Factors Affecting Patients'Attitude and Behavioral Intention of Using Hospital Online Services in Shanghai, China

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Abstract

This study conducts a survey at three hospitals in Shanghai, China, to explore the factors influencing patients' attitudes and behavioral intentions toward using hospital online registration systems. A five-point Likert scale was used to develop the questionnaire, which was then validated by three experts through an IOC test. Prior to the formal survey, 50 samples were tested for internal consistency and reliability. A total of 500 valid questionnaires were distributed, with data analyzed using SPSS for descriptive statistics and AMOS for confirmatory factor analysis (CFA) and structural equation modeling (SEM). The CFA results confirmed the adequacy of the factor structure and the model's fit. Based on theoretical frameworks, the study introduces attitude, perceived usefulness, and satisfaction as mediating variables to examine the relationships between independent variables (such as perceived usefulness, social influence, and promotion conditions) and the dependent variable (behavioral intention). The findings show that satisfaction, social influence, and promotion conditions significantly impact behavioral intention, while perceived usefulness and perceived ease of use significantly affect attitude. Additionally, attitude was found to have a direct impact on behavioral intention.

The results highlight that satisfaction, social influence, promotion conditions, perceived usefulness, perceived ease of use, and attitude significantly influence patients' behavioral intention to use the online registration system. Specifically, satisfaction, social influence, and promotion conditions directly influence behavioral intention, while perceived usefulness and perceived ease of use indirectly affect behavioral intention through their impact on attitude. Attitude also has a direct influence on behavioral intention. These findings provide important insights for promoting and developing digital health services, particularly in enhancing patients' acceptance and usage of online registration systems. Hospitals can improve adoption rates by focusing on increasing patient satisfaction, optimizing system usability, and leveraging social influence. The study also offers practical recommendations for policymakers and technology developers to facilitate the widespread adoption of digital health services. Future research could extend these findings to other regions and further investigate additional factors such as privacy protection and security.

Keywords: Factors Affecting Attitude; Behavioral Intention; Hospital Online Services; Shanghai of China

Introduction

Hospital Online Services in China have experienced rapid growth and transformation in recent years, driven by advancements in technology. These services, which encompass a range of digital healthcare offerings, have become integral to the Chinese healthcare system, enhancing patient care and streamlining administrative processes (Chen & Tan, 2004). The development of these services has not only contributed to the improvement of healthcare quality but also optimized the patient experience and facilitated the rational allocation of medical resources (Anderson & Srinivasan, 2003). In particular, as information technology continues to advance, Hospital Online Services have become a vital direction for healthcare service innovation, offering convenient appointment scheduling, registration, and inquiries through digital platforms, significantly improving healthcare efficiency and quality (Chen & Tan, 2004).

Online health consultations and telemedicine services have become increasingly important in providing timely and professional medical assistance, especially in remote areas or emergencies. These services help bridge gaps in healthcare accessibility, making them indispensable in the modern healthcare landscape. Hospital Online Services play a crucial role in improving the patient experience, simplifying traditionally cumbersome and time-consuming processes. Patients can now access healthcare services more easily, which, in turn, improves satisfaction and health outcomes (Anderson et al., 2004). Additionally, online platforms offer patients valuable health knowledge and educational resources to help them better understand and manage their health conditions.

The importance of Hospital Online Services extends to promoting the rational allocation of medical resources. By leveraging online platforms, hospitals can more accurately assess patient needs and medical habits, enabling more efficient resource distribution (Al-Mamary & Shamsuddin, 2015). This can alleviate the strain on medical resources in high-demand areas and improve overall service delivery efficiency.

The market potential for Hospital Online Services is immense. As public concern over health issues grows, alongside an increasing demand for convenient healthcare options, the online healthcare services market has seen significant growth (Babin et al., 2023). This booming trend presents vast business opportunities, not only for healthcare providers but also for technology companies involved in digital health. The development of applications like virtual health consultations, as highlighted by Xiang, B., Patanasiri, A., & Poonyaprapha, P. (2024), reflects the growing integration of digital solutions into healthcare, providing opportunities to better serve patients while enhancing business prospects.

