Factors Influencing Individual's Intention to Adopt Smart Healthcare Based on Big Data Development Strategy

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Abstract

The purposes of this study were 1) to explore different factors influencing the intention to adopt mobile healthcare as well as construct a theoretical model of the intention to adopt mobile healthcare. 2) To reveal the mechanism of the intention to adopt mobile healthcare. 3) To make empirical validation of the role of different influencing factors in the process of creating the intention to adopt mobile healthcare. The sample was 350 residents in Weiyang district, Xian, China. They were selected by random sampling. The research instrument for collecting data was a questionnaire, and the analysis of data was through the descriptive statistics and content analysis.

The research results were found as follows: 1) Perceived usefulness and ease of use, compatibility, social impact, and personal innovation had positive impacts on the intention to adopt mobile healthcare, 2) Change resistance and perceived risks did not affect users' intention to adopt, 3) Among the predictors, perceived ease of use, compatibility, social impact, and personal innovation all had positive impacts on perceived usefulness; and social impact had a positive impact on perceived ease of use. 4) Age, education level, and income level of individual had positive impacts on the intention to adopt mobile healthcare. 5) Gender and health status of individual influenced the intention to adopt mobile healthcare.

Keywords: Factors Influencing, the Intention to Adopt, Smart Healthcare, Big Data Development Strategy

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Introduction

The integration of information technology and conventional medical practices has given rise to the discipline of smart healthcare, with mobile healthcare serving as a prominent manifestation of this field. Mobile medical services primarily address the increasing need for individualized medical care, yet they also encounter numerous challenges. Based on a survey, it is projected that the number of individuals utilizing mobile healthcare services in China will reach a total of 661 million, while the market value of China's mobile healthcare sector is expected to reach 54.47 billion yuan by the year 2020. The majority of individuals who benefit from these services are young individuals, although the elderly population, specifically those aged 60 years or more, with significant medical requirements, is estimated to be 220 million (Iimedia, 2021). This finding indicates that individuals in the older population who require extensive healthcare services do not constitute the primary demographic utilizing mobile healthcare services, hence leading to a relatively low adoption rate of such services. Despite the convenience and user-friendly nature of these services, the absence of external pressures and stimuli poses challenges for consumers in sustaining their utilization of such services.

User behavior research in mobile healthcare generally uses the Technology Acceptance Model (TAM), user group characteristics, diffusion of innovations theory, and user intention to adopt. However, comprehensive models that fully analyze the many factors that influence mobile healthcare adoption are scarce in the literature. Hung and Jenpol used the Technology Acceptance Model (TAM) to examine users' intentions to employ mobile health management services. Perceived usefulness, attitude, and age influenced MHMS adoption behavior (Hung & Jenpol, 2012). Faqih and Jaradat (2015) found that age and gender affect Jordanian healthcare system's mobile technology utilization. This study examined patient acceptance of mobile healthcare services. The findings show that intrinsic and extrinsic factors influence users' mobile healthcare service engagement (Cocosila & Archer, 2009). According to the diffusion of innovations theory, a survey of three Nanchang City hospitals found that dissemination channel, compatibility, and personal variables influence Internet medical service uptake (Zhang, 2017). The researchers meta-analyzed 35 user uptake of mobile healthcare articles. Perceived usefulness, ease of use, perceived

danger, and subjective standards statistically influenced people's attitudes and behaviors toward mobile healthcare (Zhao & Ni, 2016). Zhang, Luo, Nie, and Zhang designed an experimental study and recruited participants using mobile healthcare apps. Zhang, Luo, Nie, & Zhang (2018) found that users' continuous intention to adopt consultation-based mobile healthcare apps was influenced by app interaction quality. Zhao, Huo, and Fan (2018) found that perceived usefulness and trust strongly influence mobile healthcare management service adoption. The study showed that privacy concerns do not affect adoption. Mobile healthcare services' limited and occasional use after installation is also a problem (Nurbiye, Zhao, Zhang, & He, 2022).

To fill the above-discussed research gaps, we draw upon the technology acceptance model (Davis, 1986), the unified theory of acceptance and use of technology (Venkatesh et al., 2003), the dual-factor model (Cenfetelli, 2004), and the diffusion of innovations theory (Rogers, 1962) to investigate influencing factors on the intention to adopt mobile healthcare and the correlation between influencing factors and the intention to adopt mobile healthcare. Weiyang District, Xi'an, Shaanxi Province, China is used as a research region. The findings of this study will contribute to understanding the citizen's intention to adopt mobile healthcare.

