Migration Letters

Volume: 20, No: S11(2023), pp. 813-832

ISSN: 1741-8984 (Print) ISSN: 1741-8992 (Online)

www.migrationletters.com

Exploring the Users' Intention to Use Online Hospital Service Platform Based on Extend UTAUT

Peng Qin[1], Hongmei Yang[2], Songyu Jiang[3*]

Abstract

The online hospital service platform (OHP) has the potential to address the societal dilemma of inadequate and uneven distribution of medical resources. However, users exhibit a relatively low intention to use the platform. This study aims to integrate the Unified Theory of Acceptance and Use of Technology (UTAUT), the Health Belief Theory (HBT), and the Information System Success Mode (ISSM) to explore the factors influencing users' intention to use OHP. A total of 503 valid responses were collected from Sichuan Province, China, and an empirical test was conducted using a structural equation model. The results indicate that the research model accounts for 57.8% of the variance in users' intention to use OHP. Facilitating conditions, performance expectancy, and effort expectancy significantly and positively influence users' intention to use OHP. Furthermore, system quality, information quality, and service quality significantly impact users' intention to use OHP through both effort expectancy and performance expectancy. However, distinct from previous research, it is noted that social influence factors on users' intent to use does not exhibit significance.

Keywords: *Health belief theory; Information system success mode; Unified theory of acceptance and use of technology; Online hospital service platform; Structural equation model.*

1. Introduction

The world's population is growing at an alarming rate, and at the same time, healthcare services struggle to meet the needs of the masses. Driven by increased public health awareness, there is a growing demand for medical and health services, mainly manifested as active demands for vital sign monitoring, chronic disease prevention, and health intervention (Hu et al., 2022). Unfortunately, in most nations, especially in developing economies, people do not have access to necessary medical services due to a shortage of medical professionals, insufficient hospitals or clinics, and high medical costs (Kaium et al., 2020; Ma et al., 2016).

The distribution of medical resources in China is uneven, and the supply and demand of urgently needed medical resources and medical services are unbalanced. China accounts

[1] Rattanakosin International College of Creative Entrepreneurship, Rajamangala University of Technology Rattanakosin, Phutthamonthon, 73170, Thailand

[2] Rattanakosin International College of Creative Entrepreneurship, Rajamangala University of Technology Rattanakosin, Phutthamonthon, 73170, Thailand

[3] Rattanakosin International College of Creative Entrepreneurship, Rajamangala University of Technology Rattanakosin, Phutthamonthon, 73170, Thailand, jiang.song@rmutr.ac.th

for 22% of the global population but possesses less than 2% of the world's medical resources, with 80% of medical resources concentrated in urban areas, consequently leading to scarcities of medical resources in rural and remote regions (Liu, 2019) .With the acceleration of population aging, the escalating healthcare demands and the scarcity and uneven distribution of healthcare resources has emerged as a primary impediment to the progress of the healthcare sector in China.

The online hospital service platform (OHP) is an online medical platform combining online and offline healthcare services, which is a combination of information technology and traditional medical (Chang & Chen, 2016).OHPs use information technology to extend the hospital's medical resources onto the Internet. This enables medical institutions to directly offer a myriad of medical and health services to patients, significantly enhancing resource allocation efficiency and mitigating societal healthcare costs (Chang & Chen, 2016; Alzahrani et al.,2022; Capponi & Corrocher,2022). Through OHPs, patients can engage in real-time communication with medical professionals, ensuring timely adjustments to medications and heightening treatment efficacy. It not only addresses the issue of uneven distribution of medical resources but also reconciles the contradiction between inadequate medical resource supply and the escalating health demands of the populace (Degavre et al., 2022; Zhao et al., 2022).Online medical can reduce the waste of medical resources and medical costs. Limited high-quality medical resources can be reserved for those in emergency situations, especially during the outbreak of COVID-19(Tian & Wu, 2022).

Online healthcare offers many benefits to patients and providers, but consumers do not always embrace them (Alaboudi et al., 2016 ; Rahimi et al., 2018). The global failure rate of remote healthcare projects stands at 75% and the proportion escalates to 90% in developing countries (Rahi et al., 2021). Online hospital platform was found to be valuable in monitoring, diagnosing, and maintaining patient records (Ryu, 2012; Kayyali et al., 2017). OHPs have benefited both patients and physicians during the COVID-19 outbreak, however, the degree of user acceptance remains relatively low (Napitupulu et al., 2021; Bullock et al., 2017).

The lack of user acceptance is a concern shared by both internet healthcare service providers and users. The existing literature has predominantly focused on the acceptance among medical professionals (Lin, 2017; Hsu & Wu, 2017), and the factors that explain patient acceptance are often ignored. In the literature on online hospitals, factors influencing users' intention to use include user perception, technology perception and environment perception (Al-Fadhli et al., 2018; Rahi et al., 2021; Hosseinzadeh et al., 2023). Early research indicates that the acceptance of information technology is a complex phenomenon that necessitates the integration of multiple theories for comprehensive exploration (Jackson et al., 2013; Yamin & Alyoubi, 2020). However, most studies are based on a theory and lack an examination of contextual variables, which is a significant limitation of antecedent studies (Or & Tao, 2016).Although the literature has revealed a large number of studies in the field of online healthcare, few study has been conducted on the users' intention to use OHPs during the COVID-19 (Rahi et al, 2021).

This study combines the UTAUT with the ISSM, contextualized within the context of COVID-19, to conduct an in-depth investigation into the factors influencing user's intention to use the OHPs. The research model of this study examined the direct effects of performance expectancy, effort expectancy, social influence, facilitating condition, perceived susceptibility, and perceived severity on users' intention to use OHPs. Beyond the direct effects, this study also treats performance expectancy and effort expectancy as mediating factors to explore the indirect effects of system quality, information quality, and service quality on online hospital service platform usage, thereby expanding the scholarly discourse surrounding this subject.

Rest of the paper is structured as follows. Section 2 gives details of the relevant literature related to OHP, research model and associated hypotheses. Methodology is illustrated in section 3. Data analysis and results are presented in Section 4. Section 5 discusses the analysis and research implications associated with the study. Limitation and future research directions associated with the study are presented in Section 6.

2. Literature Review

2.1 UTAUT

In response to the inadequacies and restrictions observed in utilizing models such as the Technology Acceptance Model (TAM), Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), Social Cognitive Theory (SCT), and Diffusion of Innovation Theory (DOT) to forecast user acceptance and adoption of novel information technologies, Venkatesh et al. (2003) proposed the UTAUT. Many researchers have investigated user intention to use online healthcare services based on the UTAUT model, confirming the significant impacts of social influence, facilitating conditions, performance expectancy, and effort expectancy on users' intention to use.The four original variables of UTAUT were retained in this study to investigate users' intention to use OHP, This approach is supported by earlier studies conducted in the field of online healthcare by Yu et al. (2021), Alkhalifah(2022), Batucan et al(2022).