The expansion of AI-driven services also plays a key role in modernizing healthcare services. Guo, L., & Cai, Y. (2024) highlight how AI chatbots can influence consumer behavior in online platforms, which may have similar implications for healthcare. AI-powered chatbots can enhance patient engagement, helping them navigate hospital services more effectively, improving patient satisfaction, and reducing administrative burdens.

Moreover, the potential of online media and digital influencers is increasingly relevant in healthcare. Tangtenglam, S., & Chatkaewnapanon, Y. (2022) examine how digital media influencers shape consumer decision-making, which is a strategy that can be leveraged to boost engagement with Hospital Online Services. This trend points to the importance of building trust and improving communication through online channels, which can positively affect patient behavior and service utilization.

To summarize, there are multiple compelling reasons to study Hospital Online Services. These services not only enhance the quality and efficiency of healthcare, improve patients' experiences, and promote the rational allocation of medical resources, but they also hold substantial market potential (Ajzen, 1991). As healthcare services continue to evolve digitally, understanding these dynamics will be crucial for both the academic exploration and practical implementation of digital health strategies. Therefore, conducting in-depth research and exploration in this field is of great practical significance and value, contributing to the further innovation and development of the healthcare service industry.

Research Objective

This study will conduct an empirical analysis to validate the theoretical model, explore the impact of employee satisfaction on the willingness to engage in Hospital Online Services behavior, and reveal the relationship between multiple variables.

Research hypothesis:

H1: Satisfaction significantly affects Behavioral Intention to use hospital online registration services.

H2: Social Influence significantly affects Behavioral Intention to use hospital online registration services.

H3: Facilitation Conditions significantly affect Behavioral Intention to use hospital online registration services.

H4: Perceived Usefulness significantly affects Attitude toward hospital online registration services.

H5: Perceived Ease of Use significantly affects Attitude toward hospital online registration services.

H6: Attitude significantly affects Behavioral Intention to use hospital online registration services.

Research Methodology

The research design for this study is quantitative, employing a cross-sectional survey to gather data. It is anchored on the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), aiming to understand the factors that could influence patients' behavioral intentions when engaging with online hospital services.The methodology is divided into five key components: population and sample, research tools, data collection, data analysis, and the conceptual framework.

1. Population and sample

This study selected users from three hospitals in Shanghai, China. Many patients who go to these hospitals for treatment use online hospital registration. The sample size meets the research requirements. This research onducted a study on Factors Affecting Patents' Attitude and Behavioral intention of using Hospital Online Services through online data collection. These three hospitals are Renji Hospital Shanghai 、Shanghai JiaoTong University Ruijing Hospital、Zhongshan Hospital，Fudan University.

This study used non probability sampling procedures. Researchers conducted a sampling survey of three institutions in Shanghai, China. The target audience is patients with online hospital registration experience in Shanghai. Table 1 demonstrated the specific sampling for this study.

Table 1 Population and sample size from the selected hospitals

Hospital Name	Number of patients per day	Sample Size
Renji Hospital Shanghai	7031	137
Shanghai JiaoTong University Ruijing Hospital	7397	144
Zhongshan Hospital，Fudan University	11297	219
Total	25725	500

Source: Shanghai Health Status Report (2023)

2. Research tools

According to Bell's (2010) definition, a questionnaire is a systematic tool used to collect consistent information from a specific group of respondents. Through questionnaire surveys, researchers were able to obtain standardized feedback from a large number of participants within a specific time period, providing a foundation for subsequent data analysis. Questionnaire is an economically effective tool that can collect a large amount of data in a relatively short period of time. Whether distributed through mail, email, or online platforms, the cost of questionnaires is relatively low, and compared to face-to-face or telephone surveys, questionnaire surveys require less time investment (Bryman, 2012).