Research Objectives

1. To explore the influencing factors on the intention to adopt mobile healthcare services.

2. To explore the influence of individual characteristics on the intention to adopt mobile healthcare.

Literature Review

Istepanian and Lacal (2003) found that mobile device compatibility and connection are essential for mobile healthcare development. Ji (2017) used a goal-oriented design to improve chronic illness adherence. Ji created a chronic disease management software model for hypertensives to analyze user data. The results showed patient differences in disease awareness and mobile phone software exposure. Ji (2017) found that patients' disease knowledge, self-management,

and mobile app familiarity varied. Xing and Fei (2017) detailed Capital Medical University's Xuanwu Hospital's mobile healthcare system. The authors detailed the system architecture, applications, and product features. The cloud-based data integration platform and mobile medical assistant were included.

Hung and Jenpol (2012) used the Technology Acceptance Model (TAM) to study mobile healthcare user behavior and consumer adoption of mobile health management services (MHMS). The study found that "perceived usefulness" and "attitude" significantly affected behavioral intention to adopt Mobile Health Monitoring Systems. Perceived ease of use and perceived usefulness significantly affected attitude, with ease of use influencing usefulness. The factors driving MHMS use varied by age. Huang (2010) added novel elements like the perceived threat of illness, perceived behavioral barriers, and internal and external facilitators from the health belief model to a model for telehealth monitoring adoption. Deng (2013) used the Technology Acceptance Model (TAM) and Health Belief Model to explore mobile healthcare user acceptance. The results showed that perceived usefulness, simplicity of use, barriers, and external factors shaped users' views of mobile healthcare services. These characteristics also moderated MHS use's intended aim. Yan used the Theory of Reasoned Action (TRA) to analyze mobile healthcare utilization. The goal was to examine the factors that affect people's behavior. The study found considerable demographic differences in adoption behavior, particularly in views of usefulness and simplicity of use. Yan (2012) found that young people are more influenced by social characteristics than elderly people are by usefulness and convenience of use. Liu (2015) used Innovation Diffusion Theory (IDT) to model mobile healthcare payment diffusion. The study found that relative advantage, compatibility, environmental factors, and personal characteristics strongly influenced mobile healthcare payment intentions. According to Xu (2017), young or middle-aged people with higher education are more sensitive and mature while processing health information. People with severe or chronic illnesses also worry more about privacy and security.

Grounded Theory Models of Association: The Theory of Rational Behavior (TRA) is a well-established behavioral theory that focuses on attitudes and behavior. It assumes reasonable people examine the prospective repercussions of their activities

before making judgments. Ajzen's Theory of Planned Behavior (TPB) model adds perceived behavioral norms to the Theory of Reasoned Action (TRA) paradigm. Ajzen defines behavioral influences as attitudes, subjective norms, and perceived norms (Fishbein & Ajzen, 1977). Davis (1986) proposed the Technology Acceptance Model (TAM). External influences affect users' behavioral attitudes and intend to use information technology in this paradigm. It analyses user adoption behavior using perceived usefulness (PU) and perceived ease of use (PEU). After Davis et al., several scholars improved the Technology Acceptance Model. One change was removing the attitude variable and adding "image" and "output quality." This improved model was called TAM2. The complete Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al. (2003) aims to explain 70% of user behavioral intentions in IT systems and technology acceptance. This model is based on eight relevant research findings, including the Technology Acceptance Model (TAM), Theory of Reasoned Action (TRA), and Theory of Planned Behavior. The Theory of Acceptance and Use of Technology (TAUT) explains 70% of IT user behavior intentions. Performance expectancy, effort expectancy, social influence, and convenience circumstances influence technology use, according to TAUT. TAUT also accepts that gender, age, experience, and voluntariness can reduce performance expectancy, effort expectancy, social influence, and convenience conditions. Cenfetelli (2004) offered positive and negative variables and merged them to create the dual-factor model. Negative aspects increase resistance to change and perceived risk, whereas positive factors increase usefulness. People prefer positive characteristics that increase their adoption rate and shun negative ones. Rogers' 1960s diffusion of innovation theory is the subject of this paper. While accepting the theory's broad scope, this study focuses on innovation diffusion variables. These aspects include the innovation, potential adopters, surroundings, and dissemination routes. Rogers (1983) states that IDT innovations have competitive advantages, compatibility, complexity, trialability, and observability.

