Print ISSN: 1738-3110 / Online ISSN 2093-7717
JDS website: http://www.jds.or.kr/
http://dx.doi.org/10.15722/jds.20.10.202210.105

Effects of Medical O2O Platform Quality Components on Continuous Use Intention to Information Distribution

Ju-Dong MYUNG[1], Bo-Young KIM[2]

Received: May 27, 2022. Revised: June 23, 2022. Accepted: October 05, 2022.

Abstract

Purpose: The digital healthcare business is rapidly growing due to the COVID-19 pandemic, and the medical service platform business based on smartphone apps is globally expanding. This study targeted medical information online to offline (O2O) platform users in the medical service field. It verified the effect relationship revealed in the continuous use intention of the platform with the mediation of platform quality components, namely perceived benefits, flow experience, and use satisfaction. **Research design, data and methodology:** Based on previous studies, three medical information O2O platform quality components, namely system quality, information quality, and service quality, were defined. And the questionnaire survey was carried out targeting 359 leading medical information O2O platform users in Korea. **Results:** As a result of the analysis, it was confirmed that system quality and service quality had a positive (+) effect on satisfaction and continuous use intention with the mediation of perceived benefits and flow experience. Meanwhile, information quality had a negative effect (-) on perceived benefits and flow experience and did not affect use satisfaction and continuous use intention. **Conclusions:** Consequently, it was ascertained that the system quality and service quality affecting user behavior and experience were more significant factors than information quality to medical information O2O platform users from the medical service aspect.

Keywords : O2O Platform, Distribution of Medical Information, Medical Service, Platform Quality, Continuous Use Intention

JEL Classification Code: M10, M30, L10, L81

1. Introduction

As the on-offline boundary is being collapsed due to the spread of new Information and Communication Technologies (ICT) convergence technologies, the size of the online to offline (O2O) service market providing new services linked with online and offline is rapidly growing (He et al., 2021; Lee & Yang, 2017). The O2O service is applied to various fields such as large-scale discount marts, accommodation, delivery, and transportation, rather than to a specific field, and it offers practical conveniences to consumers. The service has a characteristic where it can immediately identify and respond to customer use satisfaction (Shen et al., 2019; Xiao et al., 2019). Therefore, an era in which goods, assets, and services can be used freely at the user's desirable time, mode, and place through the Internet or mobile has arrived. Significantly, the O2O service has expanded and developed globally since the COVID-19 pandemic, obtaining technical conveniences, including convenient payment, position (location)-based service, context-based service, and quick delivery system (Gu et al., 2019; Kang et al., 2021).

1 First Author. Ph.D. Candidate, Seoul Business School, aSSIST University, South Korea. Email:jdmyung7@naver.com
2 Corresponding Author. Associate Professor, Seoul Business School, aSSIST University, South Korea. Email:bykim2@assist.ac.kr

The global O2O platform market size is projected to grow to USD 335.0 billion in 2025 (Ram, 2020). Consequently, each country in the world is laying the foundation of a legal system to diffuse O2O service and is fostering the O2O service as a national new growth engine (Wan et al., 2020). In the USA, Uber and Car Pool apps are being legalized, so entry barriers are initiatively being removed. A goods trade and distribution innovation policy through online and offline linkage was announced in China unprecedentedly. EU is active in abolishing regulations to vigorously use the O2O service in the consumer protection and employment policy direction (Xiao et al., 2019). In Korea, the O2O service business transaction amount in 2020 was KRW 126 trillion, up 29.6%, compared to KRW 97 trillion in 2019, and is continuously growing based on the government's support to foster the service (Kang et al., 2021).

The platform-centered information technology is changing the healthcare industry paradigm. A digital health platform means infrastructure offering an environment to collect and use data required for digital healthcare. It is discerned from the personal health record platform handling all health information, such as personal lifelog, medical treatment information, and genome information (Pan et al., 2017). The mobile healthcare industry based on the digital health platform can be understood as a fused field between the existing medical and health business and the IT industry, such as smart mobile devices and applications, cloud computing, and big data (Chi et al., 2016). A leading digital health platform, "Google Fit," supports users to inquire about results or analyze data by storing and managing health measurement information generated from various devices. Apple released a digital health platform, "HealthKit," and Apple combined it with health information and other institutions' medical services. Apple also subsequently released "ResearchKit" and "CareKit" and is building an ecosystem for clinical research and patient healthcare (Huh & Kim, 2019).

Moreover, personal health record- (PHR) and treatment record-based medical data information use and service platforms within the medical system are spreading amid the COVID-19 situation. The PHR platform means a platform offering an environment in which medical records and personal genome information can be comprehensively collected and managed in addition to the information collected from the digital health platform mentioned above (Zhao, 2020). As a typical example, Microsoft's "HealthVault" is a PHR integration management service in the USA, and it offers an environment where each user's treatment record can be integrated and managed. Life Semantics' "LifeRecord" was released as an open platform in which free linkage with a Third Party, a PHR collection and analysis platform, is possible.

In Korea, the National Health Insurance Service (NHIS) operates a PHR platform by which the personal health information that the NHIS has, including health examination information and health questionnaire, can be checked, and one's health data can be registered through My Health Bank (Park & Park, 2016). Such startups as 'Ttok Ttak' and 'Gooddoc' provide mobile-integrated healthcare services, such as an appointment with a doctor or a pharmacist, contactless treatment service, and various medical confirmation document issuing services beyond personal health information management. Recently, personal medical information platform services have been evolving into an intelligent medical service platform that maximizes the use of devices and infrastructure by applying prediction and analysis techniques. A trend of expanding into diversities of personal medical services through linkage with SNS channels, such as Facebook and chatbot, is being demonstrated (Byeon, 2020).

In such an environment, invigorating the personal medical information service is connected to service satisfaction and continuity discussions. When looking at existing previous studies, the relevant studies, including service quality and use intention, have been carried out, as the digital O2O platform service has been diffused within various industries, including food and beverage, restaurant, and real estate (Cachon et al., 2017; Tang et al., 2018; Selvaraj & Sundaravaradhan, 2020). However, most studies are related to healthcare, fitness, or bio information management in the medical platform (Kim et al., 2022; Lin et al., 2021; Gao & Su, 2017). Moreover, studies on consumption behaviors, service quality, and satisfaction with the medical information O2O platform handling personal medical information-based appointments with a doctor, information management, authentication (or certification), and document issuance are insufficient (Kim et al., 2021). At a time when medical settings are being shifted into digital healthcare to invigorate the medical information-based O2O platform service in the medical service industry, it is vital to identify user-desirable quality factors accurately (Du & Tang, 2014), prevent customer secession, enhance customer satisfaction, and promote continuous use intention (Lee et al., 2021).