Therefore, based on the purpose of this study, we refer to the questionnaire development process of previous researchers. This study first referred to previous research results and used objective consistency techniques to design and analyze the questionnaire. The questionnaire mainly consists of three sections. The first part was the choice of questionnaire. The second part includes seven variables, specifically: Satisfaction Social Influence、Facilitation Condition、Perceived Usefulness、Perceived Ease of Use、Attitude、Behavioral Intention。 The third Boone is the basic demographic information of the interviewee.

3. Data collection

The two steps and data collection of this study are pilot testing and primary investigation. Researchers have done a lot of preparation work to ensure the smooth progress of data collection. This study conducted pilot data collection and analysis based on the research of Biernacki et al. (1981). Researchers collected data from three hospitals in Shanghai, China. These data support further large-scale data collection in this study. The preliminary test results indicate that the scale items in this study have good reliability and consistency. On this basis, researchers conducted large-scale questionnaire distribution and data collection. The study collected data using non probability sampling techniques . Feedback data containing 500 samples.

4. Data analysis

This study uses a combination of descriptive analysis and inferential statistics to test the proposed hypotheses through structural equation modeling (SEM). In order to ensure the accuracy and scientificity of the model, this study used SPSS and AMOS software for data analysis, and focused on using confirmatory factor analysis (CFA) to verify the reliability,

convergence validity, and discriminant validity of the measurement model. Firstly, in descriptive analysis, researchers conducted a preliminary exploration of the basic characteristics of the data, including the distribution of samples, the description of central and discrete trends. This provides a solid foundation for subsequent inference and statistics. Meanwhile, in order to ensure the validity of the data, researchers use methods such as detecting extreme values and handling missing values to ensure the integrity and consistency of the data. In this study, P-value is the standard for measuring whether the hypothesis test results have statistical significance. Generally speaking, when the P-value is less than 0.05, it indicates that the hypothesis test results are significant, rejecting the null hypothesis and indicating that the independent variable has a significant impact on the dependent variable (Anderson & Gerbing, 1988). Inference statistics, through parameter estimation and hypothesis testing, can deeply reveal the potential relationships between variables and provide important basis for verifying research hypotheses.

To further validate the effectiveness of the research model, Wes used confirmatory factor analysis (CFA). In addition, researchers further tested the reliability of the model by constructing composite reliability (CR), which is generally considered acceptable when the CR value is greater than 0.6 (Fornell & Larcker, 1981). In terms of validity, this study focused on testing convergent validity and discriminant validity. In this study, discriminant validity was evaluated by comparing the squared correlation coefficients between AVE and each construct. When AVE is greater than the square of the correlation coefficient, it indicates good discriminant validity (Fornell & Larcker, 1981). After verifying the reliability and validity, Wes further used structural equation modeling (SEM) to test the conceptual model of this study.

5. Conceptual framework

We used structural equation modelling (SEM) to address the research objectives of this study. In evaluating the conceptual framework and measurement model, We used SPSS and AMOS. As mentioned in previous research (Anderson & Gerbing, 1988), we used SEM to analyze the research model to test the variables' internal consistency and discriminant validity. In this study, We tested the hypothesized relationships in the research model, the model fit, and the estimated factor structure. Through the two techniques of measurement modelling and structural modelling, We performed the completed analysis of the research model.

This framework highlights the interactions and interactions between the core concepts, revealing the complex processes by which they collectively shape individual behavioral intentions. By gaining a deeper understanding of these concepts and their relationships, we can more effectively predict and intervene in the individual's behavioral decision-making process (Figure 1).
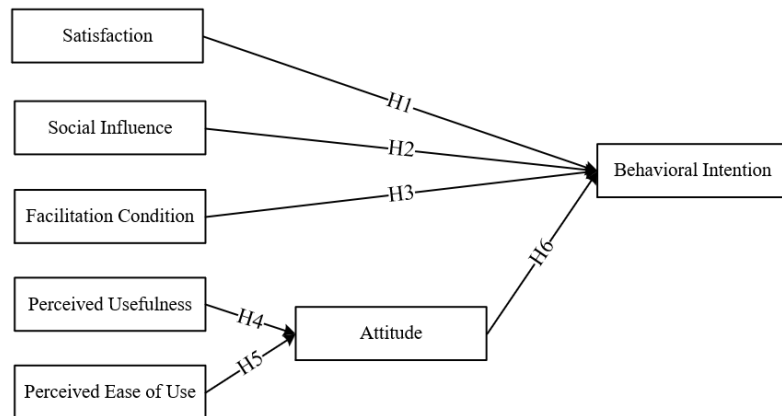
Figure 1 Conceptual Framework Source: Created by the author