Drawing from the study's context, performance expectancy is defined as the extent to which users perceive benefits when using OHPs, while effort expectancy is defined as users' perception of the difficulty when utilizing the internet hospital platform. Prior research has established the significant impact of performance expectancy and effort expectancy when assessing users' adoption of online healthcare applications. The higher the user's performance expectancy and effort expectancy, the stronger the user's intention to use OHP (Nie & Zhang, 2021). In mobile health applications, performance expectancy has been found to be a key determinant of user acceptance (Kaium et al., 2020). Social influence is defined as the extent to which users' use of OHP is influenced by social environment, policies, relatives and friends. Previous studies have confirmed that people's intention to use OHPs is influenced by social environment such as introductions from relatives and friends, publicity and promotion, and policies (Lu, 2014; Zhong, 2017; Tian & Wu, 2022). Users are more likely to engage with online healthcare systems if they receive encouragement from colleagues or supervisors (MO et al., 2019).Facilitating conditions refers to the degree to which users perceive that the existing technology and infrastructure can support their use of the OHP. Studies have shown that facilitating condition significantly affects users' intention to use online healthcare during the pandemic (Napitupulu et al., 2021; Siripipatthanakul et al., 2023). Based on earlier research, the following hypotheses were proposed:

H1：Social influence positively affects the users' intention to use OHP.

H2：Facilitating conditions positively affects the users' intention to use OHP.

H3：Performance expectancy positively affects the users' intention to use OHP.

H4：Effort expectancy positively affects the users' intention to use OHP.

2.2 ISSM

The theoretical basis of the DeLone & McLean information system successful model derives from the mathematical theory of communication proposed by Shannon and Weaver (1949). Mason (1978) and DeLone and McLean (1992) have further extended this theory to investigate patient behaviour towards information system use. The latest research model by DeLone and McLean encompasses dimensions such as service quality, information quality, intention to use, system quality, and user satisfaction (DeLone and

McLean, 2003). Previous scholars used the ISSM to study the intention of online medical users, and the results confirmed that information quality, service quality, and system quality positively affected the users' intention to use OHP (Rahi, 2022; Al-Fadhli et al., 2018; Bian, 2019).

Within the context of online medical applications, system quality refers to the functional diversity, accuracy, and ease of use of platforms, apps, or portals provided by online hospitals (Bian, 2022). System quality has been established as a key factor for predicting users' technology adoption behaviors (Kaium et al., 2020). System quality can directly affect users' performance expectancy and effort expectancy, and then affect users' intention to use OHP (Boon, 2019; Bian, 2020; Rahi et al., 2021). This study holds that better system quality can improve ease of use and elevate medical efficiency. Therefore, the hypothesis is as follows:

H5：System quality positively affects effort expectancy

H6：System quality positively affects performance expectancy.

Information quality refers to the completeness, accuracy, relevance and timeliness of information provided by the OHP (Lee & Kim, 2017; Bian, 2022). Research has indicated that inappropriate and complex information technologies can decrease user utilization rates (Nicolaou et al, 2013). Conversely, accurate and appropriate information contributes to enhanced usability and elevated task performance (Gorla et al., 2010; Kaium et al., 2020), and robust information quality can heighten user adoption intent (Al-Fadhli, 2018; Rahi, 2022).Therefore, the hypothesis is as follows:

H7: Information quality positively affects effort expectancy.

H8: Information quality positively affects performance expectancy.

Service quality refers to the user's evaluation of the services provided by the OHP (Delone and McLean, 2003; Bian, 2022). Research has indicated a connection between users' decision to not adopt online healthcare applications and inadequate platform service quality (Kaium et al,2020). Service quality has a significant impact in measuring the users' intention to adopt technology platform (Kaium et al, 2020; Jandavath & Byram, 2016). OHP is essentially an information service platform. This study hypothesizes that high service quality enhances users' confidence, thereby boosting their task and effort performance, subsequently reinforcing their usage intention. Therefore, the hypothesis is as follows:

H9: Service quality positively affects effort expectancy.

H10: Service quality positively affects performance expectancy.

System quality, information quality and service quality, as the fundament variables of the ISSM, and research confirms their significant impact on users' performance expectancy and effort expectancy (Boon, 2019; Bian, 2020; Adeyemi & Issa, 2020; Rahi et al., 2021). Performance expectancy and effort expectancy are the core variables of UTAUT, and research has demonstrated their significant influence on users' usage intention (Lu, 2014; Yang, 2022). From the perspective of OHP users, this paper integrates the ISSM and the UTAUT model to evaluate the impact of online hospital platform quality on users' intention to use OHP. This paper holds that system quality, information quality and service quality directly affect the effort expectancy and performance expectancy of users respectively, and the effort expectancy and performance expectancy are used as mediating variables to affect the users' intention to use. Therefore, the hypothesis is as follows:

H11：Performance expectancy has a mediated relationship between system quality and the users' intention to use OHP.

H12 : Performance expectancy has a mediated relationship between information quality and the users' intention to use OHP.

H13 : Performance expectancy has a mediated relationship between service quality and the users' intention to use OHP.

H14 : Effort expectancy has a mediated relationship between system quality and the users' intention to use OHP.

H15 : Effort expectancy has a mediated relationship between information quality and the users' intention to use OHP.

H16 : Effort expectancy has a mediated relationship between service quality and the users' intention to use OHP

2.3 HBT

The health belief model is one of the most comprehensive models proposed to explain preventive health behaviors. According to the HBT, individual behavior is generally influenced by the importance an individual places on specific goals and the perceived likelihood that a specific action will achieve such a goal (Hsieh & Tsai, 2013). After the outbreak of COVID-19, many scholars have employed the Health Belief Model to investigate factors influencing people's preventive behaviors against COVID-19, including motivations for COVID-19 vaccine uptake and preventive behaviors among healthcare professionals (Reiter et al., 2020; Wu, 2020; Detoc et al., 2020).

Perceived severity and perceived susceptibility are two core concepts of the HBT. Based on the social background of COVID-19, this study defines the perceived severity as an individual's perception of the potential physical suffering or mortality, as well as the adverse impact on work and family after being infected with COVID-19(Alharbi et al., 2022). Perceived susceptibility is defined as individuals' perception of their likelihood of contracting COVID-19 (Alharbi et al., 2022).

The COVID-19 has profoundly impacted various aspects of human life. People have had to take actions in their daily activities to cope with the pandemic. Even after the pandemic subsides, such changes in human behavior might persist. This study argues that if users are aware of the severity of COVID-19 and the likelihood of being susceptible to infection, they are more likely to make preventive decisions and choose OHP. Therefore, the following hypothesis is proposed:

H17 : Perceived severity positively affects the users' intention to use OHP

H18 : Perceived susceptibility positively affects users' intention to use OHP

In this study, based on the UTAUT research model, system quality, information quality and service quality are taken as the antecedents of performance expectancy and effort expectancy. The purpose is to explore whether system quality, information quality and service quality affects users' intention to use OHP through the mediation of performance expectancy and effort expectancy. Furthermore, to enhance the explanatory power of usage intention behavior towards OHPs, this study incorporates the impact of the COVID-19 on users' intention to use. The Research model is shown in Figure 1.

