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The Effects of Service Quality of Medical Information O2O Platform on Continuous Use Intention: Case of South Korea

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Abstract: Digital transformation of the healthcare industry is being accelerated due to the evolution of digital intelligence information technology such as artificial intelligence (AI), Internet of Things (IoT), and big data. As online-to-offline (O2O)-based consumption life, based on platforms, becomes routinized along with the COVID-19 pandemic, the O2O platforms on medical activities are gaining attention. This study targeted the medical information O2O platform users and aimed to verify the effects of service quality factors on the platform users' continuous use intention with the mediation of perceived usefulness and perceived convenience. Based on previous studies, four such factors: context-based affordability, immediacy of connection, reliability, and safety were defined as the medical information O2O platform service quality components. This study targeted 369 users of medical information O2O platforms with market dominance in Korea and conducted a questionnaire survey. According to analysis results, context-based affordability and immediacy of connection had a positive (+) effect on perceived usefulness and convenience, and they were confirmed to affect continuous-use intention with the mediation of the perceived usefulness and convenience. Meanwhile, reliability did not affect the perceived usefulness and convenience, whereas safety had a positive (+) effect on perceived usefulness but did not have the same effect (+) on perceived convenience. Consequently, it was ascertained that context-based affordability and immediacy of connection are more important factors to the medical information O2O platform consumers than reliability and safety.

Keywords: medical information; O2O platform; service quality; continuous use intention; perceived usefulness; perceived convenience



Citation: Myung, J.; Kim, B. The Effects of Service Quality of Medical Information O2O Platform on Continuous Use Intention: Case of South Korea. *Information* **2022**, *13*, 486. <https://doi.org/10.3390/info13100486>

Academic Editor: Luis Borges Gouveia

Received: 25 August 2022

Accepted: 6 October 2022

Published: 10 October 2022

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1. Introduction

The advent of a new platform-based business in 2000 has changed the distribution and service industry ecosystem. Significant changes in O2O service have been brought about through platforms in the one-way structure connected from production to consumption [1]. The most prominent feature of O2O is that channel integration is conducted centered on a platform-based aggregator [2]. Therefore, a mode in which consumers experience offline stores and place an order online through QR code is becoming a major part of everyday life. The O2O service started as social commerce and is being expanded into a sharing economy, including carpooling and Airbnb [3]. The O2O service is being applied in diverse areas such as interior and space marketing, book rental, car tuning, and disaster safety platforms, in addition to accommodation, food delivery, transportation, and real estate O2O platforms that are extensively applied in general [4].

The O2O platform service expansion is bringing about considerable changes in the digital healthcare industry. According to Selvaraj and Sundaravaradhan [5], the global digital healthcare market size will reach \$504.4 billion in 2025 from \$106.3 billion in 2019. Therefore, various changes are occurring, including medical information distribution and consumption typed in such media as diverse applications and OTT(over the top) using

mobile media beyond online platforms and the Internet [6]. Digital healthcare can reduce medical service-related social and economic costs, prevent diseases, and improve medical service quality by enhancing medical accessibility, cutting medical care expenses, and improving treatment efficiency. The medical sector O2O platforms can provide consumers with more convenient health care, such as an appointment with a doctor, medical information offers, and customized medical services [7].

For example, Google launched a digital health platform, “Google Fit.” Users can inquire into results at a time and analyze the data by integrating health measurement information from various devices. Apple’s “HealthKit” presents results by matching individuals’ health information and medical institutions’ medical information [8]. The integrated medical platform’s role has developed furthermore amid the COVID-19 situation. The use of medical platforms through which medical data information can be utilized based on personal health record (PHR) within the medical system is spreading.

In PHR platforms such as Microsoft, HealthVault or Life Semantics LifeRecord comprehensively collect and manage treatment records and individuals’ genome information in addition to the information collected from the digital health platforms (000, 0000). The information from the platforms can be connected to medical institutions through integrated PHR management services’ intangible resources [9]. In the USA, the use of electronic treatment information is emphasized through the Medical Privacy Act enacted in 1996 and the Medical Information Technology Act adopted in 2009. Studies on O2O services, including accommodation, transportation, and dining out, are being carried out. However, few studies on the medical information O2O platform can be found. There are many previous digital healthcare-related studies, including digital healthcare product use [10], digital healthcare service diffusion [9,11], and healthcare service use features [12,13] according to the expansion of digital healthcare services.