This study investigated service quality characteristics centered on medical information offering an app, one of the medical O2O services, which examined the causal relationship between continuous use intention and the mediation of consumer-perceived benefits, flow experience, and service satisfaction. This study offers the medical information O2O platform service market development a direction, which has been rapidly growing since the COVID-19 pandemic and provides implications for firms' service consolidation measures.

2. Theoretical Background

2.1. Medical Service and O2O Platform

O2O platform is defined as a business model making value creation possible through the connection between sellers and buyers from a business model perspective (Tsai et al., 2013). It is a business model making a new value and rendering its exchange possible by connecting people, organizations, and resources in the interaction ecosystem using ICT. O2O platform aims to attract customers online based on the ICT technology and then induce them offline (Giao et al., 2019). Therefore, the O2O platform has a function to create a new value for the market and a catalyst function so that value exchange can be actively performed (Evans & Schmalesee, 2008). O2O platform is a two-sided platform classified as a software program, e-commerce platform, payment and banking platform, and participatory network platform depending on the value and function offered to consumers (Van Alstyne et al., 2016).

The current medical industry is changing into an ecosystem centered on predictable disease prevention and healthcare using big data. Attention to digital healthcare has increased because digital technology has rapidly evolved since the Fourth Industrial Revolution (Rožman et al., 2019). Digital healthcare is a field covering all ranges of healthcare that is fused with IT technology, including u-health, sHealth, and mHealth, with it being used in diverse stages such as prevention, diagnosis, management, and treatment (Jadczyk et al., 2019). Due to IT technology innovation, the medical paradigm shifts into customized medical service, precision medicine, and prevention and management. In the healthcare 3.0 era, expanding the goals of leading a healthy life by preventing and managing beyond disease treatment is arriving (Fei & Li, 2019).

Medical digitalization strengthens the customer service system, including treatment stability, service quality improvement, reduction of waiting time, easy accessibility, and cost savings (Li et al., 2012). As the medical information O2O platform, centered on a smartphone, is being consolidated, general consumers can easily use context-based customized services through the app, including medical institution search, waiting for situations, and medical appointment with a doctor. In the past, consumers made an appointment with a doctor and went to the medical institution on time, but now they can select a medical institution suitable for their location and time and receive treatment by checking even the order of appointment.

Contactless treatment services are popularized globally due to the COVID-19 pandemic, so various relevant platform businesses are emerging. With all these factors, medical services can be received: symptoms are recorded using a contactless treatment service platform; a doctor performs treatment in a contactless way; prescriptions are downloaded through an app; and drugs are received through a courier service from a pharmacy nearby. In Korea, contactless treatment is being invigorated to the extent that 2.19 million cases of contactless treatment were performed in 2021, and the cumulative treatment cases reached 3.82 million by February 2022. Consequently, contactless treatment is becoming universal (Lee et al., 2022).

When looking at the relevant previous studies, there are numerous studies on remote treatment and digital healthcare platform construction, including a study by Wu et al. (2020), Hermes et al. (2020) introduced an intelligent medical platform, and Song et al. (2020) stressed the importance of using the method of PHR data for intelligent medical platform invigoration. Zhang and Wang (2021) introduced a medical information management platform example using blockchain. Recently, digital healthcare platforms based on personal health information have been emphasized. As Satti et al. (2020) asserted, integrated medical information collected from private and public areas is necessary to fortify the medical information platform. Therefore, the need to construct a platform that can handle various types of digital health information, including medical treatment records and personal genome information, is emphasized (Bricon-Souf et al., 2005; D'Souza et al., 2020; Torkkeli & Tuominen, 2002).

If the PHR platform is invigorated, integrated storage management from self-measured data through home medical devices and treatment records to data collected from wearable devices in one place becomes possible, so remote monitoring of hospital-discharged patients and self-management become easier. Consequently, studies on consumers' use patterns of platform service are being introduced (Chung & Park, 2016). Kim and Chung (2018) stressed the importance of personal medical data utilization in the platform economy era. Yang et al. (2017) explained that the remote medical platform service characteristic factors affect the intention of service users with the mediation of expected benefits. Jung & Chung (2016) introduced the continuous use intention of the O2O platform.

2.2. O2O Platform Quality Components

When looking at existing studies on O2O platform quality, Kim et al. (2021) explained that platform service quality positively affects customer satisfaction and loyalty. Kang and Namkung (2019) presented study results on O2O service quality perception's effect on post-purchase behavior intention. Lee and Yang (2017) defined restaurant O2O platform quality and insisted that quality factors affect perceived value, customer satisfaction, and continuous use intention. Likewise, the O2O platform quality factors affect the use behaviors and cognition of the platform users, so consideration of the quality factors for platform invigoration

is required.

The IS success model of DeLone and McLean (1992) reported that achievement of the information system is derived from system development goals and constructed a measurement model by classifying system quality, information quality, use, use satisfaction, personal effect, and organizational effect (Choi & Choi, 2019). Since then, Yang et al. (2021) presented a revised model by adding service quality based on the initial stage system model and applied the quality level to the changing e-commerce environment (Wu & Chien, 2021). Moon and Armstrong (2020) emphasized information quality, along with the digital healthcare service app quality. Lee et al. (2021) defined the effects on service use satisfaction and use intention as digital medical service quality factors; specifically, they are system quality, information quality, service quality, and relationship quality. Wang et al. (2021) presented quality components as information quality, system quality, and service quality. Based on the previous studies, this study can examine the medical information-based O2O platform quality characteristics as system quality, information quality, and service quality based on the information system success model of Pei et al. (2019).

First, system quality is the degree by which a system is stably and efficiently used (Pei et al., 2019) and means system characteristics measurement (Chen et al., 2019). From a system performance aspect, it can be interpreted as customers' perception degree and the information quality derived from delivered media characteristics (Ha & Kitchen, 2020). Gal-Tzur et al. (2020) defined system quality as a relationship between whether consistency or defects occur in all systems themselves. Namely, system quality means providing a service through which users can quickly, conveniently, and safely use the system without technical problems (Zhang et al., 2016). It is generally studied as a major success factor for an information system (Moon & Armstrong, 2020). Because customers tend to stop using, rather than request correction or present a complaint, when there is a problem in system quality in using a specific system (Zhang et al., 2016), system quality means technical success that can produce accurate information and communication is possible.

Second, information quality is based on how consumers measure the perception degree value on information provided through the platform system and is defined as consumer perception of information quality (Chang et al., 2020). Information quality also means the delivery degree of quickly and accurately valuable and meaningful content to consumers (Kaufhold et al., 2020). Excellent information quality induces users' joy and positive behavioral intention (Gorla et al., 2010). Information quality should be accurate, and timeliness and context management, by which information can be checked and used anywhere, anytime, is essential (Klievink et al., 2012). Information's context relevance measures how much the provided information is suitable for the current user's position (location). Because the same information evaluation can differ depending on the time and place in which the information is provided, users tend to be amicable to information related to the current context that is given to them (Ferhatoglu et al., 2019).