6. Research Scope

The conceptual framework in this study mainly includes the following theoretical foundations: the Technology Acceptance Model (TAM) proposed by Davis (1989); Next is the Unified Theory of Acceptance and Use of Technology（UTAUT）, which is an important theoretical model in the field of information technology acceptance proposed by scholars such as Venkatesh et al in 2003. During the analysis process, structural equation modeling (SEM) was used to validate the relevant variables and investigate the relationship between Satisfication, Social Influence, Facilitation Condition, Perceived Usefulness, Perceived Ease of Use, Attitude, and Behavioral Intent.

In terms of theory

Technology Acceptance Model (TAM):

The TAM model hypothesizes that perceived usefulness and perceived ease of use directly affect the user's attitude, which in turn affects his behavioral intention, and ultimately determines the user's usage behavior (Davis, 1989). Specifically, perceived ease of use not only directly affects user attitudes, but also indirectly influences user attitudes through perceived usefulness. At the same time, perceived usefulness and user attitude jointly determine behavior intention, and behavior intention directly determines user use behavior. This hypothetical path forms the basic framework of the TAM model.

Unified Theory of Acceptance and Use of Technology（UTAUT）

Its foundation comes from multiple theoretical models, including the Technology Acceptance Model (TAM), Planned Behavior Theory (TPB), Incentive Model, etc. (Davis, 1989; Fishbein & Ajzen, 1975)，By integrating these models, UTAUT provides a more comprehensive and unified framework for technology acceptance research.

In terms of Empirical Evidence research

Structural Equation Modeling (SEM)

This study addresses the reality of imbalanced and underfunded healthcare systems in developing countries, aiming to reveal how to promote telemedicine services more widely and sustainably. Especially after the epidemic, telemedicine has gradually become an important component of medical services, but its acceptance is still low. Therefore, this study attempts to

analyze patients' behavioral intentions and understand the main driving factors that affect their adoption of telemedicine (Anderson & Srinivasan, 2003).

The purpose of this article is to construct an article on Satisfaction, Behavioral Intention, Social influence, Perceived Usefulness, Conceptual Framework for Perceived Ease of Use, Attitude, and Facilitation Condition. These core concepts play a crucial role in individual decision-making and behavior formation, and influence each other, collectively shaping individual behavior patterns. Satisfaction is a key factor influencing behavioral intention. In the mHealth setting, patient satisfaction positively influences behavioral intentions, i.e., satisfied patients are more likely to exhibit re-use or recommendation behaviors. Social influence has a significant effect on behavioral intention. In e-money services, an individual's behavioral intentions are influenced by those around them (e.g., family, friends), and these influences play a role through mediating variables such as payment habits. The Technology Acceptance Model (TAM) states that perceived usefulness is an important factor in determining behavioral intentions. When individuals find a technology or system useful to them, they are more likely to have a positive intent to use it. The TAM also highlights the impact of perceived ease of use on behavioral intentions. When individuals find a technology or system easy to use, they are more likely to have positive intentions. Attitude is an individual's evaluation or inclination towards an object or behavior, which directly affects behavioral intentions. A positive attitude is more likely to lead to positive behavioral intentions. Facilitating conditions (e.g., resources, support, environment, etc.) have a positive impact on behavioral intentions. When individuals are confronted with favorable facilitation conditions, they are more likely to exhibit specific behavioral intentions. Satisfaction is a leading factor for behavioral intention, and high satisfaction often leads to positive behavioral intention. Social influence influences behavioral intentions by shaping an individual's values, beliefs, and attitudes. Perceived usefulness and perceived ease of use work together on attitudes, which in turn affect behavioral intentions. When individuals perceive a technology or system to be useful and easy to use, they are more likely to have a positive attitude, leading to positive behavioral intent. Attitude is the direct antecedent of behavioral intention, which determines whether an individual is willing to perform a certain behavior. Facilitative conditions provide the necessary support for the realization of behavioral intentions. When facilitation conditions are sufficient, individuals are more likely to translate behavioral intentions into actual actions.