Recently, personal medical information managed by medical institutions is operated as a more convenient and expanded integrated information management system through online and offline integration. Moreover, O2O platform services for medical service users are emerging based on various data based on medical information. Medical information-based O2O platform services need to be linked to medical facilities and take into account the nature of public data and the nature of services linked to medical practice [14,15]. Therefore, establishing or operating a medical information platform requires a differentiated approach from general commercial O2O platforms. However, research on O2O platform business and medical platform services and customer usability based on medical information is still insufficient. Therefore, this study attempted to raise two research questions. What factors affect the use of medical information-based O2O platform customers? And what factors should be considered to ensure continuous use of the healthcare-based O2O platform?

Based on these research questions, the study aimed to identify the causal relationship between the feature factors and consumers’ use intention through consumers’ perceived usefulness and perceived convenience. This study examines the service quality features of medical information O2O platforms. To this end, this study will define medical information O2O platform service-quality feature factors. It will also present what factors are needed to use the medical information O2O platforms differently from other O2O platform services in everyday life in terms of consumers’ using O2O platforms. This will offer specific implications on how platform companies should consolidate service quality for medical information O2O platform invigoration.

2. Theoretical Background and Hypothesis Development

2.1. Medical Sector’s O2O Platforms and Service Quality Components

Due to recent technology development, O2O platform service advancement, such as on-demand prediction, dynamic pricing, AI-using efficiency improvement, and customized promotion offering depending on weather and season, is carried out [16]. As the O2O platforms are expanded into diverse areas, the automated systems increase and various service types are offered, so consumers’ selection rights are expanded [17]. Regarding

personal treatment information platform services, the diversity of medical contents, IT security, combination with AI and IoT, and mutual exchange between patients and medical institutions are being cemented [18].

The O2O service is in the spotlight by business owners in that it can supplement the low loyalty and reliability of online transactions because it can provide services in conjunction with offline services, and reduce economic burden through online services such as inventory management costs and labor costs [5]. The restaurant O2O service is one of the O2O service fields and connects offline restaurants and customers online through a platform called a delivery app. The delivery app has changed the existing delivery order method by providing various types of services in one place, such as configuring a UI screen so that users can order more conveniently, one-stop from ordering food to payment, and real-time delivery status through GPS [2,9]. In addition, restaurants are recommended by analyzing consumer order patterns [12]. In Korea, as non-face-to-face transactions are active due to COVID-19, food, home convenience, and household goods can be ordered through delivery apps, and influence in the food service sector is increasing [15].

Medical service needs are reinforced from treatment-centered medical service needs to various purposes, such as prevention, examination, and beauty care. Consequently, various health and information management platforms, not restricted by place and time through combination with information technology, are on the rise [19]. The medical information O2O platforms are becoming personalized as a service that can offer and manage medical information for consumers according to environmental change [20].

The highest priority in the past medical service was appointment service with a doctor for treatment. However, medical service use through a platform is increasing due to contactless medical service process consolidation, such as payment of treatment expenses and minimization of contact between patients in the COVID-19 situation [21]. In Korea, contactless treatment and prescription operations surpassed 2.76 million cases in early 2022 since the operation started in September 2021. Likewise, contactless medical services increase worldwide, and consumers' use of medical service platforms is projected to continue to rise [22].

From this aspect, diverse O2O platforms in the medical sector are appearing. Thus, the medical service platforms need to consider service quality reinforcement and differentiation. When looking at previous studies on app service quality factors by existing industries, information character, and reliability, the immediacy of connection, convenience, design, security, and customer service are dealt with as service quality factors in the platform service studies [23,24]. In the studies related to digital healthcare industry apps, reliability, information character, system capability, design, and mobility are defined as service quality factors [25–27]. The service quality properties in the digital healthcare service are explained as reliability, operation easiness, safety, and accuracy as medical service feature factors and technical feature factors [12,28].

Based on these studies [13,29], the O2O platform service quality items were defined as location accuracy, context-based affordability, immediate connectivity, webrooming, economic easiness, perceived risks, and reliability. Yang et al. [30] emphasized consumer usefulness and explained it as immediate connectivity, context-based affordability, price fairness, and reliability. As a result of an integrated analysis of the studies, the critical service quality components of O2O platforms can be examined as context-based affordability, immediacy of connection, reliability, and safety (see Table 1).