Third, service quality is the degree of accordance between the provided service to customers and pre-expected service (Fu, 2018; Gal-Tzur et al., 2020). The O2O platform service is a commercial activity carried out in the interactions between devices and humans, and system-based factors are considered necessary in addition to service quality factors in the existing offline (Du & Tang, 2014). Contents that interest users should be provided, information suitable for individual users needs to be offered, and menu configuration suitable for individual users needs to be possible (Basili & Rossi, 2020). Osman et al. (2017) defined service quality as the overall service provided by service providers. Hamenda (2018) defined service quality as a quality that system users receive from an information system organization or IT supporting people (Li et al., 2017).

3. Research Method

3.1. Research Model and Hypotheses

This study set the quality components as independent variables, such as system quality, information quality, and service quality, and set perceived benefits, flow experience, and use satisfaction as parameters. Lastly, continuous use intention was considered as a dependent variable. To this end, the following research model, as shown in Figure 1, was designed, based on previous studies.

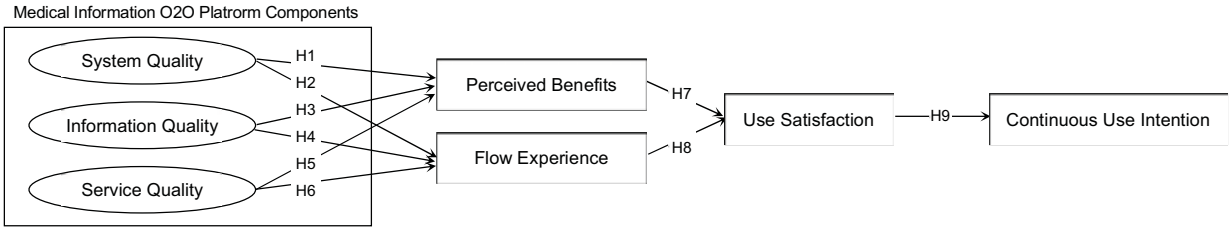

Figure 1: Research Model

3.1.1. Platform Quality Components and Perceived Benefits

Consumers expect specific benefits that attributes can provide and decide whether to buy beyond the specific attributes of products (Choi & Choi, 2019). Specifically, they expect product purchase benefits, which are called perceived benefits or perceived value (Lee & Yang, 2017). In many previous studies, O2O service and digital platform quality factors affected consumers' perceived benefits Moon & Armstrong, 2020). Typically, Zhang et al. (2016) explained that digital platform quality factors affected perceived benefits: system quality, information quality, and service quality. Studies on mobile apps (Pe et al., 2019) presented an empirical result that app quality affects perceived benefits. Based on the previous studies, the following hypotheses could be designed:

H1: System quality in the medical information O2O platform components will positively affect (+) perceived benefits.
H2: Information quality in the medical information O2O platform components will positively affect (+) perceived benefits.
H3: Service quality in the medical information O2O platform components will positively affect (+) perceived benefits.

3.1.2. Platform Components and Flow Experience

Flow experience means that one does not perceive time flows while engaging in activities and feeling joy without considering special rewards (Chen et al., 2019). Flow is related to diverse types of consumer activities in which individuals are engrossed in making joyful experiences (Wang & Hsiao, 2012). It is a concept related to forming continuous participation intention in activities within the digital platform and works through various experiences and factors (Ha & Kitchen, 2020). In previous studies, information quality significantly affects flow experience in the platform service use environment (Fu, 2018). Also, digital platforms' information quality and service quality are presented as essential factors affecting flow experience (Basili, & Rossi, 2020). The following hypotheses could be designed based on the previous studies:

H4: System quality in the medical information O2O platform components will positively affect (+) flow experience.
H5: Information quality in the medical information O2O platform components will positively affect (+) flow experience.
H6: Service quality in the medical information O2O platform components will positively affect (+) flow experience.

3.1.3. Perceived Benefits, Flow Experience, and Use Satisfaction

When looking at previous studies on perceived benefits, flow experience, and use satisfaction, the perceived benefits, and flow experience positively affect users' use satisfaction (Skadberg & Kimmel, 2004; Xin et al., 2010). From the functional and emotional benefits aspects, consumer-perceived benefits positively affect satisfaction with mobile and digital services (Xue et al., 2016). Flow experience is presented to increase customer satisfaction, repetitive use, and preference (Hoffman & Novak, 1997). Especially as Hsu and Lu (2004) presented in the platform service, user-perceived benefits positively affect use satisfaction.

Voiskounsky et al. (2004) asserted that the flow experience based on the digital environment within the platform service draws commitment to the service and joyful emotions, improving use satisfaction. Based on the previous studies, the following hypotheses could be designed:

H7: Perceived benefits on the medical information O2O platform will positively affect (+) use satisfaction.
H8: Flow experience on the medical information O2O platform will positively affect (+) use satisfaction.

3.1.4. Use Satisfaction and Continuous Use Intention

Use satisfaction in the online and offline service activities has been verified as positively affecting continuous use intention (Montoya-Weiss et al., 2003). In using the O2O platform service, use satisfaction positively affects continuous use intention (Lee & Yang, 2017). Chen et al. (2019) verified that use satisfaction typically significantly affects reuse intention using O2O platform quality factors as a variable. Kim and Chung (2018) explained that O2O platform service quality and information quality affect reuse intention with the mediation of satisfaction. The following hypothesis could be designed based on the previous studies:

H9: Use satisfaction with the medical information O2O platform will positively affect (+) continuous use intention.