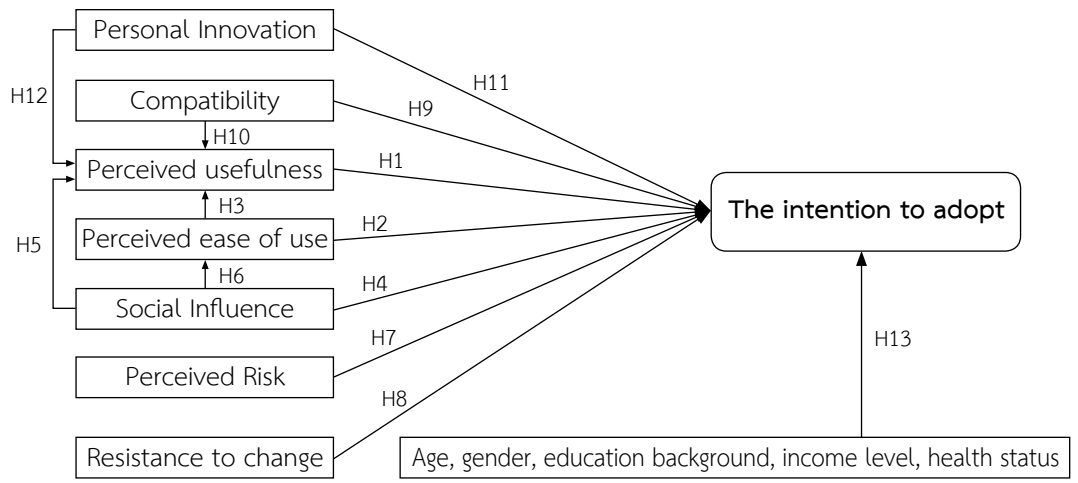
Research Methodology

This study used a mixed method. The sample was 350 residents in Weiyang district, Xian, China. They were selected by random sampling. The instrument for collecting data was a questionnaire. The study's statistical analysis was conducted using SPSS 21.0, and the following data analysis techniques are given. Descriptive statistical analysis of samples: Demographic traits, physical conditions, and utilization of mobile healthcare services are statistical explanations of the respondents' fundamental personal data. IOC, Reliability, and validity test: The validity of the questionnaire's dependability and internal consistency was examined using reliability analysis. The dependability of the survey is higher the higher the Cronbach's alpha coefficient. The validity of the questionnaire is evaluated using validity analysis. For the measurement items to effectively reflect the measurement variables, factor analysis is more appropriate the higher the KMO value. Difference analysis: Use independent sample t-test and variance analysis to analyze whether there are differences in the intention to adopt among people of different genders, ages, incomes, etc. Correlation analysis and regression analysis: Calculate the closeness of the relationship between variables, which is a measure of the relationship, to verify whether the relevant hypotheses in this study are supported.

This study incorporates the Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT) to examine the dissemination of innovation theory. It specifically focuses on the factors of compatibility, perceived risk, and consumer innovativeness. Additionally, the study integrates the dual-factor theory to develop a conceptual framework, as depicted in Figure 1. The model's outcome variable is the intention to adopt, whereas the predictor factors consist of perceived usefulness, perceived ease of use, perceived risk, compatibility, reluctance to change, social influence, and personal innovation. The control variables encompass personal characteristics, like age and gender.

Figure 1

Conceptual Framework



Note. Collected and organized by the author.

Predictor Variables

Davis (1986) found that perceived usefulness and simplicity of use regularly affect users' attitudes and behavior. Mobile healthcare combines mobile service technology with medical information technology to provide health counseling. This connection improves efficiency, time savings, and convenience.

H1: Perceived usefulness has a positive effect on the intention to adopt mobile healthcare.

H2: Perceived ease of use has a positive effect on the intention to adopt mobile healthcare.

H3: Perceived ease of use has a positive effect on perceived usefulness.

Social influence refers to how much an individual thinks external influences affect their use of information technology or how much they should adopt certain behaviors. Taylor and Todd (1995) discovered a link between social influence and subjective normative measures, supporting consistency. Davis (1989) confirmed that subjective standards affect TAM2 adoption intentions.