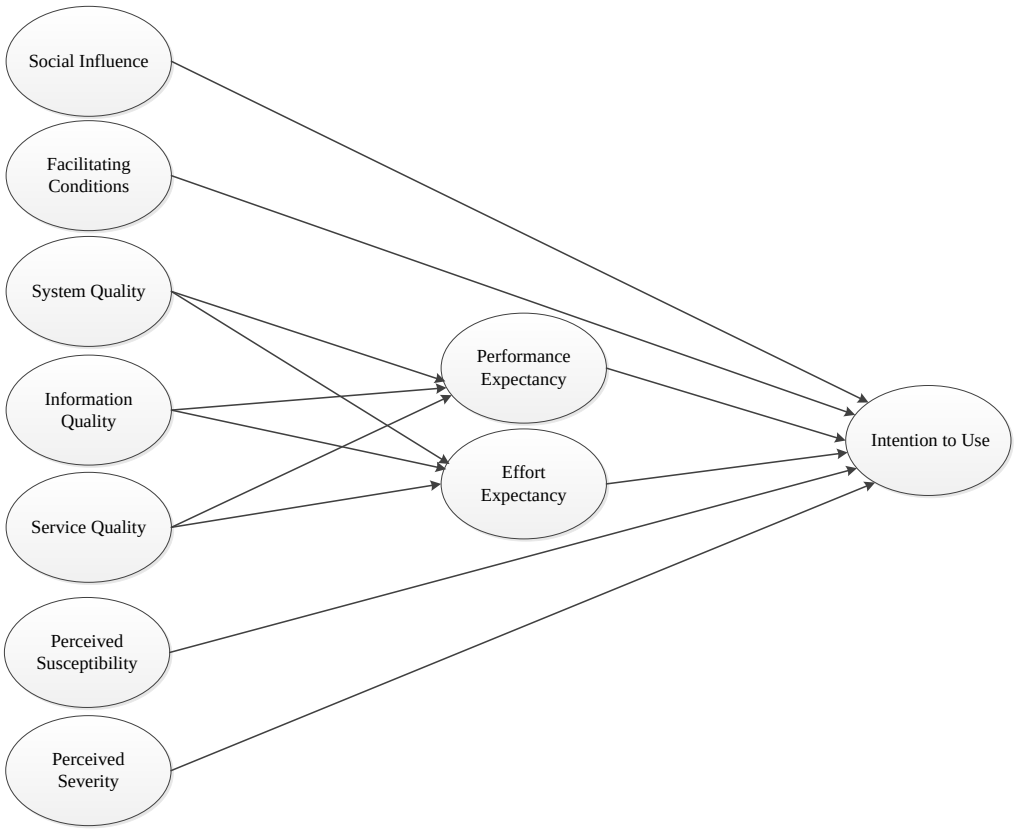

Figure 1 Research model

3. Research Methods

3.1 Instrument Development

In this research, data collected through questionnaires were used to verify the proposed hypotheses. The questionnaire comprises three sections. The first part is a questionnaire preamble, including the research scope and ethical considerations. The second part entails demographic data, incorporating age, gender, education background, income status, occupation. The third part is dedicated to scale component, consisting of 32 questions among 10 distinct constructs. The measurement scale was referenced to Lee et al. (2021), Yang (2022), Rahi et al. (2021), Bian(2020),Hoque et al.(2017), Ahadzadeh et al.(2015) ,Venkatesh & Zhang (2010). The measurement instruments utilized in the literature were appropriately adjusted based on the research context. All construct items were evaluated using a 7-point Likert scale, with a score of 1 indicating strongly disagree and 7 indicating strongly agree (Yamin & Alyoubi,2020).

Table 1 The Measurement Scale

Constructs	Items	Sources
Social Influence (SI)	SI1: The promotion of pandemic prevention and control measures and the support of national policies will affect my utilization of online hospital platform SI2: The people who are important to me believe that I should use online healthcare services to avoid unnecessary cross-infections. SI3: After the outbreak of the COVID-19, people	Lee et al.(2021); Yang (2022)

	around me began to use the online hospital platform	
Facilitating Conditions (FC)	FC1: I have the necessary resources to use online hospital services, such as the Internet and mobile phone.	Lee et al.(2021); Yang (2022)
	FC2: The online hospital platform is more compatible and can be used by a variety of mobile phones and computers	
	FC3: The service items of the online hospital platform are complete and perfect, which can meet my medical needs during the COVID-19 pandemic	
Performance Expectancy (PE)	PE1 : Using the online hospital platform has saved me a lot of time for medical consultations	Venkatesh & Zhang (2010), Yang (2022)
	PE2 : Various functions of the online hospital platform have provided me with a lot of convenience (such as appointment registration, online return visit, nucleic acid test results query and other functions)	
	PE3 : Using the online hospital platform service has enhanced my ability to manage my health during the COVID-19 pandemic	
	PE4 : Using the online hospital helped me manage my daily health care during the pandemic	
Effort Expectancy (EE)	EE1 : Is it easy for me to learn how to use online hospital platform service	Rahi et al. (2021); Venkatesh & Zhang(2010)
	EE2 : It is very easy to use the online hospital platform to register, pay and buy medicine	
	EE3 : It's easy for me to interact with the Internet hospital platform	
System Quality (SQ)	SQ1: The online hospital service platform has a friendly interface	Rahi et al. (2021); Bian(2020)
	SQ2: The online hospital service platform runs stably and has complete functions	
	SQ3: The online hospital platform has complete functions	
	SQ4: When using the online hospital platform, the loading service is rapid	
Information Quality (IQ)	IQ1: The information provided by the online hospital platform is accurate	Rahi et al. (2021); Bian(2020)
	IQ2: Information posted on online hospital platform will be updated in time	
	IQ3:The content released by the online hospital platform is authentic and reliable	
Services Quality (SeQ)	SeQ1: The online hospital service platform offers excellent online medical services.	Rahi et al. (2021); Bian(2020)
	SeQ2: I am satisfied with the service provided by	

	online hospital service platform	
	SeQ3: Online hospital pays attention to customer care and patient treatment	
Perceived Susceptibility（PSu）	PSu1 : During the pandemic, I think I am very likely to be infected with COVID-19	Ahadzadeh et al.(2015)
	PSu2: Offline medical treatment is likely to increase the probability of contracting COVID-19	
	PSu3: During the COVID-19 pandemic, in order to avoid cross infection, I prefer to use the online hospital platform	
Perceived Severity (PSe)	PSe1 : It is easy to cause underlying diseases after infection with COVID-19	Ng et al. (2009); Yang (2022)
	PSe2 : Being infected with COVID-19 will affect my work and daily life	
	PSe3: Contracting COVID-19 can lead to physiological impairments	
Intention to Use (UI)	UI1 : I am willing to use the online hospital platform	Hoque et al.(2017) ; Yang (2022)
	UI2 : I am willing to continue to understand other functions of the online hospital platform	
	UI3 : I believe I will use the online hospital platform in the future	

3.2 Survey Design and Data Collection

The target population of this study is the users of OHPs in Sichuan province, and participants must meet the criteria of having utilized OHPs. WenJuanXing, a web platform dedicated to data collection, was used for questionnaire distribution and data collection. Convenience sampling approach was used in reference to previous studies on online healthcare (Kaium et al., 2020; Rahi et al, 2021). A total of 852 questionnaires were distributed through email, QQ and WeChat among citizens of Sichuan. Of the 852 questionnaires, 302 questionnaires were deleted as responses had not used the OHP. 20 were disregarded due to low response durations. Furthermore, 27 questionnaires exhibiting uniformity in responses across indicators were excluded. Ultimately, 503 valid questionnaires remained.

In terms of demographic data, 247 of the 503 respondents were male, accounting for 49.11%, and 256 were female, accounting for 50.89%.Participants aged 18 to 30 comprised 292 individuals, representing 58.05%, and 156 participants aged 31 to 40 years, accounting for 31.01%. 39 participants were 41-50 years old, accounting for 7.75%; 16 participants were over 51 years old, accounting for 3.18%. In terms of educational background, 50 respondents held a high school diploma or lower, constituting 9.94%; 45 participants possessed a college degree, accounting for 8.95%; 319 respondents had obtained a bachelor’s degree, representing 63.42%; and 89 individuals had pursued graduate or postgraduate studies, amounting to 17.69%. In regards to monthly income, 46.52% of participants reported earnings below 3000 yuan, while 36.78% fell within the income range of 3000 to 8000 yuan, and 16.7% reported monthly income exceeding 8000 yuan.

