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Analysis and Research on Users' Continuous Use of Online Health Community based on WeChat Public Number

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Abstract: With the continuous development of Internet applications, health WeChat is more and more favored by the majority of users, and what factors affect the users' willingness to continue to use is one of the research point questions in recent years. In this paper, the technology acceptance model integrates the theories of information system success model, perceived risk theory and self-efficacy to make a fitness model and put forward relevant hypotheses, and finally use SPSS26.0 and AMOSS26.0 for hypothesis verification. The experimental results show that users' perceptions of the quality of public information content as well as their own abilities positively affect their long-term use. Meanwhile, users' perceptions of usefulness can significantly increase their willingness to continue using, while perceptions of risk lead to a weakening of their willingness to continue using. However, the effect of perceived value on the willingness to continue using is not significant.

Keywords: Technology Acceptance Model; Information Quality; Self-efficacy;

1. Introduction

At present, the domestic online medical high-speed development, the integration of big data, artificial intelligence and other cutting-edge technologies, as of the end of 2021 online health community users accounted for 28.9% of Internet users. The main research object of this paper-health microblog (hereinafter referred to as the public) belongs to health education. After an in-depth search and collation of related information, the author found that domestic scholars focus on the dissemination effect of the WeChat public platform and the application of content, but the discussion on the long-term use of the user is relatively limited, and the existing research model is also too monotonous [1]. In order to make up for this shortcoming, this paper tries to integrate various theoretical frameworks to establish an all-round model, in order to explore the determinants of users' willingness to continue using public numbers at a deeper level, and to reveal the interrelated mechanisms between these key factors.

2. Research Hypothesis and Model Construction

2.1 Perceived Usefulness, Ease of Use and Willingness to Continue to Use

Two important variables in TAM, ease of use and usefulness, are an important part of the research in this paper. The Technology Acceptance Model (TAM) is a theoretical model proposed by Davis (1989) to explain the adoption and acceptance of new technologies by individuals. Among them, perceived usefulness is an individual's subjective evaluation of the perceived usefulness and value of a technology or system [2], and perceived ease of use refers to the degree of ease of use and the amount of effort required by an individual when using a technology or system [3]. In this paper, we take the Technology Acceptance Model (TAM) as the basic model, consider the characteristics of the public number and the user characteristics, and rename the "behavioural willingness" variable in the TAM model as "continuous use willingness". The following assumptions are made.

H1: Public user usefulness perception positively affects the willingness to continue using.

H2: Ease of use of the public number positively affects the willingness to continue using it.

H3: The ease of use of public numbers has a positive effect on usefulness.

2.2 Perceived Value and Willingness to Sustain Use

Since the technology acceptance model can only explain 40-60% of group intentions, it is combined with the perceived value theory to

provide a more idealised fit model. Users synthesise perceived value through the costs they pay and the benefits they receive, and a large amount of data from previous empirical experiments has shown that the perceived value of information system users significantly influences their intention to use [4]. When users believe that using a public number can bring practical benefits and value, they will be more motivated to adopt and use this public number [5]. This paper proposes the following hypotheses for the perceived value variable:

H4: The perceived value of public users positively influences their perceived usefulness.

H5: The perceived value of public users positively influences their willingness to continue using.

2.3 Perceived Risk and Willingness to Continue Use

Perceived risk theory was first derived from the field of psychology by Bauer (1960) at Harvard University, which mainly refers to the fact that any choice made by a consumer cannot be sure whether it matches his or her expectations, and therefore these choices often contain uncertainty, i.e., for the initial conceptual formation of risk [6]. It has been found that users' negative perception of risk when using an information system can have a significant impact on their willingness to use it [7]. When users perceive that there are certain risks or potential problems in using a public number, they may be sceptical and hesitant to use it. Therefore, this paper introduces the variable of perceived risk to analyse its influence on the factors of using public numbers. Therefore, the following hypotheses are proposed.

H6: Perceived risk of public users negatively affects users' willingness to continue using.

2.4 Information Quality and Willingness to Continue Using

Information quality is derived from the information system success model and is an important research variable in the information system success model. For users, high-quality information can provide more accurate, comprehensive and timely reference, and information quality is an important indicator of the content of information systems [8]. Delone W H showed that information quality significantly affects users' willingness to use through the modified information system success model [9]. In this paper, we introduce information quality as an important variable to study its role in influencing public users' continued usage intention, and make the following hypotheses.