H4: Social influence has a positive effect on the intention to adopt mobile healthcare.

H5: Social influence has a positive effect on perceived usefulness.

H6: Social influence has a positive effect on perceived ease of use.

Perceived risk includes performance, psychological, financial, and social risk, according to Featherman and Pavlou (2003). Their research shows that perceived risk negatively impacts consumer e-service uptake.

H7: Perceived risk hurts the intention to adopt mobile healthcare.

The medical model and health management have changed due to mobile healthcare. Conservatives oppose change and advocate for the status quo. This leads to internal rejection, anxiety of change, and bias against the perceived usefulness of products and services.

H8: Resistance to change hurts the intention to adopt mobile healthcare.

The diffusion of innovation theory underpins this study's compatibility idea. This work defines compatibility as the public's view of mobile healthcare matching their beliefs and health management habits. Taylor and Todd (1995) found that perceived usefulness, ease of use, and compatibility increase public interest in mobile healthcare. The combination of perceived usefulness, simplicity of use, and compatibility also influences mobile healthcare adoption behavior.

H9: Compatibility has a positive effect on the intention to adopt mobile healthcare.

H10: Compatibility has a positive effect on perceived usefulness.

According to Agarwal and Prasad (1998), personal creativity in information technology may affect people's willingness to adopt new technologies. Ouyang's (2014) research on paid e-learning adoption found that personal innovation positively affects consumers' inclination to adopt.

H11: Personal innovation has a positive effect on the intention to adopt mobile healthcare.

H12: Personal innovation has a positive effect on perceived usefulness.

Control Variables

This study employs the UTAUT model to examine mobile healthcare uptake across age, gender, education, income, and health status. Age, gender, educational background, income level, and health status are used as control variables to determine if mobile healthcare adoption differs statistically across these demographic and health-related dimensions. Young people are more likely to think actively and agilely due to their cognitive flexibility and adaptability. They are also more open to new ideas and experiences than middle-aged and older people. The age of users may affect their technology adoption. Yan (2012) found that unfavorable variables distort more as people get older. Gender is usually the covariate researchers focus on when studying the intention to adopt. Liu (2014) observed that males were more likely to use WeChat than females. This gender gap was especially obvious in perceived usefulness. Higher education is associated with increased scientific and cultural literacy, as people with higher education tend to learn faster. Higher education is associated with mobile healthcare adoption. An individual's income can indicate their social and economic status. Thus, it is often used as a moderating variable in IT adoption studies. Nie (2016) found a positive association between elderly income and their willingness to use smart community home care. Mobile healthcare solutions are more likely to be used by those with frequent access to healthcare, which is linked to physical health.

H13: The intention to adopt mobile healthcare is affected by factors such as gender, age, educational background, income level, and health status. H13a: There is a significant difference in mobile healthcare intention to adopt by gender. H13b: There is a significant difference in mobile healthcare intention to adopt by age.H13c: There is a significant difference in the intention to adopt mobile healthcare by education background. H13d: There is a significant difference in the intention to adopt mobile healthcare by income level. H13e: There is a significant difference in the intention to adopt mobile healthcare by health status.

Outcome Variable

The concept of intention to adopt can be equated to behavioral intention, as demonstrated in a study conducted by Fishbein and Ajzen (1977). In this study, behavioral intention was defined as an individual's perceived likelihood of willingly engaging in a specific behavior. This study examines the outcome variable of intention to adopt, specifically focusing on the public's decision-making process regarding the adoption of mobile healthcare. The degree of subjective intention is considered as a measure of the strength of this decision.

Reliability and Validity Analysis

The reliability assessment in this study was performed utilizing the SPSS21.0 statistical software. The findings of the data analysis indicated that the Cronbach's coefficient for the entire sample was 0.841. The coefficients of all the other variables exceeded 0.7, so they met the criteria established for the study.

Table 1

Reliability Measurement Statistics

Variables	Number of Questions	Cronbach's Alpha
Perceived usefulness	4	0.851
Perceived ease of use	4	0.876
Compatibility	3	0.832
Perceived Risk	4	0.719
Resistance to change	2	0.752
Personal Innovation	4	0.77
Social Influence	4	0.755
Intention to adopt	3	0.796
Total	28	0.841

Note. Collected and organized by the author.