4. Data Analysis

4.1 The Reliability and Validity Analysis

CFA was used to verify the reliability and validity of the model. The internal consistency of the scale was verified by Cronbach's alpha (α) testing. To ensure appropriate construct reliability, it is necessary to ensure that α and composite reliability (CR) values should be greater than 0.70 (Hair et al., 2010; Rahi et al., 2021). Standardized factor loadings >0.5(P<0.05), CR>0.7 and average variance extraction (AVE)>0.5 indicating that the model has good convergence validity. In addition, if the AVE square root value surpasses the absolute value of the correlation coefficient of the two potential variables, the model demonstrates robust discriminant validity (Rahi et al., 2021).The factor loadings, α, CR and AVE value of the measured model are presented in Table 2. The factor loadings all exceeded 0.7, CR values exceeded 0.8, and all constructs had α values greater than 0.8. All indicators meet the reliability and validity criteria of the measurement model.

Table 2 The mean, standard deviation, factor loadings, α, CR, AVE of measurement model

Items	M	SD	Factor loadings	α	AVE	CR
SQ1	5.73	1.11	0.811	0.900	0.694	0.901
SQ2	5.63	1.08	0.861			
SQ3	5.49	1.16	0.816			
SQ4	5.41	1.17	0.843			
IQ1	5.39	1.09	0.901	0.915	0.783	0.916
IQ2	5.38	1.07	0.908			
IQ3	5.35	1.09	0.845			
SeQ1	5.07	1.09	0.893	0.887	0.728	0.889
SeQ2	5.17	1.10	0.873			
SeQ3	5.13	1.15	0.790			
PE1	5.72	.96	0.921	0.933	0.782	0.935
PE2	5.71	.90	0.879			
PE3	5.63	1.03	0.870			
PE4	5.47	1.10	0.867			
EE1	5.55	1.04	0.882	0.869	0.701	0.875
EE2	5.66	.97	0.853			
EE3	5.56	1.12	0.772			
SI1	5.23	1.20	0.754	0.845	0.649	0.847
SI2	5.32	1.14	0.850			
SI3	5.25	1.11	0.810			
FC1	5.56	.98	0.814	0.864	0.685	0.867
FC2	5.49	1.04	0.898			
FC3	5.52	1.08	0.766			
PSu1	5.22	1.09	0.714	0.833	0.634	0.838

PSu2	5.57	1.02	0.847			
PSu3	5.61	1.00	0.822			
PSe1	5.56	1.03	0.752			
PSe2	5.64	1.07	0.827	0.853	0.662	0.854
PSe3	5.66	1.06	0.858			
UI1	6.02	.96	0.834			
UI2	5.89	.94	0.839	0.888	0.725	0.888
UI3	5.99	1.01	0.880			

The discriminant validity of the scale is presented in Table 3, where the bold numbers on the diagonal are the square root of the AVE for each variable. The correlation values of all constructs exceed 0.7 and higher than the correlation coefficients with other constructs, which indicates that the scale has robust discriminant validity.

Table 3 Result of Discriminate Validity Tests

	SQ	IQ	SeQ	PE	EE	SI	FC	PSu	PSe	UI
SQ	0.833									
IQ	0.021	0.885								
SeQ	0.079	0.038	0.853							
PE	0.405	0.294	0.294	0.885						
EE	0.476	0.325	0.365	0.087	0.837					
SI	0.067	0.209	0.105	0.122	0.061	0.806				
FC	0.067	0.093	0.037	0.072	0.063	0.114	0.828			
PSu	0.055	0.125	0.155	0.074	0.126	0.129	0.087	0.796		
PSe	0.040	0.112	0.009	0.081	0.058	0.059	0.055	0.065	0.814	
UI	0.381	0.325	0.303	0.458	0.413	0.164	0.313	0.407	0.38	0.851

4.2 Structural Equation Model

4.2.1 Fit Test of Structural Equation Model

The research model underwent estimation utilizing AMOS 26.0. The outcomes of the structural equation model's fitness evaluation are presented in Table 4. The results reveal that the actual values of all fit indices surpass the recommended thresholds (Hair et al., 2010). The congruence between the model and the data is evident, indicating a favorable model fit and its suitability for data analysis.

Table4 Results of Fit Test of Structural Equation Model

Test index	Absolute Fit Index					Incremental Fit Index			Minimalist Fit Index		
	χ^2	df	χ^2/df	RMSEA	GFI	NFI	RFI	CFI	PNFI	PCFI	PGFI
Standard			1~3	＜0.08	＞0.9	＞0.9	＞0.9	＞0.9	＞0.5	＞0.5	＞0.5
Model fit values	666.670	452	1.475	0.031	0.925	0.937	0.931	0.979	0.854	0.892	0.792
Fit or not			YES	YES	YES	YES	YES	YES	YES	YES	YES

4.2.3 Structural Equation Model Path Analysis

The fitting results of the structural equation model can be observed in Figure 2, while the primary path analysis results of the model are presented in Table 5.