First, context-based affordability provides user-customized optimal information based on the user's location information [31,32]. It is different from location character using only location information, and it is an activity in the mobile environment considering the consumer's situation and movement path [33,34]. Therefore, context-based affordability can be defined as a concept considering all situations of a user, which belongs to mobile service, and the user's location.

Table 1. Components of medical sector O2O platform service quality.

Components	Details	References
Context-based Affordability	Offering user-customized optimal information considering all situations of service within the medical information platform	Pierce et al. [31], Russell and Greenhalgh [32], Nalepa et al. [33], Nayak et al. [34]
Immediacy of Connection	Connectivity based on mobile and online devices, not restricted by time and place within the medical information platform	Faranda [35], Parise et al. [36], Perez-Vega et al. [37], Tucker and Lavis [38], Riapina [39]
Reliability	Consumers trust the reliability and sincerity delivered by the medical information platform within the e-service environment	Brun and Gross [40], Kim and Frangopol [41], Chen et al. [42], Faust et al. [43]
Safety	Degree of consumers' safety consciousness on information outflow risk and security through the medical information platform	Currie et al. [44], Jeeradist et al. [45], Celik [46]

Second, the immediacy of connection can be explained as ubiquitous connectivity, namely receiving information by connecting to the Internet immediately at a necessary time, such as information services [35]. It is the facility to search and purchase products or services immediately connecting, not restricted by time and place [36]. In the case of platform service, connectivity that can be connected to online service without a problem with just a mobile-based communication device, such as smart devices used by individuals, becomes a critical satisfaction factor [37–39].

Third, the exchange process within service use or consumption activity is established when a company shows belief or trust with reliability and sincerity [40]. Reliability is essential in the e-service environment, where uncertainties are very high [41,42]. Faust et al. [43] asserted that reliability is a crucial service property and that reliability increases repurchasing intention.

Fourth, safety is essential in the medical service connected to consumers' health and treatment [44]. In using platform service, information outflow risk and security affect an intention to adopt products and services according to the collection of information, including personal information, health management, and medical records [45]. Celik [46] pointed out that anxiety felt from the possibility that one's personal information may be abused in the position (location)-based use process can be connected to service use rejection.

2.2. Perceived Value of O2O Platform and Continuous Use Intention

The perceived value of service positively affects consumers' service attitude or continuous use intention in general [47]. The O2O platform service should improve users' perceived quality or value and service quality improvement to enhance service satisfaction and continuous use intention. I.M.Ishaq [48] explained that online service quality improves offline satisfaction through perceived benefits. Consequently, if consumers experience quality satisfaction from an O2O platform, they can be simultaneously satisfied with offline service beyond online service. The perceived value factor of O2O platform service can affect service satisfaction and use consolidation.

As Davis et al. [49] and Zeithaml [50] asserted, through a value-based adoption model (VAM), the perceived value in the digital technology-based environment is connected to technology adoption and users' behavior reinforcement. When looking at previous studies on this, He and Li [51] insisted that perceived usefulness and easiness in the O2O platform service of e-commerce affect reuse intention. Akter et al. [52] presented that easiness works as an essential factor for use intention in a study for O2O platform expansion in the restaurant industry. Zhu [53] explained that the perceived convenience of beauty service O2O platform service affects repurchasing intention. Jeong and Song [54] presented a

study in which the perceived usefulness and convenience of medical O2O platforms affect user satisfaction.

Davis et al. [49] presented two belief variables, use easiness and perceived usefulness, as central values affecting users' information technology adoption and use intention. In conclusion, as presented above, such factors as context-based affordability, immediacy of connection, reliability, and safety affecting medical information O2O platform service quality affect users' perceived usefulness or convenience of a platform, and continuous use intention can be revealed when the perceived usefulness and convenience are positive.