3.2. Measurement Variable and Data Collection

A questionnaire survey was carried out to collect data to analyze the model, and questions were completed through previous studies, as shown in Table 1. In addition, manipulative variables of components were to be composed as the questions were defined. When looking at the manipulative definition of the used variables for the questionnaire survey, the system quality of the medical information O2O platform components mean helping quick

Table 1: Variable Definitions and Measure

Factors		Survey Items	References
Medical Information O2O Platform Quality Components	System Quality	(1) The medical app provides a quick appointment service with a doctor. (2) The medical app that I use recommends nearby hospitals by reflecting my position (location). (3) The medical app that I use works well and stably without errors.	Pei et al. (2019) Chen et al. (2019) Zhang et al. (2016)
	Information Quality	(1) The medical app that I use provides various information related to medical services. (2) The medical app that I use is continuously updated. (3) The medical app that I use provides accurate information.	Chang et al. (2020) Kaufhold et al. (2020) Ferhatoglu et al. (2019)
	Service Quality	(1) The medical app that I use provides individual-customized service. (2) The medical app that I use reflects user requirements. (3) The medical app that I use provides professional and competitive service.	Du & Tang (2014) Basili & Rossi (2020)
Perceived Benefits		(1) The medical app that I use helps me make an appointment with a doctor. (2) Making an appointment with a doctor through the medical app is simple and convenient. (3) The medical app that I use is easy to utilize.	Gal-Tzur et al. (2020) Pe et al. (2019)
Flow Experience		(1) I intensely concentrate during my use of the medical app. (2) I wonder what comments are posted when I use the medical app. (3) I feel happy when I use the medical app.	Fu (2018) Basili & Rossi (2020)
Use Satisfaction		(1) I am generally satisfied with the medical app that I currently use. (2) Consulting a medical institution has become convenient by using the medical app. (3) I think the medical app has improved our quality of life.	Hsu & Lu (2004) Voiskounsky et al. (2004)
Continuous Use Intention		(1) I will continue to use the medical app that I am currently using. (2) I think the utilization of the medical app will be higher. (3) I have an intention to use the medical app in the long term.	Chen et al. (2019) Kim & Chung (2018)

medical appointments, recommending close medical institutions, and stably operating when consumers want to use the platform. Information quality means providing various information related to medical services and quick updating for accurate information. Service quality means providing customized service reflecting individual consumers' requirements.

Perceived benefit, a parameter affected by the above factors, is perceived as consumers receive help and convenience that minimize non-monetary expenses through quick service. Flow experience is a factor in understanding consumers' behaviors, which means how much users are engrossed in and use without caring about the surroundings.

Use satisfaction means consumers' satisfaction with convenience while using the medical information O2O platform. Lastly, continuous use intention means that consumers who used the platform want to use it again and the degree to recommend the platform to others. The variables defined above consist of 21 questions in the questionnaire. However, as a result of factor analysis, each question out of each three questions of the perceived benefits, flow experience, and continuous use intention was rejected, so an analysis was conducted with two questions, respectively.

3.3. Demographic Information of the Data

As for the gender of the respondents, males were 47.6%, and females were 52.4%, so an even distribution was shown. Concerning age, 54.3% and 35.1% were in their 30s and 40s, respectively, so most respondents were in their 30s and 40s. Regarding occupation, 46.2% were company employees, followed by professionals and self-employed people at 42.1%. As for education level, 69.6%, 20.6%, and 9.7% were revealed as "enrolled in or graduated from university," "graduated from high school," and "enrolled in or graduated from graduate school," respectively in the order. Regarding annual medical costs, 46.0% and 41.5% were less than KRW 1 million and KRW 1 million to less than KRW 2 million, respectively, so most respondents spent less than KRW 2 million on medical costs. Concerning the medical information platform use period, users with less than one year were 67.4%, and one year to less than three years were 32.6% (see Table 2).

Table 2: Demographic Information of Survey Participants

Classification		Frequency	Percentage (%)
Gender	Male	171	47.6
	Female	188	52.4
	Total	359	100
Age	20s	31	8.6
	30s	195	54.3
	40s	126	35.1
	50s and over	7	1.9
	Total	359	100
Occupation	Company Employee	166	46.2
	Professional, Self-employed	151	42.1
	Housewife	27	7.5

Classification		Frequency	Percentage (%)
	Teacher, Public Official	7	1.9
	Other	8	2.2
	Total	359	100
Education Level	Graduated from High School	74	20.6
	Enrolled in or Graduated from University	250	69.6
	Enrolled in or Graduated from Graduate school	35	9.7
	Total	359	100
Annual Medical Cost	KRW 1 Million and Less	165	46.0
	KRW 1 Million to KRW 2 Million and Less	149	41.5
	KRW 2 Million to KRW 3 Million and Less	32	8.9
	KRW 3 Million to KRW 5 Million and Less	13	3.6
	Total	359	100
Use Period of Medical Information O2O Platform	Within the Recent One Year	242	67.4
	Recent One Year to Three Years	117	32.6
	Total	359	100

4. Results

4.1. Analysis Results of Reliability and Validity

As shown in Table 3, the reliability and convergent validity analysis results were all good. The internal consistency reliability was verified based on 0.7 and higher of the composite reliability index of the structural equation measurement model. Securing validity of convergent validity was verified through factor loading, Cronbach α, and composite reliability index. In line with the criteria, all factor loading was 0.680 to 0.961, and all were good. Internal reliability was 0.736 to 0.879, and significance was secured. Because the t value is 8.0 and higher, it was confirmed to be statistically significant. AVE was 0.481-0.737, and Cronbach α was 0.735-0.833, so convergent validity was secured. According to the analysis result of the fit of the measurement model, χ^2(df) was 504.154, χ^2/degree of freedom was 3.665. Goodness-of-Fit-Index (GFI) value was 0.902, Adjusted Goodness-of-Fit-Index (AGFI) was 0.878, Normal Fit Index (NFI) was 0.898, and Root Mean Square Error of Approximation (RMSEA) was 0.045.

Therefore, the component values of the measurement model fit were statistically very significant.

Table 3: Results of Reliability and Convergent Validity Test

Variable	Measurement Item	Standardized Regression Weights	T value	CR	AVE	Cronbach α
System Quality	SQ1	0.900	-	0.879	0.709	0.877
	SQ2	0.853	19.659			
	SQ3	0.768	17.192			
Information Quality	IQ1	0.750	-	0.805	0.580	0.804
	IQ2	0.724	11.997			
	IQ3	0.809	12.485			
Service Quality	SVQ1	0.735	-	0.754	0.506	0.754
	SVQ2	0.687	10.408			
	SVQ3	0.711	10.589			
Perceived Benefits	PC1	0.736	-	0.855	0.613	0.845
	PC2	0.869	15.864			
Flow Experience	FE1	0.700	-	0.813	0.690	0.776
	FE2	0.943	8.782			
Use Satisfaction	US1	0.703	-	0.736	0.481	0.735
	US2	0.698	10.246			
	US3	0.680	10.097			
Continuous Use Intention	SU1	0.961	-	0.846	0.737	0.833
	SU2	0.742	12.918			
Measurement Model Fit: χ^2(df) 504.154, χ^2/degree of freedom 3.665, RMR 0.019, GFI 0.902, AGFI 0.878, NFI 0.898, TLI 0.911, CFI 0.896, RMSEA 0.045 * p<0.05, ** p<0.01, *** p<0.001						

Table 4: Discriminant Validity

Classification	AVE	SQ	IQ	SeQ	PB	FX	US	CUI
System Quality (SQ)	0.709	**0.842**						
Information Quality (IQ)	0.580	0.299***	**0.762**					
Service Quality (SeQ)	0.506	0.232***	0.237***	**0.711**				
Perceived Benefits (PB)	0.613	0.340***	0.068	0.329***	**0.783**			
Flow Experience (FE)	0.690	0.262***	0.172**	0.210***	-0.129*	**0.831**		
Use Satisfaction (US)	0.481	0.295***	0.201***	0.126*	0.314***	0.182**	**0.694**	
Continuous Use Intention (CUI)	0.737	0.347***	0.046	0.184***	0.477***	0.166**	0.443***	**0.858**

* p<0.05, ** p<0.01, *** p<0.001/ The bold diagonal value is the square root of AVE.