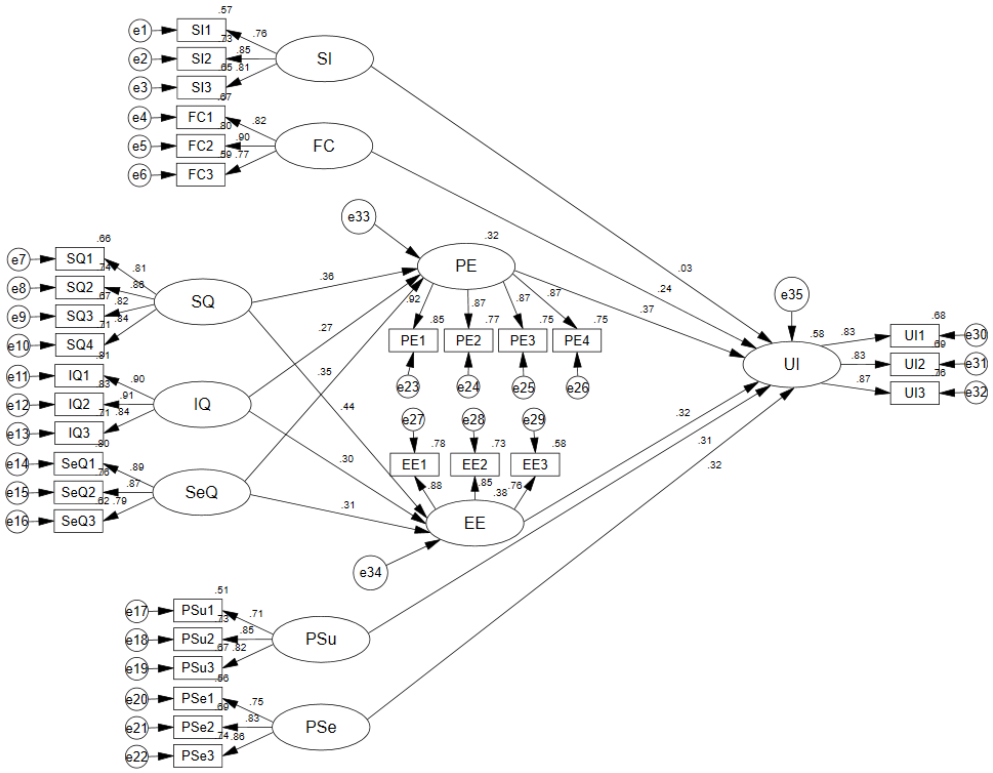

Figure 2 Fitting Results of Structural Equation Model

Table 5 Model Path Analysis Results

Path	Non-standardized Path Coefficient	Standardized Path Coefficient(β)	S.E.	C.R.	P	R^2
SQ→EE	0.421	0.441	0.043	9.846	***	
IQ→ EE	0.299	0.302	0.042	7.107	***	0.382
SeQ→EE	0.311	0.311	0.044	7.141	***	
SQ→PE	0.338	0.363	0.041	8.313	***	
IQ→PE	0.259	0.269	0.041	6.391	***	0.325
SeQ→PE	0.338	.0347	0.043	7.910	***	
PE→UI	0.321	0.367	0.036	8.870	***	
EE→UI	0.274	0.322	0.036	7.683	***	
SI→UI	0.024	0.028	0.033	0.734	.463	0.578
FC→UI	0.222	0.238	.036	6.121	***	
PSu→UI	0.298	0.315	0.038	7.793	***	
PSe→UI	0.269	0.316	0.034	7.940	***	

Note : C.R. is the test statistic that affects path significance, ***P＜0.001, $R^2$is the squared multiple correlation.

System quality significantly positively affects effort expectancy(β=0.441,C.R.=9.846,P＜0.001), confirming the validity of hypothesis H5.Information quality significantly positively affects effort expectancy(β=0.302,C.R.=7.107,P＜0.001), corroborating hypothesis H7. Service quality significantly positively affects effort expectancy(β=0.311,C.R.=7.141,P＜0.001),H9 is established.

System quality significantly positively affects performance expectancy(β=0.363, C.R.=8.313,P＜0.001), confirming the validity of hypothesis H6. Information quality significantly positively affects performance expectancy(β=0.269,C.R.=6.391,P＜0.001), corroborating hypothesis H8; Service quality significantly positively affects performance expectancy(β=0.347, C.R.=7.91,P＜0.001), H10 is established.

Social influence (SI) has no significant influence on users' intention to use OHP(C.R.=0.734, P=0.463＞0.05),H1 is not valid. Facilitating condition significantly positively affects the users' intention to use OHP(β=0.238, C.R.=6.121, P＜0.05), H2 is established ; Performance expectancy positively affects the users' intention to use OHP(β=0.367,C.R.=8.87,P＜0.001), H3 is established ; Effort expectancy positively affects the users' intention to use OHP(β=0.322,C.R.=7.683,P＜0.001), H4 is established; Perceived severity significantly positively affects users' intention to use OHP(β=0.316,C.R.=7.94,P＜0.001), H17 is established ; Perceived susceptibility significantly positively affects users' intention to use OHP(β=0.315,C.R.=7.793,P＜0.01),H18 is established. The comprehensive effect value of the BI, represented by R^2, is 0.578, demonstrating that the model elucidates 57.8% of the variance in BI.

4.3 The Result of Moderating Effect Test

Bootstrap method was used to assess the mediating role of performance expectancy and effort expectancy in the model. The number of resamples was set at 5000. The verification of the established influence effects using the Bootstrap method hinges on the calculation of 95% confidence intervals for mediated, total, and direct effects. An influence effect is deemed significant when its 95% confidence interval does not encompass zero.（Preacher & Hayes, 2008）. The results of the mediation effect test are shown in Table 6.

Table 6 Tests of mediating effect of each mediating influence path in the model

Mediated Influence Path	Intermediate coefficient	Standard error	95% Confidence Intervals	
			Lower	Upper
SQ→ UI	0.275	0.037	0.204	0.348
SQ→PE→UI	0.133	0.025	0.086	0.186
SQ→EE→UI	0.142	0.030	0.085	0.203
IQ→ UI	0.196	0.026	0.148	0.248
IQ→PE→UI	0.099	0.020	0.062	0.139
IQ→EE→UI	0.097	0.021	0.060	0.142
SeQ→ UI	0.228	0.024	0.179	0.274
SeQ→PE→UI	0.128	0.025	0.081	0.179
SeQ→EE→UI	0.100	0.022	0.060	0.148

The results in Table 6 reveal that the mediating effect of system quality (SQ) on users' intention to use (UI) through performance expectancy (PE) is 0.133,with a 95% confidence interval (CI) [0.086,0.186].The 95% CI does not encompass 0, indicating the mediating effect is valid, and H11 is established ; The mediating effect of SQ on UI through effort expectancy (EE) is 0.142, with a 95%CI [0.085, 0.203], thus H14 is established ; The combined mediating effect of SQ on UI through the two mediating variables is 0.275.

The mediating effect of information quality (IQ) on UI through PE is 0.099, with a 95%CI [0.062, 0.139], thus H12 is established ; The mediating effect of IQ on UI through EE is 0.097, with a 95%CI [0.060, 0.142],thus H15 is established ; The combined mediating effect of information quality on UI through the two mediating variables is 0.196.

The mediating effect of service quality (SeQ) on UI through PE was 0.128, 95%CI was [0.081, 0.179], and H13 is established. The mediating effect of SeQ on UI through EE is 0.100, with a 95%CI [0.060, 0.148], thus H16 is established. The aggregate mediating effect of SeQ on UI through the two mediating variables is 0.228. The results of research hypothesis testing of the model are shown in Table 7.

Table 7 Result of Testing the Structure Equation Model

Hypothesis	Content	Decision
H1	Social influence positively affects the users' intention to use OHP.	Rejected
H2	Facilitating condition positively affects the users' intention to use OHP.	Supported
H3	Performance expectancy positively affects the users' intention to use OHP.	Supported
H4	Effort expectancy positively affects the users' intention to use OHP.	Supported
H5	System quality positively affects effort expectancy.	Supported
H6	System quality positively affects performance expectancy.	Supported
H7	Information quality positively affects effort expectancy.	Supported
H8	Information quality positively affects performance expectancy.	Supported
H9	Service quality positively affects effort expectancy.	Supported
H10	Service quality positively affects performance expectancy.	Supported
H11	Performance expectancy has a mediated relationship between system quality and the users' intention to use OHP.	Supported
H12	Performance expectancy has a mediated relationship between information quality and the users' intention to use OHP.	Supported
H13	Performance expectancy has a mediated relationship between service quality and the users' intention to use OHP.	Supported
H14	Effort expectancy has a mediated relationship between system quality and the users' intention to use OHP.	Supported
H15	Effort expectancy has a mediated relationship between information quality and the users' intention to use OHP.	Supported
H16	Effort expectancy has a mediated relationship between service	Supported

	quality and the users' intention to use OHP.	
H17	Perceived severity positively affects the users' intention to use OHP.	Supported
H18	Perceived susceptibility positively affects users' intention to use OHP.	Supported

5. Discussion and Conclusion

5.1 Discussion of Research Result

The empirical research approach was employed in this study, wherein data were collected through a questionnaire survey. The following conclusions were drawn from the study's empirical outcomes:

1) Performance expectancy and effort expectancy have a significant positive impact on the users' intention to use OHPs. The willingness of the public to utilize OHPs hinges on the platforms offering commendable system quality, information quality, and service quality, along with convenience and cost-saving benefits for users. When people choose to use the OHP, the ease of use and usefulness of the platform are the primary factors to consider（Chu et al.,2018; Kamal et al.,2020）.