In this regard, the following hypotheses could be set. First, perceived usefulness means the degree of belief that service use is not problematic, and it can explain how easily the service can be used [55]; that is, a user's total value perceived by using new technology can be useful [56], and usefulness awareness can become the foundation of behavioral selection. In the case of online market-based services based on technology such as platforms, usefulness can be a crucial factor for users' adoption [55,57]. The following hypotheses were set based on the previous studies;

Hypothesis 1. *Context-based affordability among the medical information O2O platform service quality factors will have a positive (+) effect on perceived usefulness.*

Hypothesis 2. *The immediacy of connection among the medical information O2O platform service quality factors will have a positive (+) effect on perceived usefulness.*

Hypothesis 3. *Reliability among the medical information O2O platform service quality factors will have a positive (+) effect on perceived usefulness.*

Hypothesis 4. *Safety among the medical information O2O platform service quality factors will have a positive (+) effect on perceived usefulness.*

The perceived convenience means consumers' use of services is convenient and straightforward [58]. When the convenience of service increases, the customer's time and cost decrease, which improves perceived value [59]. Berry et al. [60] reported that service users' conveniences are different, and service convenience improves by consumers' high perception of convenience if the service user minimizes the cost of input efforts. Teo [61] stressed that convenience and promptness are essential because consumers tend to minimize time and cost when they use a service. Consumers' perceived convenience of service strongly affects consumer value and satisfaction. In healthcare service platform use, consumers motivate to purchase services that can be easily accessible and conveniently usable in the online environment [62,63]. In conclusion, service quality factors of medical O2O platform service affect judging convenience among consumers' perceived consumption value factors. The following hypotheses were set based on the previous studies;

Hypothesis 5. *Context-based affordability among the medical information O2O platform service quality factors will have a positive (+) effect on perceived convenience.*

Hypothesis 6. *The immediacy of connection among the medical information O2O platform service quality factors will have a positive (+) effect on perceived convenience.*

Hypothesis 7. *Reliability among the medical information O2O platform service quality factors will have a positive (+) effect on perceived convenience.*

Hypothesis 8. *Safety among the medical information O2O platform service quality factors will have a positive (+) effect on perceived convenience.*

Ozturk et al. [58] confirmed that use easiness and convenience affect adoption intention and behavioral intention by studying consumers' adoption process on information tech-

nology and system. Lai and Liew [64] asserted that perceived convenience has a positive effect on consumer behaviors. Choi and Choi [65] explained that perceived values such as perceived usefulness and convenience affect service satisfaction and voluntary behavioral intention. Studies on digital healthcare or health information platforms commonly present that perceived usefulness and convenience positively affect users' use intention [66–68]. Based on the previous studies, this study set the following hypotheses that the perceived usefulness and convenience of the medical information O2O platform service will have a positive effect on continuous use intention;

Hypothesis 9. *Perceived usefulness on the medical information O2O platform service quality factors will have a positive (+) effect on continuous use intention.*

Hypothesis 10. *Perceived convenience on the medical information O2O platform service quality factors will have a positive (+) effect on continuous use intention.*

3. Research Method

3.1. Research Model

This study aimed to identify the effects of the medical information O2O platform service quality factors on user behaviors with the mediation of perceived usefulness and convenience. In context-based affordability, the immediacy of connection, reliability, and safety was set as the quality factors, which are independent variables, whereas the parameters were set as perceived usefulness and perceived convenience. Also, continuous use intention was set as a dependent variable. To this end, a research model was designed, centered on the hypotheses based on previous studies, as shown in Figure 1.

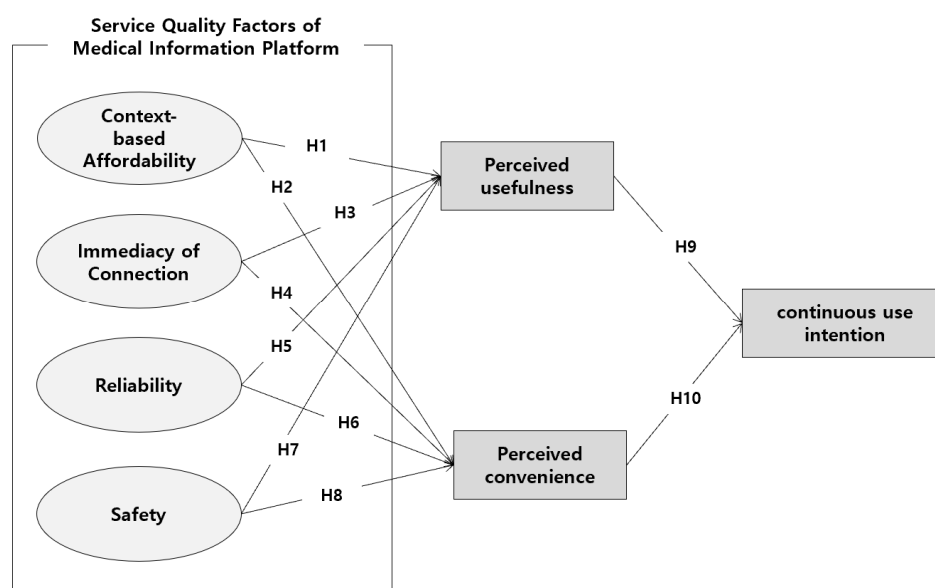


Figure 1. Research model.