Table 5: Results of the Hypothesis Test

	Hypothesis (Path)	Standard Path Coefficient	T Value	Status of Adoption	R^2
H1	System Quality -> Perceived Benefits	0.344	5.512***	Adopted	0.277
H2	Information Quality -> Perceived Benefits	-0.109	-1.722	Rejected	
H3	Service Quality -> Perceived Benefits	0.352	5.042***	Adopted	
H4	System Quality -> Flow Experience	0.256	3.805***	Adopted	0.157
H5	Information Quality -> Flow Experience	0.045	0.67	Rejected	
H6	Service Quality -> Flow Experience	0.209	2.913*	Adopted	
H7	Perceived Benefits -> Use Satisfaction	0.577	8.353***	Adopted	0.450
H8	Flow Experience -> Use Satisfaction	0.367	5.936***	Adopted	
H9	Use Satisfaction -> Continuous Use Intention	0.660	9.505***	Adopted	0.436
Structural Model Fit: χ^2(df) 513.231, χ^2/degree of freedom 3.424, RMR 0.021, GFI 0.907, AGFI 0.869, NFI 0.905, TLI 0.897, CFI 0.912, RMSEA 0.038 Note: * p<0.05, ** p<0.01, *** p<0.001					

4.2. Analysis Results of the Structural Model

As presented in Table 5, due to an analysis of structural model fit, χ^2(p) was 513.231 (0.000), and χ^2 /degree of freedom was 3.424. GFI value was 0.907, NFI was 0.905, AGFI was 0.869, RMR was 0.021, and RMSEA was 0.038, so the component values of fit were significant. Although not affected by the sample, CFI indicating the model's explanation power was 0.912, and TLI judging the explanation power of the structural model was 0.897, so the primary model was analyzed to be suitable.

As shown in Table 5, as a result of hypothesis verification through a path analysis of the structural equation model, two out of eight hypotheses were rejected. The system quality (5.512, p<0.001) and service quality (5.042, p<0.001) out of the medical information O2O platform quality components positively (+) affected perceived benefits. However, the information quality hypothesis was rejected, so there was no effect. In the result that verified the effect on flow experience, the system quality (3.805, p<0.001) and service quality (2.913, p<0.05) had a positive (+) effect on flow experience. The information quality hypothesis was rejected, so there was no effect. Perceived benefits (8.353, p<0.001) and flow experience (5.936, p<0.001) had a positive (+) effect on use satisfaction, and the use satisfaction (9.505, p<0.001) also had a positive effect (+) on continuous use intention.

4.3. Mediated Effect

As seen in Table 6, this study drew direct, indirect, and total effects using a bootstrapping method to verify the significance of indirect effects. Like the path analysis result above, information quality did not show a mediated effect of perceived benefits and flow experience regarding use satisfaction. System quality was confirmed to affect use satisfaction with the mediation of perceived benefits (0.120, p<0.01) and flow experience (0.061, p<0.01). Service quality also showed a mediated effect of perceived benefits (0.047, p<0.01) and flow experience (0.068, p<0.05) in terms of use satisfaction. It was ascertained that perceived benefits (0.078, p<0.01) and flow experience (0.065, p<0.01) affected continuous use intention with the mediation of use satisfaction.

Table 6. Results of Mediated Effect

Dependent Variable	Explanatory Variable	Direct Effect	Indirect Effect	Total Effect
System Quality	Perceived Benefits	0.949*	-	0.949
	Flow Experience	0.061**		0.061
	Perceived Benefits -> Use Satisfaction	-	0.120**	0.120
	Flow Experience -> Use Satisfaction	-	0.074**	0.074
Information Quality	Perceived Benefits	-0.139	-	-0.139
	Flow Experience	0.013		0.013
	Perceived Benefits -> Use Satisfaction	-	-0.018	-0.018
	Flow Experience -> Use Satisfaction	-	-0.011	-0.011
Service Quality	Perceived Benefits	0.607*	-	0.607
	Flow Experience	0.068*		0.068
	Perceived Benefits -> Use Satisfaction	-	0.077**	0.077
	Flow Experience -> Use Satisfaction	-	0.047**	0.047
Perceived Benefits	Use Satisfaction	0.127**	-	0.127
	Continuous Use Intention	-	0.078**	0.078
Flow Experience	Use Satisfaction	0.554**	-	0.554
	Continuous Use Intention		0.065**	0.065

4.4. Discussions

This study researched the effects of medical information O2O platform quality components on continuous use intention through the mediation of perceived benefits, flow experience, and use satisfaction. As a result of the analysis, the following results were drawn:

First, when looking at the relationship between medical information O2O platform quality components and perceived benefits and flow experience, the system quality and service quality positively (+) affect perceived benefits and flow experience in the order. However, information quality did not affect the relationship between perceived benefits and flow experience. According to a previous study by Lee and Yang (2017), the information quality of the O2O delivery app service has a high possibility of recognizing the information provided through accumulated experience in advance specifically. Therefore, the effect on customer satisfaction was not significant. Because a quick appointment with a doctor based on existing accumulated experience is perceived as more crucial in terms of a medical information app, it can be interpreted that information quality within the platform service does not significantly affect satisfaction. The aged population or chronic disease patients frequently looking for medical services need the same medical institutions and drug prescriptions, not new medical information; therefore, it was confirmed that quality, which customers want more in the medical information O2O platform, is the system quality in which convenience is emphasized like making an appointment with a doctor by quickly accessing. Making an appointment with a doctor is possible based on position (location) information anywhere.

Second, flow experience positively (+) affects use satisfaction and continuous use intention. It was confirmed that users' flow experience could be as important as perceived benefits in the medical information O2O platform. Generally, flow experience was handled as a factor increasing use satisfaction or preference, centered on a digital platform such as games or entertainment (Xin Ding et al., 2010; Voiskounsky et al., 2004). However, it was ascertained that the flow experience factor could work as mediation in enhancing use satisfaction by consolidating system quality and service quality for medical information platform users. There is a need to consider the experience factors related to making an appointment with a doctor and contactless treatment.