Performance expectancy and effort expectancy have been demonstrated as significant factors influencing users' intention to use OHPs (MO et al., 2019; Siripipatthanakul et al., 2023; Alkhalifah, 2022). Both performance expectancy and effort expectancy positively impact user acceptance of mobile healthcare (Alkhalifah, 2022). Moreover, system quality significantly affects users' intention to use online health services through performance expectancy (Bian, 2020). The findings of this study align with previous research, underscoring the validity of the study's results.

2) Social influence has no significant effect on the users' intention to use OHPs. The result is consistent with Napitupulu et al (2021) and Lee (2021). However, this conclusion is inconsistent with the conclusion of most scholars. Earlier research indicates that the public intention will be affected by social factors such as recommendations from relatives and friends, media promotion, and national policies（MO et al.,,2019; Byun & Park,2021）. Nonetheless, the outcomes of this study oppose these prevailing perspectives.

There are two potential reasons for the result: On the one hand, people have formed the habit of online medical treatment during the epidemic, and they are no longer affected by the surrounding environment; On the other hand, people now have more and more of their own opinions and awareness of prevention. When confronted with external information, they are empowered to evaluate their own needs and exercise judgment in determining whether to adopt a novel element.

3) Facilitating conditions have a significant positive impact on the users' intention to use OHPs. This study corroborates the findings of Alkhalifah (2022) and Batucan et al. (2022). This conclusion highlights that users perceive a stronger inclination to engage with OHPs when the national infrastructure is well-developed, platform functionalities are comprehensive, and technological applications are extensive. Therefore, in order to improve users' intention to use the OHP, it is necessary to improve the existing network facilities, improve the existing technology, and reduce the geographical limitations of OHP.

4) Perceived susceptibility and perceived severity have significant positive effects on users' intention to use OHPs. The result proves that the public's intent to use OHPs increase due to the COVID-19 pandemic. Aligned with the theory of perceived risk, the

greater the threat felt by the public, the greater the intention to use OHP（Yang, 2022）. Government promotion of pandemic awareness contributes to encouraging individuals to adopt preventive behaviors (Karimy et al., 2021). Based on these research findings, during a pandemic outbreak, governments should leverage media campaigns to communicate the gravity of the situation, encourage users to adopt essential preventive measures, implement measures to prevent infection, and elevate the utilization of OHP.

5.2 Theoretical Implications

OHPs represent an emerging healthcare model with relatively limited theoretical exploration. Existing literature indicates that the predominant focus of papers related to online hospitals centers around their establishment and developmental status. While research in areas like mobile healthcare, telemedicine, and internet-based healthcare is more extensive, there is a notable dearth of dedicated studies concerning user intention toward OHPs. Previous studies mainly focused on the user behavior of online hospital apps, telemedicine, and online health websites, while there were few studies on users' intention to use OHPs (Lu, 2014; Siripipatthanakul et al., 2023). From the perspective of the research subjects, this study contributes to the extension of research in the field of online healthcare. Additionally, previous investigations have predominantly focused on healthcare professionals such as doctors and nurses, with limited emphasis on patient vision (Lin, 2017; Hsu & Wu, 2017). This paper explores the user's intention to use OHP, which enriches theoretical exploration within the domain of online healthcare.

Previous research theories, mainly based on the TAM, TRA, TPB, SCT, DOT, ISSM, etc., have limited explanations for the behavioral intentions of online medical users. Most research models accounting for an explanatory variance ranging from 17% to 53% (Venkatesh et al., 2003; Kim et al., 2016; Alkhalifah, 2022). This study integrates the UTAUT, ISSM and HBT into online medical platform, builds a comprehensive user intention research model of OHP. This contribution significantly enhances the current landscape of online healthcare research, making a meaningful contribution to the corpus of literature in the domain of online medical services. The results of structural equation modeling revealed that the research model explained 57.8% of the variance of users' intention to use OHP.

The research model examines the direct effects of ISSM factors on performance expectancy and effort expectancy. Previous studies on the impact of system quality, service quality, and information quality on user intention to use have primarily focused on direct effects (Alkhalifah, 2022; Adeyemi & Abdulwahab, 2020). This study extends prior research by introducing performance expectancy and effort expectancy as mediating variables to investigate the indirect effects of system quality, information quality, and service quality on user intention to use. The results confirm that information quality, system quality and service quality are the main antecedents of performance expectancy and effort expectancy.

Another theoretical contribution of this study is to integrate the social context of COVID-19 into the research model, exploring the effects of perceived susceptibility and perceived severity on users' intention to use, which expands the UTAUT research model. Previous studies have seldom delved into the influence of social context on users' intentions. The research can offer valuable insights for future investigations into user intention to use online healthcare services. In response to the COVID-19 context, drawing from the HBT, two variables of perceived susceptibility and perceived severity were proposed to deeply explore the impact of social environment on users' intention to use OHPs. Therefore, this study provides a deeper understanding of user intention to use online healthcare services and offers insights for research pertaining to users' actual usage behaviors.

5.3 Managerial Implications

Firstly, this study reveals that information quality, system quality and service quality are the main antecedents of user performance expectancy and effort expectancy. They significantly affect users' intention to use through performance expectancy and effort expectancy. Therefore, as online medical service providers and decision makers, they need to fully consider the actual needs of users, improve the service functions of online hospitals, improve the usefulness and ease of use of OHPs, and ensure information quality and service quality. On the one hand, the user interface of the platform should be simplified, the usage workflows of each function should be optimized, and the ease of use and convenience of the platform should be improved. On the other hand, emphasis should be placed on the safeguarding of user information to mitigate potential privacy risks.

Secondly, government should facilitate the development of OHPs to improve the accessibility and affordability of medical services. Specifically, measures should be taken to strengthen investments in network infrastructure and reduce non-clinical expenses associated with online healthcare (such as increasing the coverage of 4G network and reducing data usage costs), thereby enhancing the accessibility and affordability of the system. Furthermore, government should improve laws and regulations, clarify the main responsibility of online hospitals, and improve the relevant policies on occupational access, medical service pricing and talent training. At the same time, the supervision of online diagnosis and treatment, patient data security, online medical quality should be strengthened to reduce the public's perceived risks.

Thirdly, government and enterprises should strengthen publicity and guide users to rationally choose OHPs. During various epidemic outbreaks, users might not undertake preventive measures if they are not fully cognizant of the severity of potential infections. Therefore, in the event of a future pandemic, publicity should be strengthened to increase users' intention to use OHP to avoid excessive users and non-essential visits occupying limited medical resources, and alleviate the burden of physical hospitals. Furthermore, the survey conducted in this study unveiled a segment of the population unfamiliar with OHPs, representing an untapped pool of potential users with healthcare needs. In light of this, medical institutions should intensify their promotional efforts concerning OHPs by disseminating information to the general public about the concepts, features, functionalities, and benefits of OHPs.

5.4 Limitations and Future Research

This study expanded the indirect effects of system quality, information quality and service quality on users' intention to use and filled the research gap on the impact of COVID-19 on users' intention to use OHP. However, this study still has certain limitations.