3.2. Measurement Variables and Data Collection

A questionnaire survey was carried out to collect data to analyze the model, the questions were composed through previous studies, as shown in Figure 1, and manipulated variables of the components for the questions were defined based on the references (see Table 2).

Table 2. Variable definitions and measurement items.

Factors	Survey Items	References
Medical information O2O platform service quality	(1) If I use the medical app service, I can receive the information on the medical institution I want. (2) If I use the medical app service, I can select a medical institution where treatment waiting time is not long. (3) If I use the medical app service, I can receive helpful medical information in which I am interested.	Pierce et al. [31], Russell and Greehalgh [32],
	(1) I can use the medical app service freely on the move. (2) I can immediately use the medical app on the move if I have a cell-phone. (3) If I use the medical app service, I can identify the operation information of medical institutions.	Perez-Vega et al. [37], Tucker and Lavis [38], Riapina [39]
	(1) The medical app service can be trusted. (2) I can trust the information provided by the medical app service. (3) I can trust the medical app service and select a medical institution.	Kim and Frangopol [41], Chen et al. [42]
	(1) Personal information will not be disclosed if I use the medical app service. (2) When I use the medical app service, a third party will not identify my location information. (3) When I use the medical app service, there will be no risk of being hacked externally.	Jeeradist et al. [45], Celik [46]
Perceived usefulness	(1) The medical app that I use is beneficial. (2) The medical app I use is helpful for an appointment with a doctor. (3) The medical app that I use is worth using.	He and Li [51], Akter et al. [52], Zhu et al. [53]
Perceived convenience	(1) The appointment with a doctor through my medical app is simple. (2) The medical app that I use is easy to use. (3) I can easily check medical information through my medical app.	Berry et al. [60], Teo et al. [61], Lai and Liew [62]

Table 2. Cont.

Factors	Survey Items	References
Continuous use intention	(1) I frequently use the medical app that I currently have.	Lee et al. [69], Xin Ding et al. [70]
	(2) I will recommend the medical app I currently use to acquaintances.	
	(3) I will continue using my current medical app.	

When looking at the manipulated definition of the variables used for the questionnaire survey, the context-based affordability in this study means that close medical institutions are searched in connection with the consumer's current location and informing treatment waiting situation and that the service is stably operated. The immediacy of connection means an appointment with a doctor can be made by immediately connecting if a user has a smart device. Reliability means that the information and medical institution information provided by a medical information O2O platform can be trusted. Safety means personal information is safely managed without being disclosed.

Perceived usefulness, a parameter affected by the factors, means that users see its usefulness and find the medical information O2O platform worthwhile. Perceived convenience means the use of easiness as a concept measuring an easy operation method and how much easy it is to become familiar with the medical information O2O platform. Continuous use intention examines whether an O2O platform is used frequently and can be recommended to acquaintances and if an intention to use it continuously exists in the case of using a medical institution.

The variables defined in this way are the questions of the questionnaire, and a total of 21 questions are offered. Based on the previous research of Pierce et al. [31] and Russell and Greenhalgh [32], this study formed three questions for the factor 'context-based affordability'. To build the three questions of 'immediacy of connection' we used the literatures by Perez-Vega et al. [37], Tucker and Lavis [38] and Riapina [39]. We used the studies by Kim and Frangopol [41], and Chen et al. [42] for the questions of 'reliability'. The three questions on the 'safety' variable of the medical information O2O platform service quality were designed by the previous studies of Jeeradist et al. [45] and Celik [46]. To design the questions we used the studies of He and Li [51], Akter et al. [52] and Zhu et al. [53] for 'perceived usefulness', Berry et al. [60], Teo et al. [61], Lai and Liew [62] for 'perceived convenience', and Lee et al. [69] and Xin Ding et al. [70] for 'continuous use intention'.