Research Results

1. Demographic Information

Demographic information collected from participants. In terms of education level, the majority are junior college, undergraduate, graduate students, and above, with numbers of 153, 101, and 143, accounting for 30.91%, 20.4%, and 28.89%, respectively; From the perspective of occupation, the number of Students, Employed/Worker, Retiree, and Other is 99, 155, 114, and 127 respectively, accounting for 20%, 31.31%, 23.03%, and 25.66% respectively; From the gender perspective, the number of males and females is 244 and 251 respectively, accounting for 49.29% and 50.71% respectively; From the age perspective, the numbers of 18-30, 31-50, and Above 50 are 164, 192, and 139, respectively, accounting for 33.13%, 38.79%, and 28.08%, respectively(Table 2).

Table 2 Demographic Profile Source: Created by the author

Items	Categories	N	Percent (%)
Educational level	High school and below	98	19.8
	junior college	153	30.91
	undergraduate	101	20.4
	Graduate students and above	143	28.89
Occupation	Student	99	20
	Employed/Worker	155	31.31
	Retiree	114	23.03
	Other	127	25.66
Gender	Male	244	49.29
	Female	251	50.71
Age	18-30	164	33.13
	31-50	192	38.79
	Above 50	139	28.08
Total		495	100

2. Confirmatory Factor Analysis (CFA)

This paper used confirmatory factor analysis (CFA) to measure each variable in the conceptual framework of this study. AVE's Satisfaction, Social Influence, Facilitation Condition, Perceived Usefulness, Perceived Ease of Use, Attitude, and Behavioral Intention are 0.63, 0.585, 0.527, 0.659, 0.646, 0.623, and 0.574 respectively, and AVE meets the standards; The satisfaction, social influence, facilitation condition, perceived usefulness, perceived ease of use, attitude, and behavioral intention of CR are 0.836, 0.849, 0.816, 0.885, 0.879, 0.832, and 0.802, indicating that CR meets the standard.

In Table 3, the coefficient values of Satisfaction, Social Influence , Facilitation Condition, Perceived Usefulness, Perceived Ease of Use, and Attitude Behavioral Intention are 0.793, 0.765, 0.726, 0.812, 0.804, 0.789, and 0.758, respectively. Therefore, the discriminant validity meets the standard (Table 3).

In Table 4, the coefficient values of Satisfaction, Social Influence , Facilitation Condition, Perceived Usefulness, Perceived Ease of Use, and Attitude   Behavioral Intention are 0.793, 0.765, 0.726, 0.812, 0.804, 0.789, and 0.758, respectively. Therefore, the discriminant validity meets the standard.

Table 5 showed the convergent validity and discriminant validity for this study. the fitting effect meets the standard.