Firstly, this study explored the influence factors of users' intention to use OHPs, but did not study users' use behaviors for specific online hospital platforms. Therefore, in the future, researchers can investigate the actual use behavior of users based on specific OHP, and explore the factors that affect users' use behavior of OHPs combined with the expectation confirmation theory.

Secondly, this study is a cross-sectional research. It is only for users in a certain period of time, and there is no dynamic study across time periods. Researchers can investigate the behavioral intention of online medical users in a longitudinal context, conduct comparative studies, and deeply explore the impact of social influence on users' intention to use OHP in the future.

Thirdly, this study does not include all the influencing factors of users' intention to use OHP. OHPs, while valuable as a means of providing health services from both economic and medical standpoints, are still subject to the influences of cultural, technological, social, organizational, and political factors. This is particularly evident in developing countries (Alkhalifah, 2022). Therefore, existing research models can be extended to

other technology or service-related factors, such as cultural differences, technological innovation, etc.

5.5 Conclusion

This study combined the social context of COVID-19, integrated the UTAUT, HBT, ISSM to explore users' intention to use OHPs. The results reveal that system quality, information quality and service quality indirectly affect users' intention to use OHP through performance expectancy and effort expectancy. Facilitating condition, perceived susceptibility and perceived severity significantly affect users' intention to use OHPs. In contrast to prior research, social influence has no significant effect on users' intention to use OHPs.

This study theoretically validates the applicability of the UTAUT, HBT and ISSM in exploring user intention towards OHP. These theories can effectively be applied to the study of user behavioral intentions in online healthcare contexts. The findings of this research can offer valuable insights for businesses, governments, and healthcare institutions aiming to develop OHPs. For businesses and healthcare institutions, it is crucial to prioritize the quality of online healthcare platforms. This involves developing user-friendly interfaces and enhancing system functionality according to user needs, thereby improving usability and practicality to boost user intention. Governments can contribute by formulating policies that enhance basic network services, intensify supervision and management of online healthcare services, provide relevant insurance services, enhance platform credibility, and increase user confidence in utilizing OHPs.

References

Adeyemi, I. O., & Issa, A. O. (2020). Integrating information system success model (ISSM) and technology acceptance model (TAM): proposing students' satisfaction with university web portal model. Record and Library Journal, 6(1), 69-79.

Ahadzadeh, A. S., Sharif, S. P., Ong, F. S., & Khong, K. W. (2015). Integrating health belief model and technology acceptance model: an investigation of health-related internet use. Journal of Medical Internet Research, 17(2), 35-64.

Alaboudi, A., Atkins, A., Sharp, B., Balkhair, A., Alzahrani, M., & Sunbul, T. (2016). Barriers and Challenges in Adopting Saudi Telemedicine Network: The Perceptions of Decision Makers of Healthcare Facilities in Saudi Arabia. Journal of Infection and Public Health, 9(6), 725–733.

Al-Fadhli, A. A., Othman, M., Ali, N. A., & Al-Jamrh, B. A. (2018). Understanding health professionals' intention to use telehealth in Yemen: Using the DeLone and McLean IS success model. In Recent Trends in Information and Communication Technology: Proceedings of the 2nd International Conference of Reliable Information and Communication Technology (IRICT 2017), 627-638.

Alharbi, N. S., AlGhanmi, A. S., & Fahlevi, M. (2022). Adoption of health mobile apps during the COVID-19 lockdown: a health belief model approach. International journal of environmental research and public health, 19(7), 41-79.

Alkhalifah, T. (2022). A structural equation modelling of governing factors influencing patient acceptance of mobile health in Saudi Arabia: a modified UTAUT model. International Journal of E-Services and Mobile Applications (IJESMA), 14(1), 1-17.

Alzahrani, A. I., Al-Samarraie, H., Eldenfria, A., Dodoo, J. E., & Alalwan, N. (2022). Users' intention to continue using mHealth services: A Dematel approach during the COVID-19 pandemic. Technology in society.

Batucan, G. B., Gonzales, G. G., Balbuena, M. G., Pasaol, K. R. B. & Gonzales, R. R. (2022). An extended UTAUT model to explain factors affecting online learning system amidst COVID-19 pandemic: The case of Philippine higher education. Frontiers in Artificial Intelligence, 8(5), 84-94.

Bian, X. T. (2020). Quality evaluation of online health care website and research on user's willingness to continue using (Master's thesis, Zhejiang University of Technology).

Boonitt, S. (2019). Quality of health websites and their influence on perceived usefulness, trust and intention to use: an analysis from Thailand. Journal of Innovation and Entrepreneurship, 8(1), 1-18.

Bullock, D. R., Vehe, R. K., Zhang, L., & Correll, C. K. (2017). Telemedicine and other care models in pediatric rheumatology: an exploratory study of parents' perceptions of barriers to care and care preferences. Pediatric Rheumatology, 15, 1-8.

Capponi, G., & Corrocher, N. (2022). Patterns of collaboration in mHealth: A network analysis. Technological Forecasting and Social Change, 175.

Chang, C. F., Chen, R. J., Chen, P. C., & Liu, Y. X. (2021). Exploring behavioral intention to use a mobile health education website: An extension of the UTAUT2 model. Sage Open, 11(4).

Chang, Z., & Chen, M. (2016). Analysis of medical service mode and the trend of internet hospital. Chinese Journal of Health Informatics and Management, 13(6), 557-560.

Chu, X., Lei, R., Liu, T., Li, L., Yang, C., & Feng, Y. (2018). An Empirical Study on the Intention to Use Online Medical Service. In 2018 15th International Conference on Service Systems and Service Management (ICSSSM), 1-7.

DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: a ten-year update. Journal of Management Information Systems, 19(4), 9-30.

Degavre, F., Kieffer, S., Bol, D., Dekimpe, R., Desterbecq, C., Pirson, T., & Tubeuf, S. (2022). Searching for Sustainability in Health Systems: Toward a Multidisciplinary Evaluation of Mobile Health Innovations. Sustainability, 14(9), 52-86.

Exploring behavioral intention to use a mobile health education website: An extension of the UTAUT2 model. (2021). Sage Open, 11(4).

Gorla, N., Somers, T. M., & Wong, B. (2010). Organizational impact of system quality, information quality, and service quality. The Journal of Strategic Information Systems, 19(3), 207-228.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate data analysis: A global perspective (7th ed.). MacMillan.

Hoque, M. R., Bao, Y., & Sorwar, G. (2017). Investigating factors influencing the adoption of e-Health in developing countries: A patient's perspective. Informatics for Health and Social Care, 42(1), 1–17.

Hosseinzadeh, H., Ratan, Z. A., Nahar, K., Dadich, A., Al-Mamun, A., Ali, S., & Okely, A. (2023). Telemedicine Use and the Perceived Risk of COVID-19: Patient Experience. International Journal of Environmental Research and Public Health, 20(4), 30-61.

Hsieh, H. L., & Tsai, C. H. (2013). An Empirical Study to Explore the Adoption of Telehealth: Health Belief Model Perspective. Journal of Engineering Science & Technology Review, 6(2), 1-5.

Jackson, J. D., Mun, Y. Y., & Park, J. S. (2013). An empirical test of three mediation models for the relationship between personal innovativeness and user acceptance of technology. Information and Management, 50, 154-161.

Jandavath, R. K. N., & Byram, A. (2016). Healthcare service quality effect on patient satisfaction and behavioral intentions in corporate hospitals in India. International Journal of Pharmaceutical and Healthcare Marketing, 10(1), 48-74.