H7: Public information quality has a positive effect on users' perceived usefulness.

H8: public information positively affects users' continued use.

2.5 Self-efficacy and Willingness to Sustain Use

In social cognitive theory, self-efficacy is a person's assessment of his or her own abilities, a belief in his or her ability to succeed in performing a particular behaviour in a particular situation [10]. Barhoumi, in his study of technology acceptance models, found that users who have strong confidence in their own successful use of an information system perceive it as being more useful to them and are more likely to use it consistently [11]. In the context of public access, when users are satisfied with their self-efficacy, they are more likely to use public access consistently. Based on related research and theories, the following hypotheses are proposed.

H9: Public user self-efficacy positively influences perceived usefulness.

H10: Public users' identification of self-efficacy positively and positively affects their willingness to continue using.

Based on the above assumptions, the research model is constructed as Figure 1:

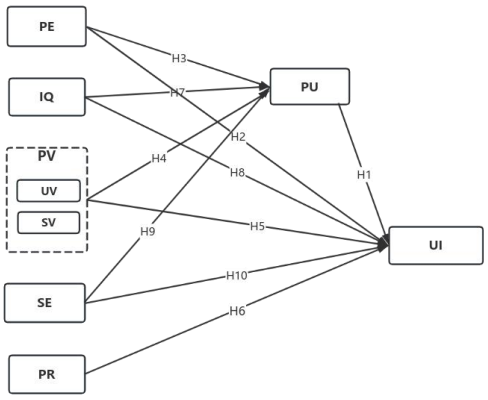

Figure 1. Study Model Diagram

3. Questionnaire Design and Recovery

In the questionnaire section two parts of questions were designed to collect information from the respondents, the first part was about the

background information such as education and age of the respondents; the second part was designed with 23 items to test the characteristics of the questions for different variables. A five-point Likert scale was used to select a score of 1-5 according to the level of recognition of the respondents. Before the formal survey, 150 questionnaires were collected for pre-survey and distributed after the questionnaires were modified accordingly. The research borrowed questionnaire star more collected 421 questionnaires, screening and retaining the final valid questionnaire 352.

4. Data Analysis

4.1 Reliability Test

Cronbach's alpha reliability coefficient, CITC and Cronbach's alpha index after items have been deleted were used to test the reliability of the data in the formal research. Using the Cronbach's α reliability test to analyse the internal consistency of the dimensions, the values of the Cronbach's α coefficient for the seven variables ranged from 0.785-0.871, with the majority exceeding 0.8, and the CITC indicator was significantly higher than 0.5, which confirms that the test methodology used provides excellent internal consistency and reliable results.

4.2 Validity Tests

AMOS 26.0 was used to test the convergent validity (AVE) and combinatorial reliability (CR) of each dimension of the scale, and the convergent validity and combinatorial reliability values of each dimension were calculated. Through the analysis of the results, it can be seen that the standardised loading factors of the measurement items of different variables are all greater than 0.5, and the AVE values of the variables are greater than 0.5 and the CR values are greater than 0.7. Taking the above results into consideration, it can be concluded that the validity of the items in the scale is good.

4.3 Modelling Analysis

After the AMOS26.0 simulation, it was found that the fitness of the model was high, and the values of CFI, RMSEA, GFI, and NFI all reached a satisfactory level, with the results of CFI reaching as high as 0.997, the results of RMSEA even reaching 0.013, and the results of PGFI also reaching 0.722, while the results of PNFI reached 0.785, which indicates that the The results of the model and the actual measurements are very close to each other and have high accuracy. The analysis results in Table 1 were obtained after analysing the model paths. Based on the assumptions made above and the results of the path analysis, the assumptions in Table 2 are summarised. According to Table 1 and Table 2, it can be seen that the hypotheses proposed in this paper are valid except for hypothesis H5.