There are three steps to ensure the effectiveness of research tools: firstly, hand over the questionnaire to the instructor for suggestions for improvement; secondly, correct and adjust the questionnaire according to the instructor's opinions and suggestions; thirdly, after receiving the feedback and suggestions from the instructor, use the project goal consistency index to test the content validity. During the process, the questionnaire will be checked by three experts in the field of management.

The items that had scores lower than 0.5 were revised. On the other hand, the items that had scores higher than or equal to 0.5 were revised. The results from the IOC test for this current research were more than 0.9 in sum.

Research findings

The 303 genuine survey respondents aged 18-29 is weak. Equal gender proportion among responders. The age distribution is as follows: The 21-30 age group made up 57.1% of the population, while the 31-40 age group made up 17.1%. In terms of education, 187 people (76.9% of the sample) have a bachelor's degree or above. 133 people reported monthly income below 3,000 yuan. Other groups in descending order.

Table 2

Demographic Profile of Participants

Variable	Type	Frequency	Percentage
Gender	Male	158	52.3
	Female	145	47.7
Age	Under 20 years old	15	4.9
	21 - 30 years old	173	57.1
	31 - 40 years old	52	17.1
	41 - 50 years old	36	11.9
	50 years and older	27	8.9
Education background	High school and below	34	11.1
	College	36	11.9
	Undergraduate	177	58.4
	Master	54	17.8
	Doctor and above	2	0.8

Variable	Type	Frequency	Percentage
Income level	3000 yuan and below	133	44
	3000 - 5000 yuan	86	28.1
	5000 - 8000 yuan	37	12.3
	8000 yuan and above	47	15.6
Occupation	Student	105	34.6
	Civil servant	2	0.8
	Civil business unit personnel	36	11.9
	Corporate employees	117	38.6
	Self-employed persons	13	4.2
	Freelancers	23	7.5
	Unemployed	5	1.6
	Other	2	0.8

Note. Collected and organized by the author.

Table 3

Health Status of Survey Respondents

Variable	Type	Frequency	Percentage
Health Status	Never feel sick	50	16.4
	Occasionally felt unwell	233	77
	Feeling unwell often	20	6.6
	Total	**303**	**100**
Number of medical visits	0 times	123	40.7
	1 - 3 times	161	53.1
	4 - 6 times	13	4.1
	7 - 9 times	1	0.5
	10 times and above	5	1.6
	Total	**303**	**100**

Note. Collected and organized by the author.

About 77% of the sample, 233 people, reported occasional illness. A 6.6% minority claimed regular illness. Over the past six months, 161 users (53.1%) interacted with the platform 1 - 3 times. The recorded visit count was nil, 40.7%. The survey participants are healthy.

Tables 4 and 5 show that gender analysis used an independent samples t-test. The p-value of 0.467, which exceeds the significance level of 0.05, implies no gender-specific difference in adoption intention. Educated people use mobile healthcare more, with a favorable association. Income levels differ in their willingness to use mobile healthcare. Mobile healthcare adoption is highest among those earning 5,000 to 8,000 yuan, followed by those earning over 8,000. Mobile healthcare adoption is lowest among those earning 3,000 yuan or less. When user groups with different amounts of visits during the past six months are split, there is no statistically significant difference. A p-value of 0.993 above the 0.05 statistical significance criterion, supports this result.

Table 4

Gender Difference Analysis

Outcome variable	Gender	N	Mean	Standard deviation	t	Sig
Intention to adopt	Male	158	3.9882	0.69712	0.728	0.467
	Female	145	3.9267	0.61061		

Note. Collected and organized by the author.

Table 5

Age, Education Background, Income Level, Health Status Difference Analysis

Outcome variable	Predictor Variables	Content	N	Mean	Standard deviation	F	Sig
Intention to adopt	Age	Under 20 years old	15	3.7083	0.71377	3.112	0.016
		21 - 30 years old	173	4.009	0.64368		
		31 - 40 years old	52	4.0714	0.67914		
		41 - 50 years old	36	3.9569	0.59787		
		50 years and older	27	3.5476	0.61043		
	Education background	High school and below	34	3.8519	0.69472	2.618	0.036
		College	36	3.9052	0.64922		
		Undergraduate	177	3.9173	0.63701		
		Master	54	4.1512	0.66157		
		Doctoral and above	2	5	0		
	Income level	3000 yuan and below	133	3.8388	0.67227	2.915	0.035
		3000 - 5000 yuan	86	3.989	0.59135		
		5000 - 8000 yuan	37	4.2	0.57009		
		8000 yuan and above	47	4.0526	0.73328		
	Number of medical visits	0 times	123	3.9242	0.66476	0.557	0.933
		1 - 3 times	161	3.9864	0.65945		
		4 - 6 times	13	3.85	0.55528		
		7 - 9 times	1	4.75	0.63675		
		10 times and above	5	4	0.73598		

Note. Collected and organized by the author.