Third, a positive (+) effect was revealed in the relationship between use satisfaction and continuous use intention in the case of medical information platform services. Like the previous study result of digital O2O platform service (Wang et al., 2021; Pei et al., 2019; Chen et al., 2019), it was confirmed that medical information platform service could positively affect continuous use intention if service quality satisfaction is improved. The medical information O2O platform has a peculiarity of an area handling information affected by information security, regulatory environment, and policy, unlike general digital platform services. However, as Choi and Choi (2019) asserted, in the same way public service loses the service function if users reject it, the medical information O2O platform service should induce customer satisfaction and continuous use. From this aspect, it was ascertained that use satisfaction with service could be essential in terms of continuous use factors like other digital O2O platforms in

the medical service market through the results of this study.

5. Conclusion

5.1. Research Implications

This study may have an academic meaning in that platform quality is analyzed by classifying it into system quality, information quality, and service quality, and confirmed organic causal relationship for continuous use intention with the mediation of perceived benefits and flow experience, unlike previous studies on medical information O2O platform that emphasized general platform construction or technical characteristics. The study result provided that system quality and service quality, rather than information quality, can consolidate use satisfaction regarding the medical information O2O platform. Based on this, this study can present the following practical implications:

First, the importance of the platform's system quality can be emphasized to improve use satisfaction and continuous use intention in the case of medical information platforms. In general, offline medical institutions' customer service activities and service processes, such as reducing waiting time, increasing process convenience, convenient service to make an appointment with a doctor, and linkage of treatment and prescription, work as essential factors. Customers request faster and more convenient appointments with a doctor, proper treatment, and a simple process in the medical information distribution and platform. Consequently, platform developers or medical institutions can consider innovative system development to improve the digital medical service process and consolidate convenience by reflecting such features.

Second, because flow experience affects use satisfaction in the medical information platform service, there is a need to strengthen the platform user experience. Rather than focusing on just information distribution and consumption, factors that may stimulate functional and emotional experience factors or devices to enhance commitment can be provided in making an appointment with a doctor or searching for information. Considering the characteristics of medical platform users, users need to experience customized medical information concept by the situation, especially a need to fortify platform use experience satisfaction by consolidating medical service quality.

Lastly, service quality consolidation such as prediction and prevention can be considered beyond information and service offering because the role of the medical information O2O platform will be expanded due to the expansion of contactless treatment in the future. Consumers' time use maximization can be offered by increasing convenience through adding a function, such as presenting a list of medical institutions that consumers mainly use in reflection of their characteristics or a function to set the list in advance. Medical institutions for medical examination or treatment activities like beauty care or plastic surgery can provide a possible schedule in advance, and consumers can consider a medical appointment service beforehand. There is a need to seek measures to extend medical service benefits and the selection range of consumers through prior notice of new information offering and distribution.

5.2. Limitations and Future Research

This study has research significance in that it presented empirical results through discussions on service quality, use satisfaction, and continuity, unlike existing previous studies emphasizing the data and technology development aspect of medical information platforms amid the environment where the digital healthcare and medical information O2O platform service market is growing. Nonetheless, this study has the following research limitations: First, this study surveyed only Korean medical information app users. Since Korean medical service consumers' characteristics are reflected, there is a limitation in generalizing the study results. There is a need to consider research expansion by targeting medical information app users in each continent or major country and expanding the research target countries in a further study. Second, this study defined the quality components of medical information apps based on general O2O platform service components, such as system quality, service quality, and information quality, so the medical information service's peculiarity was not considered. A further study that can discover distinguishing factors from a service aspect that medical information platform has may be conducted, empirically discussing the relationship between satisfaction and use continuity.

References

Basili, M., & Rossi, M. A. (2020). Platform-mediated reputation systems in the sharing economy and incentives to provide service quality: the case of ridesharing services. *Electronic Commerce Research and Applications*, *39*, 100835.

Bricon-Souf, N., Anceaux, F., Bennani, N., Dufresne, E., & Watbled, L. (2005). A distributed coordination platform for home care: analysis, framework and prototype. *International Journal of Medical Informatics*, *74*(10), 809-825.

Byeon, S. H. (2020). A Study on the consumer disputes and protection measures of the digital healthcare market and O2O service. *Journal of Arbitration Studies*, *30(4)*, 121-138.

Cachon, G. P., Daniels, K. M., & Lobel, R. (2017). The role of surge pricing on a service platform with self-scheduling capacity. *Manufacturing & Service Operations Management*, *19*(3), 368-384.

Chang, J. R., Chen, M. Y., Chen, L. S., & Chien, W. T. (2020). Recognizing important factors of influencing trust in O2O models: an example of OpenTable. *Soft Computing*, *24*(11), 7907-7923.

Chen, C. C., Hsiao, K. L., & Hsieh, C. H. (2019). Understanding usage transfer behavior of two-way O2O services. *Computers in Human Behavior*, *100*, 184-191.

Chi, Y., Kang, M., Han, K. & Choi, J. (2016). A study on the discontinuance intention on O2O commerce: With a focus on the mediating effects of perceived risk and user resistance. *International Journal of u- and e- Service, Science and Technology, 9*(2), 207-218.

Choi, S. G., & Choi, H. G. (2019). The Effect of O2O Platform Quality on Relationship Quality and Personal Behavior Value. *International Journal of Advanced Culture Technology*, *7*(4), 86-95.

Chung, K., & Park, R. C. (2016). PHR open platform based smart health service using distributed object group framework. *Cluster Computing*, *19*(1), 505-517.

DeLone, W. H., & McLean, E. R. (1992). Information Systems Success: The Quest for the Dependent Variable. *Information Systems Research, 3*(1), 60-95.

D'Souza, R. S., D'Souza, S., Strand, N., Anderson, A., Vogt, M. N., & Olatoye, O. (2020). YouTube as a source of medical information on the novel coronavirus 2019 disease (COVID-19) pandemic. *Global public health*, *15*(7), 935-942.

Du, Y., & Tang, Y. (2014). Study on the Development of O2O E-commerce Platform of China from the Perspective of Offline Service Quality. *International Journal of Business and Social Science*, *5*(4), 308-312.

Evans, D. S., & Schmalensee, R. (2008). Markets with two-sided platforms. *Issues in Competition Law and policy, 28*(1), 667-693.

Fei, Y., & Li, W. Q. (2019). APnet, an innovative multidisciplinary medical information platform for acute pancreatitis. *Revista Da Associacao Medica Brasileira*, *65*(2), 118-122.