Table 3 Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Variables	No. of Item	Cronbach's Alpha	CR	AVE
Satisfaction	3	0.833	0.836	0.63
Social Influence	4	0.848	0.849	0.585
Facilitation Condition	4	0.815	0.816	0.527
Perceived Usefulness	4	0.885	0.885	0.659
Perceived Ease of Use	4	0.879	0.879	0.646
Attitude	3	0.832	0.832	0.623
Behavioral Intention	3	0.802	0.802	0.574

Note: CR = Composite Reliability, AVE = Average Variance Extracted
Source: Created by the author

Table 4 Discriminant Validity

	Satisfaction	Social Influence	Facilitation Condition	Perceived Usefulness	Perceived Ease of Use	Attitude	Behavioral Intention
Satisfaction	0.793						
Social Influence	0.205	0.765					
Facilitation Condition	0.196	0.193	0.726				
Perceived Usefulness	0.122	0.207	0.326	0.812			
Perceived Ease of Use	0.141	0.227	0.225	0.431	0.804		
Attitude	0.238	0.366	0.313	0.322	0.347	0.789	
Behavioral Intention	0.283	0.327	0.382	0.352	0.26	0.601	0.758

The diagonally listed value is the AVE square roots of the variables
Source: Created by the author

Table 5 Goodness of Fit for Confirmatory Factor Analysis (CFA)

Fit index	Critical value	Current Value	result
Chi-square		442.074	
Degrees of Freedom		259	
Chi-square /degrees of freedom	<3	1.707	Comply with standards
RMSEA	<0.10	0.038	Comply with standards
GFI	> 0.8	0.935	Comply with standards
AGFI	> 0.8	0.919	Comply with standards
RFI	>0.9	0.917	Comply with standards
NFI	>0.9	0.929	Comply with standards
IFI	>0.9	0.969	Meet standards
TLI	>0.9	0.964	Meet standards
CFI	>0.9	0.969	Meet standards

Remark: CMIN/DF = the ratio of the chi-square value to degree of freedom, GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, NFI = normalized fit index, IFI = Incremental Fit Indices, CFI = comparative fit index, TLI = Tucker Lewis index, and RMSEA = root mean square error of approximation
Source: Created by the author

3. Structural Equation Model (SEM)
Table 6 shows the final situation of the structural equation model results.
The standardized regression coefficient value of Attitude <---Perceived Usefulness is 0.263, P=0.000<0.001. Therefore, the impact of Perceived Usefulness on Attitude is positive and significant ;
Attitude <---Perceived Ease of Use is 0.282, P=0.000<0.001. Therefore, the impact of Perceived Ease of Use on Attitude is positive and significant ;
Behavioral Intention <--- The regression coefficient value of Satisfaction is 0.135, P=0.003<0.01. Therefore, the impact of Satisfaction on Behavioral Intention is positive and significant ;
Behavioral Intention <--- The regression coefficient value of Social Influence is 0.097, P=0.034<0.05. Therefore, the impact of Social Influence on Behavioral Intention is positive and significant ;
Behavioral Intention <--- The regression coefficient value of   Facilitation Condition is 0.236, P=0.000<0.001. Therefore, the impact of Facilitation Condition on Behavioral Intention is positive and significant ;
The regression coefficient value of Behavioral Intention<---Attitude is 0.612, P=0.000<0.001. Therefore, the impact of Attitude on Behavioral Intention is positive and significant ;

Table 6 Goodness of Fit for Structural Equation Mode（SEM）

		Estimate	SE	CR	P	Estimate
Attitude	Perceived Usefulness	0.267	0.058	4.577	***	0.263
Attitude	Perceived Ease of Use	0.272	0.056	4.895	***	0.282
Behavioral Intention	Satisfaction	0.128	0.044	2.93	0.003	0.135
Behavioral Intention	Social Influence	0.091	0.043	2.115	0.034	0.097
Behavioral Intention	Facilitation Condition	0.211	0.043	4.876	***	0.236
Behavioral Intention	Attitude	0.553	0.05	11.039	***	0.612

Source: Created by the author

4. Research Hypothesis Testing Result

The final hypothesis test results are shown in Table 7, which shows that the assumptions H1-H6 are valid.