The findings presented in Table 6 indicate that the P values associated with perceived usefulness, perceived ease of use, compatibility, personal innovation, and social influence were all below 0.01. These variables exhibited a positive correlation with adoption. Additionally, the P value associated with resistance to change was below 0.05, indicating a weak negative correlation between intention to adopt and

perceived risk. The study found that the P value exceeded the threshold of 0.05, indicating a lack of a statistically significant link between intention to adopt and the variables under investigation.

Table 6

Pearson Correlation Coefficients for Outcome Variable and Predictor Variables

		V1	V2	V3	V4	V5	V6	V7	V8
V1	Intention to adopt	1 .000	.624** .000	.561** .000	.460** .000	-.136* .034	-.06 .349	.456** .000	.541** .000
V2	Perceived usefulness	.624** .000	1	.620** .000	.475** .000	-.073 .258	-.18 .78	.401** .000	.383** .000
V3	Perceived ease of use	.561** .000	.620** .000	1	.529** .000	-.079 .221	-.032 .625	.479** .000	.370** .000
V4	Compatibility	.460** .000	.475** .000	.529** .000	1	-.158* .014	-.033 .61	.355** .000	.480** .000
V5	Resistance to change	-.136* .034	-.073 .258	-.079 .221	-.158* .014	1	.245** .000	-.04 .535	-.247** .000
V6	Perceived risk	-.06 .349	-.018 .78	-.032 .625	-.033 .61	.245** 0	1	-.029 .657	.042 .514
V7	Social influence	.456** .000	.401** .000	.479** .000	.355** .000	-.04 .535	-.029 .657	1	.236** .000
V8	Personal innovation	.541** .000	.383** .000	.370** .000	.480** .000	-.247** .000	.042 .514	.236** .000	1

** .Significant correlation an the 0.01 level (both sides).

* .Significant correlation an 0.05 level (both sides).

Note. Collected and organized by the author.

Table 7 presents the results indicating a significant correlation between perceived usefulness and other predictor variables. The linear regression analysis suggests that the significance value (Sig) is below 0.05, indicating a statistically significant relationship. Specifically, perceived usefulness demonstrates a significant correlation with perceived ease of use, compatibility, and personal factors.

Table 7

Stepwise Multiple Regression Analysis of Perceived Usefulness and Other Variables

Model	B	Error	Beta	t	Sig	Tolerance	VIF
Perceived ease of use	0.427	0.051	0.491	8.41	0	0.703	1.422
Compatibility	0.138	0.055	0.154	2.489	0.014	0.627	1.595
Individual factors	0.117	0.052	0.127	2.251	0.025	0.751	1.332

Outcome variable: Perceived usefulness

Note. Collected and organized by the author.

Table 8 shows that the relevant factors' VIF values are 1 - 2 and less than 10. Additionally, tolerances are greater than 0.1 and range from 0.577 - 1. These findings indicate that each variable lacks multivariate covariance. The model 4 Durbin-Watson (DW) statistic is 2.048. This figure is between 1.5 and 2.5, implying that the regression model and random errors are unrelated. The DW value shows good sample independence and no autocorrelation.

Table 8

The Intention is to Adopt and Stepwise Multiple Regression Analysis of Each Variable

NO.	The order	B	Error	Beta	t	Tolerance	VIF
1	**Perceived usefulness**	0.65	0.052	0.624	12.402	1	1
2	**Perceived usefulness**	0.509	0.052	0.488	9.854	0.853	1.172
	Personal innovation	0.34	0.048	0.354	7.147	0.853	1.172
3	**Perceived usefulness**	0.429	0.053	0.411	8.077	0.751	1.331
	Personal innovation	0.32	0.046	0.334	6.951	0.845	1.183
	Social influence	0.201	0.046	0.212	4.378	0.832	1.203
4	**Perceived usefulness**	0.356	0.06	0.342	5.945	0.577	1.733
	Personal innovation	0.302	0.046	0.314	6.532	0.823	1.214
	Social influence	0.164	0.048	0.173	3.432	0.752	1.33
	Perceived ease of use	0.136	0.054	0.15	2.514	0.538	1.858

Model 4 DW value 2.048

Outcome variable: Intention to adopt.

