, indicating high-reliability quality. The SPSSAU software was used to test the validity of the sample for 25 questions in the questionnaire. The KMO values for this sample were all greater than 0.7, indicating suitability for information extraction.

Linear regression analysis.

Regression analysis is used to study the relationship between X (quantitative or qualitative) and Y (quantitative), including whether there is a relationship, the direction of the relationship, and the degree of influence. The results of the linear regression analysis are shown in Figure 2.

	Non-standardized coefficient		Standardized coefficient	t	p	Covariance diagnosis	
	B	Standard Error	$Beta$			VIF	Tolerability
Constant	0.053	0.474	-	0.111	0.911	-	-
Gender	-0.126	0.088	-0.064	-1.423	0.156	1.016	0.984
Age group	0.111	0.090	0.083	1.232	0.219	2.293	0.436
Education level	-0.007	0.074	-0.005	-0.090	0.928	1.480	0.675
Monthly income range	0.107	0.074	0.085	1.453	0.147	1.737	0.576
Self-health status	0.020	0.051	0.017	0.390	0.697	1.017	0.984
Behavioral attitude	0.177	0.059	0.169	3.003	0.003**	1.610	0.621

	Non-standardized coefficient		Standardized coefficient	t	p	Covariance diagnosis	
	B	Standard Error	Beta			VIF	Tolerability
Perceived behavioral control	0.125	0.058	0.125	2.156	0.032*	1.704	0.587
Perceived gains	0.145	0.057	0.146	2.552	0.011*	1.666	0.600
Altruism	0.166	0.055	0.177	2.999	0.003**	1.777	0.563
Subjective norms	0.115	0.054	0.119	2.150	0.032*	1.567	0.638
Social identity	0.135	0.050	0.148	2.670	0.008**	1.562	0.640
R^2	0.436						
Adjusted R^2	0.414						
F	$F(11, 288) = 20.205, p=0.000$						
D-W value	1.988						

Dependent variable: willingness to share health information behavior

$* p<0.05 ** p<0.01$

Fig. 2. Linear regression analysis results (n=300)

According to the table above, gender, age group, education level, monthly income range, self-health condition, behavioral attitude, perceived behavioral control, perceived benefit, altruism, subjective norm, and social identity were taken as independent variables, and the willingness to share health information behavior was taken as the dependent variable for linear regression analysis. It can be seen from the table above that the model R square value is 0.436, which means that these 11 variables can explain 43.6% of the variation in the willingness to share health information behavior. When conducting the F test on the model, it was found that the model passed the F test (F=20.205, p=0.000<0.05), which means that at least one of these 11 variables has an impact on the willingness to share health information behavior. In addition, testing for multicollinearity of the model found that all VIF values were less than 5, which means that there is no problem of collinearity; and the D-W value is around 2, indicating that the model does not have autocorrelation and there is no relationship between the sample data, which means that the model is good.

6   Research Conclusion

Based on the analysis of the three influencing factors, namely 'individual cognition', 'value factors, and 'social environment', the following three main conclusions can be drawn:

6.1   Individual cognition is the primary factor influencing the health information-sharing behavior of middle-aged and elderly users.

According to the path coefficient, the behavior attitude path coefficient is 0.177, significantly higher than the path coefficients of other factors, indicating that behavior attitude is the primary factor influencing the health information-sharing behavior of middle-aged and elderly users. Additionally, in individual cognition, the path coefficient of perceived behavior control is 0.125, which has a positive effect on health information-sharing behavior.

   Therefore, for the managers of mobile UGC communities, it is crucial to understand the individual cognitive factors of users and how they influence the behavior of other users.

6.2   Value factors can influence the health information-shar behavior of middle-aged and elderly users in mobile UGC communities.

In mobile UGC communities, middle-aged and elderly users may perceive benefits in the areas of self-expression and recognition, social connections and interaction, and helping others when sharing health information. These factors satisfy the individual's needs and values, thereby enhancing behavior willingness. Thus, when publishing information in UGC communities, users should focus on sharing valuable health information verified and audited, adhere to a 'user-centric' philosophy, and consider whether the information positively affects personal image shaping after sharing. This will create a positive cycle of sharing valuable health information and improve the dissemination effect.

6.3   Social environment factors are a crucial factor affecting the health information-sharing behavior of middle-aged and elderly users.

In mobile UGC communities, middle-aged and elderly users may receive support and pressure from their family, friends, communities, and society. At the same time, when sharing information, they form their own social identity and believe that they belong to a particular community or group, seeking recognition and a sense of belonging in that community or group.

   Therefore, middle-aged and elderly users need to focus on the quality of health information, the presentation of information, the richness of dissemination methods, and the relevance of the information to receive timely and positive responses. The content of the information should be accurate and based on evidence, meeting the user's health needs and interests. For middle-aged and elderly users, it is essential to focus on health information related to cardiovascular disease, diabetes, and dementia. Multiple forms, such as combining images and text or using short audio, can be used to disseminate health information. This will increase the readability and visual appeal of the information, improve user participation, and enhance the dissemination effect.

References

1. Ajzen I. Theroy of Planned Behavior[J]. Organizational Behavior and Human Decision Processes, 1991, 50(2): 179-217.
2. Rosenstock I M. Historical Origins of the Health Belief Model[J]. Health Education Monographs, 1974, 2 (4) : 328－335.
3. Sun Xingying, Guo Yan, Sun Jing. Validation of the integration of health beliefmodel and planned behavior theory [J]. Journal of Peking University(Health Sciences), 2009,41(02):129-134
4. CHEN Yini, ZHOU Xiaoying, YUE Lixin, YU Xiaoning. Factors Influencing Adoption Willingness of the Health Information in the Mobile UGC Community [J]. Documentation, Information & Knowledge,2022,39(05):82-95
5. Xi Linna, Dou Yongxiang. Examining Reposts of Micro-bloggers with Planned Behavior Theory [J] Data Analysis and Knowledge Discovery,2019,3(02):13-20
6. Cai Y, Shi W. The Influence of the Community Climate on Users' Knowledge-sharing Intention: The Social Cognitive Theory Perspective[J]. Behaviour & Information Technology, 2022,41(2):307-323.