Ferhatoglu, M. F., Kartal, A., Ekici, U., & Gurkan, A. (2019). Evaluation of the reliability, utility, and quality of the information in sleeve gastrectomy videos shared on open access video sharing platform YouTube. *Obesity surgery*, *29*(5), 1477-1484.

Fu, H. (2018). Factors influencing user usage intention on intelligent logistics information platform. *Journal of Intelligent & Fuzzy Systems*, *35*(3), 2711-2720.

Gal-Tzur, A., Bar-Lev, S., & Shiftan, Y. (2020). Using question & answer forums as a platform for improving transport-related information for tourists. *Journal of Travel Research*, *59*(7), 1221-1237.

Gao, F., & Su, X. (2017). Omnichannel retail operations with buy-online-and-pick-up-in-store. *Management Science*, *63*(8), 2478-2492.

Giao, H. N. K., Trung, B., & Truong, B. Q. (2019). Outbound service quality at Wan Hai Lines. *The Journal of Asian Finance, Economics, and Business, 6*(1), 177-185.

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.

Gu, W., Bao, P., & Lee, J. H. (2019). A Study on the Continuance Intention of O2O Fresh Agricultural Products E-Commerce. *International Journal of Industrial Distribution & Business*, *10*(10), 35-44.

Gupta, A. K., & Mann, K. S. (2014). Sharing of medical information on cloud platform-a review. *IOSR Journal of Computer Engineering*, *16*(2), 08-11.

Ha, H. Y., & Kitchen, P. J. (2020). Positive crossover loyalty shifts or negative temporal changes? The evolution of shopping mechanism in the O2O era. *European Journal of Marketing*. *54*(6), 1383-1405.

Hamenda, A. (2018). An integrated model of service quality, price fairness, ethical practice and customer perceived values for customer satisfaction of sharing economy platform. *International Journal of Business & Society*, *19*(3), 709-724.

He, B., Mirchandani, P., Shen, Q., & Yang, G. (2021). How should local Brick-and-Mortar retailers offer delivery service in a pandemic World? Self-building Vs. O2O platform. *Transportation Research Part E: Logistics and Transportation Review*, *154*, 102457. https://doi.org/10.1016/j.tre.2021.102457

Hermes, S., Riasanow, T., Clemons, E. K., Böhm, M., & Krcmar, H. (2020). The digital transformation of the healthcare industry: exploring the rise of emerging platform ecosystems and their influence on the role of patients. *Business Research*, *13*(3), 1033-1069.

Hsu, C. L., & Lu, H. P. (2004). Why do people play on-line games? An extended TAM with social influences and flow experience. *Information & management*, *41*(7), 853-868.

Huh, J. H., & Kim, T. J. (2019). A location-based mobile health care facility search system for senior citizens. *The Journal of Supercomputing*, *75*(4), 1831-1848.

Jadczyk, T., Kiwic, O., Khandwalla, R. M., Grabowski, K., Rudawski, S., Magaczewski, P., & Henry, T. D. (2019). Feasibility of a voice-enabled automated platform for medical data collection: CardioCube. *International journal of medical informatics*, *129*, 388-393.

Jung, H., & Chung, K. (2016). Life style improvement mobile service for high risk chronic disease based on PHR platform. *Cluster Computing*, *19*(2), 967-977.

Kang, J. W., & Namkung, Y. (2019). The information quality and source credibility matter in customers' evaluation toward food O2O commerce. *International Journal of Hospitality Management*, *78*, 189-198.

Kang, M. J., Wu, Z., & Hwang, H. J. (2021). A Study on the Mediating Effect of Customer Orientation between O2O Service Quality and Customers' Perceived Service Satisfaction. *Journal of Distribution Science*, *19*(2), 37-44.

Kang, M., Gao, Y., Wang, T. & Wang, M. (2015). The role of switching costs in O2O platforms: Antecedents and consequences. *International Journal of Smart Home, 9*(3), 135-150.

Kaufhold, M. A., Rupp, N., Reuter, C., & Habdank, M. (2020). Mitigating information overload in social media during conflicts and crises: design and evaluation of a cross-platform alerting system. *Behaviour & Information Technology*, *39*(3), 319-342.

Kim, H., Ryu, M. H., Lee, D., & Kim, J. H. (2022). Should a small-sized store have both online and offline channels? An efficiency analysis of the O2O platform strategy. *Journal of*