Note. Collected and organized by the author.

The correlation study shows no association between perceived danger, reluctance to change, and intention to adopt. The stepwise multiple regression analysis also shows that resistance to change, perceived risk, and desire to adopt no longer have a meaningful association. The stepwise regression analysis examined adoption intention components. The regression model had four variables, and model 4 had an adjusted R-square of 0.538. This means the four variables explained 53.8% of the variation in adoption intention. The regression model started with perceived usefulness, indicating its main effect on the desire to adopt. Personal innovation, societal influence, and perceived ease of use were included in the model.

Table 9

Summary of Intention to Adopt and Models of Each Regression

Model	Perceived usefulness	Personal innovation	Social influence	Perceived ease of use	R^2	Adjusted R^2
1	x				0.39	0.387
2	x	x			0.497	0.492
3	x	x	x		0.534	0.528
4	x	x	x	x	0.546	0.538

Note. Collected and organized by the author.

According to the data, perceived usefulness, ease of use, social influence, and personal creativity positively correlate with mobile healthcare adoption. Compatibility was not included in the regression model. This exclusion does not mean these factors do not affect adoption; it means they are not statistically significant.

Discussions

The study proposed 17 hypotheses for the intention to adopt a mobile healthcare model by performing analytical methods such as descriptive statistics, difference analysis, correlation analysis, and regression analysis on 303 valid questionnaires recovered and found that 13 hypotheses were accepted, and 4 hypotheses were rejected.

The results indicate:

Perceived usefulness is the first factor affecting the intention to adopt mobile healthcare. Products or services that can provide users with a sense of value and help them improve their efficiency and quality of life are more likely to be recognized. This is consistent with the research conclusion of Davis (1986) that perceived usefulness and perceived ease of use always have an impact on users' attitudes and behavioral intentions.

Personal innovation is the second factor affecting the intention to adopt mobile healthcare. The personal innovation factor represents the user's ability to accept new things. The higher the user's acceptance of new information technology products, the easier it is to accept mobile healthcare. The study shows that a user's innovation has a significant positive correlation with the intention to adopt a mobile travel app (Li, 2014).

Social influence is the third factor affecting the intention to adopt mobile healthcare. This is consistent with the research conclusion of Matthew that social influence positively affects the intention of medical professionals to adopt electronic medical records (Matthew, 2008). In the face of a new thing, the user is in a position of information asymmetry, and listening to the advice of trusted people around him can reduce the cost of decision-making. At the same time, the influence of the news media cannot be ignored.

Perceived ease of use and compatibility are the fourth and fifth affecting the intention to adopt mobile healthcare. Perceived ease of use, whether it is easy to use, will become the reason for whether the public is willing to accept the technology. Mobile healthcare products with simple and clear interfaces, clear logic, and user-friendly operation will be easier to recognize. This is consistent with the research conclusion of Taylor &Todd (1995) that perceived usefulness, perceived ease of use, and compatibility have a positive impact on the public's intention to adopt mobile healthcare.

Resistance to change and perceived risk do not hurt the intention to adopt mobile healthcare. It shows that users are not resistant to using mobile healthcare software and are happy to accept IT products to help them with minor ailments and

learn about healthcare. Users' trust in mobile Internet products has improved. According to previous research conclusions (Featherman & Pavlou, 2003), perceived risk hurt the intention to adopt mobile healthcare, but this factor was not included in the regression in this study. The human sample has a certain dilution effect on this item. On the other hand, with the popularization of mobile payment and continuous assurance of information security, the public's sense of trust in Internet products has been improved.

Age, educational background, and income level among individual characteristics have significant differences in the intention to adopt mobile healthcare. This is consistent with the research conclusion of Yan (2012) that the older the age, the greater the distortion effect of negative factors through comparative analyses of different age groups. In his study, Nie (2016) found that the higher the income of the elderly, the more likely they are to adopt smart community home care - a new model of aging. There is no significant difference between gender and health status among individual characteristics on the intention to adopt mobile healthcare.