Karimy, M., Bastami, F., Sharifat, R., Heydarabadi, A. B., Hatamzadeh, N., Pakpour, A. H., & Araban, M. (2021). Factors related to preventive COVID-19 behaviors using health belief model among general population: a cross-sectional study in Iran. BMC Public Health, 21, 1-8.

Kamal, S. A., Shafiq, M., & Kakria, P. (2020). Investigating acceptance of telemedicine services through an extended technology acceptance model (TAM). Technology in Society, 60, 101212.

Kaium, M. A., Bao, Y., Alam, M. Z., & Hoque, M. R. (2020). Understanding Continuance Usage Intention of mHealth in a Developing Country. International Journal of Pharmaceutical and Healthcare Marketing, 14(2), 251–272.

Karimy, M., Bastami, F., Sharifat, R., Heydarabadi, A. B., Hatamzadeh, N.& Araban, M. (2021). Factors related to preventive COVID-19 behaviors using health belief model among general population: a cross-sectional study in Iran. BMC Public Health, 21, 1-8.

Kim, S., Lee, K. H., Hwang, H., & Yoo, S. (2016). Analysis of the factors influencing healthcare professionals' adoption of mobile electronic medical record (EMR) using the unified theory of acceptance and use of technology (UTAUT) in a tertiary hospital. BMC Medical Informatics and Decision Making, 16(1), 1-12.

Kamal, S. A., Shafiq, M., & Kakria, P. (2020). Investigating acceptance of telemedicine services through an extended technology acceptance model (TAM). Technology in Society, 60, 101212.

Kaium, M. A., Bao, Y., Alam, M. Z., & Hoque, M. R. (2020). Understanding Continuance Usage Intention of mHealth in a Developing Country. International Journal of Pharmaceutical and Healthcare Marketing, 14(2), 251–272.

Kamal, S. A., Shafiq, M., & Kakria, P. (2020). Investigating acceptance of telemedicine services through an extended technology acceptance model (TAM). Technology in Society, 60.

Karimy, M., Bastami, F., Sharifat, R., Heydarabadi, A. B., Hatamzadeh, N.& Araban, M. (2021). Factors related to preventive COVID-19 behaviors using health belief model among general population: a cross-sectional study in Iran. BMC Public Health, 21, 1-8.

Kamal, S. A., Shafiq, M., & Kakria, P. (2020). Investigating acceptance of telemedicine services through an extended technology acceptance model (TAM). Technology in Society, 60.

Karimy, M., Bastami, F., Sharifat, R., Heydarabadi, A. B., Hatamzadeh, N. & Araban, M. (2021). Factors related to preventive COVID-19 behaviors using health belief model among general population: a cross-sectional study in Iran. BMC Public Health, 21, 1-8.

Kayyali, R., Peletidi, A., Ismail, M., Hashim, Z., Bandeira, P., & Bonnah, J. (2017). Awareness and use of mHealth apps: a study from England. Pharmacy, 5(2), 33.

Lee, S., & Kim, B. G. (2017). The impact of qualities of social network service on the continuance usage intention. Management Decision, 55(4), 701-721.

Lin, H. C. (2017). Nurses' satisfaction with using nursing information systems from technology acceptance model and information systems success model perspectives: a reductionist approach. CIN: Computers, Informatics, Nursing, 35(2), 91-99.

Lu, J. J. (2014). Research on user acceptance behavior of medical and health websites based on UTAUT (Master's thesis, Gannan Normal University).

Ma, Y., Zhang, L., & Boswell, M. (2016). Inequities in the allocation of medical resources in China's Township Health Centers. China Agricultural Economic Review, 8(4), 637-646.

MO, O., Emuoyibofarhe, J. O., & Oladosu, J. B. (2019). A Modified Unified Theory of Acceptance And Use of Technology (UTAUT) Model For E-Health Services. Journal of Experimental Research, 7(3), 30-36.

Napitupulu, D., Yacub, R., & Putra, A. H. P. K. (2021). Factors influencing of telehealth acceptance during COVID-19 outbreak: extending UTAUT model. International Journal of Intelligent Engineering and Systems, 14(3), 267-281.

Nie L., & Zhang, K. L. (2021). Analysis on influencing factors of mobile medical service usage intention of chronic disease patients. Chinese Journal of Health Management, 38(6), 5-10.

Nicolaou, A. I., Ibrahim, M., & Van Heck, E. (2013). Information quality, trust, and risk perceptions in electronic data exchanges. Decision support systems, 54(2), 986-996.

Or, C., & Tao, D. A. (2016). A 3-month randomized controlled pilot trial of a patient-centered, computer-based self-monitoring system for the care of type 2 diabetes mellitus and hypertension. Journal of medical systems, 40, 1-13.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. Behavior research methods, 40(3), 879-891.

Rahi, S., Khan, M. M., & Alghizzawi, M. (2021). Factors influencing the adoption of telemedicine health services during COVID-19 pandemic crisis: an integrative research model. Enterprise Information Systems, 15(6), 769-793.

Rahi, S. (2022). Assessing individual behavior towards adoption of telemedicine application during COVID-19 pandemic: evidence from emerging market. Library Hi Tech, 40(2), 394-420.

Rahimi, B., Nadri, H., Afshar, H. L., & Timpka, T. (2018). A systematic review of the technology acceptance model in health informatics. Applied clinical informatics, 9(03), 604-634.

Ryu, S. (2012). Telemedicine: Opportunities and Developments in Member States: Report on the Second Global Survey on eHealth 2009 (Global Observatory for eHealth Series, Volume 2). Healthcare Informatics Research, 18(2), 153–155.

Siripipatthanakul, S., Limna, P., Sriboonruang, P., & Kaewpuang, P. (2023). Applying the TPB and the UTAUT models predicting intentions to use telemedicine among Thai people during the COVID-19 pandemic. International Journal of Computing Sciences Research, 7(1), 1362-1384.

Skar, A. M. (2021). An investigation of the factors influencing e-Health adoption in developing countries: evidence from Nigeria. Electronic Markets, 31(2), 325-342.

Tian, X. F., & Wu, R. Z. (2022). Determinants of the mobile health continuance intention of elders with chronic diseases: an integrated framework of ECM-ISC and UTAUT. International Journal of Environmental Research and Public Health, 19(16), 9980.

Venkatesh, V., & Zhang, X. (2010). Unified theory of acceptance and use of technology: US vs. China. Journal of Global Information Technology Management, 13(1), 5-27.

Wu, Z. L. (2020). A study on the effect of users' online health information searching behavior based on stimulus-body-response theory (Master's thesis, Anhui University).

Yang, Y. (2022). Study on influencing factors of intention to Use Internet Hospital in Tianjin in post-epidemic era (Master's thesis, Tianjin Normal University).

Yamin, M. A. Y., & Alyoubi, B. A. (2020). Adoption of telemedicine applications among Saudi citizens during COVID-19 pandemic: an alternative health delivery system. Journal of Infection and Public Health, 13(12), 1845-1855.

Zhao, S., Cao, Y., Cao, H., Liu, K., Lyu, X., Zhang, J., & Davidson, P. M. (2022). Chinese version of the mHealth app usability questionnaire: Cross-cultural adaptation and validation. Frontiers in Psychology, 13.

Zhong, S. Y. (2017). Research on Influencing Factors of mobile medical APP user Acceptance behavior based on UTAUT Theory. (Doctoral thesis, Hangzhou Normal University).