Retailing and Consumer Services, *64*, 102823.
Kim, J. C., & Chung, K. (2018). Mining health-risk factors using PHR similarity in a hybrid P2P network. *Peer-to-Peer Networking and Applications*, *11*(6), 1278-1287.
Kim, Y., Wang, Q., & Roh, T. (2021). Do information and service quality affect perceived privacy protection, satisfaction, and loyalty? Evidence from a Chinese O2O-based mobile shopping application. *Telematics and informatics*, *56*, 101483. https://doi.org/10.1016/j.tele.2020.101483
Klievink, B., Janssen, M., & Tan, Y. H. (2012). A stakeholder analysis of business-to-government information sharing: the governance of a public-private platform. *International Journal of Electronic Government Research*, *8*(4), 54-64.
Lee, J. K., Choi, Y., Lim, E., Kim, Y., Ahan, S., & Kim, M. (2021). A Study on Factors Affecting Vender's Continuous Use Intention in O2O Delivery App Platform Service. *Journal of Information Technology Services*, *20*(2), 13-31.
Lee, O. J., & Yang, D. W. (2017). A study on the effect of O2O service quality on user satisfaction and intention of reuse. *Journal of Digital convergence*, *15*(6), 165-178.
Lee, S. Y., Chun, S. Y., & Park, H. (2022). The impact of COVID-19 protocols on the continuity of care for patients with hypertension. *International Journal of Environmental Research and Public Health*, *19*(3), 1735.
Li, C., Zegras, P. C., Zhao, F., Qin, Z., Shahid, A., Ben-Akiva, M., & Zhao, J. (2017). Enabling bus transit service quality co-monitoring through smartphone-based platform. *Transportation Research Record*, *2649*(1), 42-51.
Li, S. H., Wang, C. Y., Lu, W. H., Lin, Y. Y., & Yen, D. C. (2012). Design and implementation of a telecare information platform. *Journal of medical systems*, *36*(3), 1629-1650.
Lin, M., Ma, L., & Ying, C. (2021). Matching daily home health-care demands with supply in service-sharing platforms. *Transportation Research Part E: Logistics and Transportation Review*, *145*, 102177. https://doi.org/10.1016/j.tre.2020.102177
Montoya-Weiss, M. M., Voss, G. B., & Grewal, D. (2003). Determinants of online channel use and overall satisfaction with a relational, multichannel service provider. *Journal of the academy of marketing Science*, *31*(4), 448-458.
Moon, Y., & Armstrong, D. J. (2020). Service quality factors affecting customer attitudes in online-to-offline commerce. *Information Systems and e-Business Management*, *18*(1), 1-34.
Novak, T. P., & Hoffman, D. L. (1997). Measuring the flow experience among web users. *Interval Research Corporation*, *31*(1), 1-35.
Osman, A. R., Saha, J., & Alam, M. M. D. (2017). The impact of service climate and job satisfaction on service quality in a higher education platform. *International journal of learning and development*, *7*(3), 48-72.
Pan, Y., Wu, D., & Olson, D. L. (2017). Online to offline (O2O) service recommendation method based on multi-dimensional similarity measurement. *Decision Support Systems*, *103*, 1-8.
Park, J. Y., & Park, D. W. (2016). Global O2O matching platform research based on clinics. *Journal of the Korea Institute of Information and Communication Engineering*, *20*(8), 1517-1523.
Pei, Y., Xue, W., Yang, Y., Li, D., & Li, Y. (2019). The Impacts of user experience on user loyalty based on O2O innovation platform. *Journal of Electronic Commerce in Organizations*, *17*(2), 79-87.
Ram, J., Manoharan, A., & Sun, S. (2020). O2O adoption benefits: A managerial perspective of customer benefits. *Electronic Journal of Information Systems Evaluation*, *23*(1), 65-78.
Rožman, N., Corn, M., Požrl, T., & Diaci, J. (2019). Distributed logistics platform based on Blockchain and IoT. *Procedia CIRP*, *81*, 826-831.
Satti, F. A., Ali, T., Hussain, J., Khan, W. A., Khattak, A. M., & Lee, S. (2020). Ubiquitous Health Profile (UHPr): a big data curation platform for supporting health data interoperability. *Computing*, *102*(11), 2409-2444.
Selvaraj, S., & Sundaravaradhan, S. (2020). Challenges and opportunities in IoT healthcare systems: a systematic review. *SN Applied Sciences*, *2*(1), 1-8.
Shen, C. W., Chen, M., & Wang, C. C. (2019). Analyzing the trend of O2O commerce by bilingual text mining on social media. *Computers in Human Behavior*, *101*, 474-483.
Skadberg, Y. X., & Kimmel, J. R. (2004). Visitors' flow experience while browsing a Web site: its measurement, contributing factors and consequences. *Computers in human behavior*, *20*(3), 403-422.
Song, X., Liu, X., & Wang, C. (2020). The role of telemedicine during the COVID-19 epidemic in China—experience from Shandong province. *Critical care*, *24*(1), 1-4.
Tang, D., Zhu, W., & Kuvshinov, A. (2018). A big data-driven approach to catering O2O modeling. *Wireless Personal Communications*, *103*(1), 1089-1099.
Torkkeli, M. & Tuominen, M. (2002). The contribution of technology selection to core competencies. *International Journal of Production Economics*, *77*(3), 271-284.
Tsai, T. M., Yang, P. C., & Wang, W. N. (2013). Pilot study toward realizing social effect in O2O commerce services, *LNCS, 8238*, 268-273.
Van Alstyne, M. W., Parker, G. G. & Choudary, S. P. (2016), Pipelines, platforms, and the new rules of strategy. *Harvard Business Review, 94*(4), 54-62.
Voiskounsky, A. E., Mitina, O. V., & Avetisova, A. A. (2004). Playing online games: Flow experience. *PsychNology Journal*, *2*(3), 259-281.
Wan, X., Wang, N., & Liu, B. S. C. (2020). Impact of O2O platform multihoming and vertical integration on performance of local service firms – a quantile regression approach. *Internet Research*, *30*(5), 1583-1610.
Wang, C., Wang, Y., Wang, J., Xiao, J., & Liu, J. (2021). Factors influencing consumers' purchase decision-making in O2O business model: evidence from consumers' overall evaluation. *Journal of Retailing and Consumer Services*, *61*, 102565. https://doi.org/10.1016/j.jretconser.2021.102565
Wang, L. C., & Hsiao, D. F. (2012). Antecedents of flow in retail store shopping. *Journal of retailing and consumer services*, *19*(4), 381-389.
Wu, P. J., & Chien, C. L. (2021). AI-based quality risk management in omnichannel operations: O2O food dissimilarity. *Computers & Industrial Engineering*, *160*, 107556. https://doi.org/10.1016/j.cie.2021.107556
Wu, X., Zhang, Y., Wang, A., Shi, M., Wang, H., & Liu, L. (2020). MNSSp3: Medical big data privacy protection platform based on Internet of things. *Neural Computing and Applications*, 1-

15. https://doi.org/10.1007/s00521-020-04873-z

Xiao, L., Mi, C., Zhang, Y., & Ma, J. (2019). Examining consumers' behavioral intention in O2O commerce from a relational perspective: An exploratory study. *Information Systems Frontiers*, *21*(5), 1045-1068.

Xin Ding, D., Hu, P. J. H., Verma, R., & Wardell, D. G. (2010). The impact of service system design and flow experience on customer satisfaction in online financial services. *Journal of Service Research*, *13*(1), 96-110.

Xue, X., Han, H., Wang, S., & Qin, C. Z. (2016). Computational experiment-based evaluation on context-aware O2O service recommendation. *IEEE Transactions on Services Computing*, *12*(6), 910-924.

Yang, C. T., Liu, J. C., Chen, S. T., & Lu, H. W. (2017). Implementation of a big data accessing and processing platform for medical records in cloud. *Journal of medical systems*, *41*(10), 1-28.

Yang, F. X., Li, X., Lau, V. M. C., & Zhu, V. Z. (2021). To survive or to thrive? China's luxury hotel restaurants entering O2O food delivery platforms amid the COVID-19 crisis. *International Journal of Hospitality Management*, *94*, 102855. https://doi.org/10.1016/j.ijhm.2020.102855

Zhang, X., & Wang, Y. (2021). Research on intelligent medical big data system based on Hadoop and blockchain. *EURASIP Journal on Wireless Communications and Networking*, *2021*(1), 1-21.

Zhang, X., Wu, H., Chen, Y., Sun, L., & Wang, W. (2016). Establishment of evaluation model of O2O platform service quality based on SERVQUAL scale. *China Pharmacy*, *12(1)*, 1005-1008.

Zhao, J. (2020). Will the community O2O service supply channel benefit the elderly healthcare service supply chain?. *Electronic Commerce Research*, 1-34. https://doi.org/10.1007/s10660-020-09425-0

Zhao, X., Lin, W., Cen, S., Zhu, H., Duan, M., Li, W., & Zhu, S. (2021). The online-to-offline (O2O) food delivery industry and its recent development in China. *European Journal of Clinical Nutrition*, *75*(2), 232-237.