Table 1. Model Path Coefficients and Significance Tests

trails			Standardised path factor	S.E.	C.R.	P	P	in the end
Perceived usefulness	<---	Quality of information	0.216	0.071	2.851	0.004	**	statistically significant
Perceived usefulness	<---	perceived value	0.237	0.071	2.97	0.003	**	statistically significant
Perceived usefulness	<---	self-efficacy	0.222	0.064	2.992	0.003	**	statistically significant
Willingness to continue	<---	Perceived ease of use	0.169	0.078	2.393	0.017	*	statistically significant
Willingness to continue	<---	Quality of information	0.156	0.078	2.135	0.033	*	statistically significant
Willingness to continue	<---	perceived value	0.154	0.081	1.962	0.05	ns	insignificant
Willingness to continue	<---	self-efficacy	0.154	0.071	2.177	0.03	*	statistically significant
Willingness to continue	<---	Perceived risk	-0.159	0.079	-2.074	0.038	*	statistically significant
Willingness to continue	<---	Perceived usefulness	0.163	0.09	2.086	0.037	*	statistically significant

Table 2. Summary of Hypothesis Results

serial number	Suppose that...	Hypothetical results
H1	Knowledge of usefulness among healthy WeChat users positively affects willingness to continue using it	set up
H2	Ease of Use of Healthy WeChat Positively Influences Willingness to Continue Using It	set up
H3	Ease of use has a positive effect on usefulness in health microfinance	set up
H4	Perceived value of health WeChat users positively affects their perceived usefulness	set up
H5	Perceived value value of health WeChat users positively affects their willingness to continue using it	untenable
H6	Perceived Risk of Healthy WeChat Users Negatively Affects Users' Willingness to Continue Using It	set up
H7	Public information quality has a positive effect on users' perceived usefulness	set up
H8	Healthy WeChat information quality positively affects continued user use	set up
H9	Self-efficacy of health WeChat users positively influences perceived usefulness	set up
H10	Healthy WeChat users' identification of self-efficacy positively and positively affects their willingness to continue using it	set up

5. Conclusion

Based on the above findings, the following conclusions can be drawn:

(1) For public number users, users' understanding of the perceived usefulness, ease of use, information quality and self-efficacy of the public number will have a positive and positive effect on their continued use of the public number. This means that users are more likely to continue to use a public number if they perceive it to be useful, easy to use, provide high-quality information, and feel confident that they can use it effectively.

(2) Users' understanding of the ease of use, self-efficacy, information quality, and value of the Public will positively contribute to their perceived usefulness. This means that users will be more likely to perceive the public as useful if they think it is easy to use, if they are able to use it effectively themselves, and if it provides high-quality information and perceived value.

(3) Users' perceived risk of the public number has a negative effect on the willingness to continue using it. This suggests that users' perception of the public number as having certain risks will reduce their willingness to continue using the public number.

(4) The role of perceived value in influencing users' willingness to continue using is insignificant, i.e., hypothesis H5 does not hold.

References

[1] He Zikun, Tao Xiandu. Communication strategy of health micro letter public number: A study based on Ding Xiang doctor. Science and Technology Communication. 2019, 11 (03):59-63.

[2] Guo Bingying, Dong Jie. Research on factors influencing users' willingness to continue using under health knowledge payment. Science and Technology Information, 2022, 20 (05): 220-222.

[3] Wang Xiaohong, Liu Haigui, Nanlu Shun, Xu Linyun. A comparative study of mobile reading experience of nine popular health WeChat public numbers. News lover, 2019, (02):32-37.

[4] Yuan Pengcheng, Hu Yi, Cai Jinjin. A study of persistent usage intention of online car rental: the mediating role of customer satisfaction. Logistics Science and Technology, 2021, 44 (08): 77-81.

[5] Li Shupeng. Research on the status quo and countermeasures of health communication of WeChat public number "Dr Ding Xiang". Media Forum, 2019, 2(13):98-99.

[6] Li Xiujuan, Liu Zhihao. A study on fresh food e-commerce APP users' willingness to continue using. Modern Marketing (Lower Decade), 2023, (02): 161-163.

[7] Deng Shengli, Guan Qin. Research on factors influencing users' willingness to acquire health information based on Q&A platform. Intelligence Science, 2016, 34 (11):53-59.

[8] Understanding the relationships of critical factors to Facebook educational usage

intention. Chih-Hung Wu, Shih-Chih Chen. Internet Research. 2015 (2).

[9] Yang Xiaojuan. Research on the mechanism of constructing subject teaching knowledge of teachers integrating technology in online teaching. Journal of Shandong Normal University (Social Science Edition), 2023, 68 (04): 90-99.

[10] Barhoumi C. User acceptance of the -information service as information resource: a new extension of the technology acceptance model. New Library World, 2016, 117 (9/10): 626-643.

[11] Delone W H, Melean E R. Toward a theory of perceived benefits, affective commitment, and continuance intention in social virtual worlds: Cultural values (indulgence and individualism) matter. European Journal of Information Systems, 1985, 27(2):1-15.