Among predictor variables, perceived ease of use, compatibility, social influence, and personal innovation all have a positive impact on perceived usefulness; social influence has a positive impact on perceived ease of use.

Table 10

Hypothesis Verification Results

No.	Assumption	Accepted or rejected
H1	Perceived usefulness has a positive impact on the public's intention to adopt mobile healthcare.	Accepted
H2	Perceived ease of use has a positive impact on the intention to adopt mobile healthcare.	Accepted
H3	Perceived ease of use has a positive impact on perceived usefulness.	Accepted
H4	Social influence has a positive impact on the intention to adopt mobile healthcare.	Accepted
H5	Social influence has a positive impact on the perceived usefulness of mobile healthcare.	Accepted

No.	Assumption	Accepted or rejected
H6	Social influence has a positive impact on the perceived ease of use of mobile healthcare.	Accepted
H7	Perceived risk hurts the intention to adopt mobile healthcare.	Rejected
H8	Resistance to change hurts the intention to adopt mobile healthcare.	Rejected
H9	Compatibility has a significant positive impact on the intention to adopt mobile healthcare	Accepted
H10	Compatibility has a significant positive impact on the perceived usefulness of mobile healthcare	Accepted
H11	Individual innovation has a positive impact on the intention to adopt mobile healthcare.	Accepted
H12	Personal innovation has a positive impact on the perceived usefulness of mobile healthcare.	Accepted
H13a	There is a significant difference between the intention to adopt mobile healthcare and different genders.	Rejected
H13b	There is a significant difference between the intention to adopt mobile healthcare and different ages.	Accepted
H13c	There is a significant difference between the intention to adopt mobile healthcare and different educational backgrounds.	Accepted
H13d	T There is a significant difference between the intention to adopt mobile healthcare and different income levels.	Accepted
H13e	There is a significant difference between the intention to adopt mobile healthcare and different health status.	Rejected

Note. Collected and organized by the author.

Conclusion

The present study examined the various factors that influence individuals' intention to adopt mobile healthcare. Specifically, the study investigated seven predictor variables, namely perceived usefulness, perceived ease of use, perceived risk, personal innovation, compatibility, social influence, and resistance to change. The outcome variable of interest was the intention to adopt mobile healthcare.

Based on the findings of empirical investigation, the determinants impacting the inclination to embrace mobile healthcare can be identified as follows: The predictor variables, including perceived usefulness, perceived simplicity of use, compatibility, social influence, and personal innovation, were found to have a favorable influence on the intention to use mobile healthcare. The absence of negative effects on the desire to adopt was observed in resistance to change and perceived danger. The variables of perceived ease of use, compatibility, social influence, and personal innovation were found to have a positive influence on perceived usefulness. Additionally, social influence was found to positively affect perceived ease of use.

When examining the impact of individual characteristics on the intention to adopt mobile healthcare, it was found that out of the five elements of individual characteristics, three elements exhibited statistically significant differences in their influence on the intention to adopt mobile healthcare. Conversely, the two elements did not demonstrate any significant difference in their impact on the intention to adopt mobile healthcare. There were notable variations in the desire to utilize mobile healthcare based on factors such as age, educational background, and economic level. There is a lack of substantial disparity observed between gender and health status about the inclination to embrace mobile healthcare.

Recommendations for future study

Firstly, Expand the scope of the study sample. This paper did not conduct a nationwide sample, and there are differences in population and medical conditions in different regions of China. The sample in this study does not provide a comprehensive and accurate picture of Chinese citizens' intention to adopt mobile healthcare. Therefore, future studies can expand the study population to include people from all regions, age groups, and health conditions to improve the accuracy of the empirical study.

Secondly, Change the research perspective. The research object selected in this paper is Chunyu Doctor APP, which is a mobile medical service software. Mobile Internet-based medical software applications, after explosive growth in 2015 gradually returned to rationality, in 2017 The present, in the medical field began to appear, and AI (Artificial Intelligence) technology, that is, the combination of artificial

intelligence, future scholars can consider the study of the user's intention to adopt more new technologies from the level of artificial intelligence.

Thirdly, Focus on physician groups. In this paper, we only analyzed the factors influencing the adoption of mobile health care for C-side consumers but did not consider the study of the doctors' group. mobile healthcare adoption research vision more comprehensive.

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