Table 7 Hypothesis Result of the Structural Model

symbol	Hypothesis	Results
H1	Satisfaction has significant affect on Behavioral Intention	Supported
H2	Social influence has significant impact on Behavioral Intention	Supported
H3	Facilitation condition has significant impact on Behavioral Intention	Supported
H4	Perceived Usefulness has significant impact on Attitude	Supported
H5	Perceived Ease of Use has significant impact on Attitude.	Supported
H6	Attitude has significant impact on Behavioral Intention.	Supported

Note: *p<0.05
Source: Created by the

Discussion

This study explores the factors influencing patients' attitudes and intentions toward using online registration systems in Shanghai municipal hospitals, highlighting both the theoretical and practical significance of these factors and how they interact to shape patient behavior.

Using a quantitative approach, data were collected through questionnaires and analyzed with SPSS and AMOS. The results showed that several key factors significantly impact patients' attitudes and behavioral intentions. Satisfaction with the system was found to significantly influence patients' intention to continue using it, aligning with Oliver's (1980) argument that satisfaction affects future behavioral intentions. Social influence, including the roles of family, friends, and medical institutions, also played a crucial role in shaping patients' adoption intentions, consistent with the UTAUT model (Venkatesh et al., 2003), which identifies social influence as a key determinant of technology adoption. Facilitating conditions, such as resources and support, were another significant factor, supporting Taylor & Todd's (1995) assertion that external support is essential for technology acceptance. Furthermore,

perceived usefulness and ease of use were found to significantly affect patients' attitudes toward the system, confirming the Technology Acceptance Model (TAM) by Davis (1989).

The findings provide valuable insights into the complex decision-making process behind technology adoption. The interaction between perceived usefulness, ease of use, satisfaction, social influence, and facilitating conditions shapes patient behavior, ultimately influencing their decision to adopt online registration systems.

Overall, the results confirm the applicability of established models like TAM and UTAUT in the context of hospital online registration systems. However, the study also reveals that cultural factors, such as the collectivist nature of Chinese society, amplify the role of social influence in patients' decisions. These insights deepen our understanding of the unique factors affecting technology adoption in this cultural context. The study identifies satisfaction, social influence, facilitating conditions, perceived usefulness, and perceived ease of use as key drivers of the adoption of hospital online registration systems. These factors not only individually influence patients' attitudes and behavioral intentions but also interact to create a stronger combined effect. The interaction among these factors shapes patients' behavior and influences their decision to adopt and use the system. The findings underscore the importance of considering multiple, interconnected factors when designing and promoting online registration services, as each factor contributes to fostering a positive attitude and intention toward adoption. Therefore, a holistic approach that addresses both the individual and interactive effects of these variables is crucial for the successful implementation of digital health solutions.

Suggestion

Future studies should consider including additional factors such as patients' health status, trust in technology, and concerns about privacy and data security to create a more comprehensive model for understanding patient behavioral intentions. Longitudinal research methods could help track changes in patients' attitudes and intentions over time, identifying long-term factors and trends. Comparative studies across different regions and cultures may provide valuable insights into how socio-cultural backgrounds influence patients' intentions toward adopting online healthcare services.

Policymakers should prioritize increasing digital literacy, especially in rural and economically disadvantaged areas, to bridge the digital divide and ensure equitable access to online healthcare services. It is also important to establish strong regulatory frameworks for data security to protect patients' data and foster trust in online healthcare systems. Additionally, a policy framework should incentivize the adoption and enhancement of hospital online registration systems, making them more user-friendly, accessible, and efficient.

Hospitals should focus on enhancing the user experience of online registration systems by reducing technical failures, simplifying the process, and providing clear instructions. Leveraging social networks and media can raise awareness of online registration services, with patient testimonials and word-of-mouth being effective tools. Comprehensive technical support, including online tutorials and 24-hour helplines, should be provided to help patients with varying digital literacy navigate the system. Continuous innovation and feedback collection should be prioritized to improve system functionality and patient satisfaction.

Further research should explore the role of trust in technology, particularly regarding privacy concerns, and how it influences technology adoption. Investigating specific behavioral patterns across different demographic groups can help understand adoption trends. Cross-national studies could also be valuable in assessing how cultural differences impact the adoption and use of online healthcare platforms.

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