The online survey was conducted through random samples for users of 'gooddoc' and 'ddocdoc', which are medical information O2O platforms in Korea. The survey was conducted for 20 days from 1 March 2022 to 20 March 2022. A total of 380 surveys were collected, and 359 surveys were analyzed, excluding those that were faithfully answered. Frequency analysis, validity and reliability analysis, and structural equation model analysis were performed using SPSS v.22 and AMOS v.22 programs.

3.3. Demographic Information of the Data

As shown in Table 3, as for the gender ratio of the respondents, males were 47.4%, and females were 52.6%, so an almost even gender ratio distribution was shown. Regarding age, respondents in their 30s and 40s took up 53.8% and 35.8%, respectively, so the respondents in their 30 and 40s took up most of the subjects. Regarding the education level, the respondents who enrolled in or graduated from university were 69.4%, those who graduated from high school were 20.5%, and those enrolled in or graduated from graduate school were 10.1%, respectively. As for the use period of the medical information platform, users with less than one year took up 67.6%, and those with one year to less than 3 years took up 32.4%.

Table 3. Demographic information of survey participants.

Classification		Frequency	Percentage (%)
Gender	Male	164	47.4
	Female	182	52.6
	Total	346	100
Age	20–29	30	8.7
	30–39	186	53.8
	40–49	124	35.8
	Over 50	6	1.7
	Total	346	100
Education level	Graduated from high school	71	20.5
	Enrolled in or graduated from university	240	69.4
	Enrolled in or graduated from graduate school	35	10.1
	Total	346	100
Use period of medical information O2O platform	Within the recent year	234	67.6
	Within the last three years	112	32.4
	Total	346	100

4. Results

4.1. Analysis Results of Reliability and Validity

The analysis results of reliability and convergent validity of the measurement model, as shown in Table 4, were good. Based on 0.7 and higher composite reliability index of the structural equation measurement model, internal consistency reliability and convergent validity were verified through factor loading, Cronbach α , and complex reliability indices. All factor loadings were between 0.772 and 0.977, which were in line with the standard. Internal reliability was between 0.857 and 0.953, so significance was ensured. Because the t-value was 15.0 and higher, statistical significance could be confirmed. AVE was 0.666 to 0.870, and Cronbach α was 0.859–0.952; therefore, convergent validity was secured. As a result of an analysis of the measurement model fit, $\chi^2(df)$ was 612.91 and $\chi^2/\text{degree of freedom}$ was 3.648. Goodness-of-Fit-Index (GFI) was 0.849, Adjusted Goodness-of-Fit-Index (AGFI) was 0.792, Normal Fit Index (NFI) was 0.908, and Root Mean Square Error of Approximation (RMSEA) was 0.088. Consequently, the component values of the fit of the measurement model were statistically very significant.

As a result of an analysis on the AVE and CR values between potential variables in this study, each potential variable's square root of AVE was larger than correlation coefficients between the potential variables, so it was ascertained that discriminant validity was obtained (see Table 5).

Table 4. Results of reliability and convergent validity test.

Variables	Items	Standardized Regression Weight	t-Value	CR	AVE	Cronbach α
Context-based affordability	CA1	0.942	-	0.942	0.845	0.942
	CA2	0.913	29.557 ***			
	CA3	0.902	28.630 ***			
Immediacy of connection	IC1	0.899	-	0.897	0.744	0.895
	IC2	0.892	22.353 ***			
	IC3	0.792	18.571 ***			
Reliability	RE1	0.840	-	0.925	0.805	0.921
	RE2	0.958	23.569 ***			
	RE3	0.889	21.579 ***			
Safety	SA1	0.881	-	0.953	0.870	0.952
	SA2	0.977	30.193 ***			
	SA3	0.938	27.842 ***			
Perceived usefulness	PU1	0.792	-	0.903	0.756	0.898
	PU2	0.912	19.427 ***			
	PU3	0.900	19.131 ***			
Perceived convenience	PC1	0.822	-	0.899	0.747	0.898
	PC2	0.873	19.230 ***			
	PC3	0.897	19.860 ***			
Continuous use intention	CUI1	0.832	-	0.857	0.666	0.859
	CUI_2	0.843	16.461			
	CUI3	0.772	15.204			

Measurement model fit: χ^2 (df) 612.91, χ^2 /degree of freedom 3.648, RMR 0.021, GFI 0.849, AGFI 0.792, NFI 0.908, TLI 0.913, CFI 0.931, RMSEA 0.088/*** $p < 0.001$.

Table 5. Discriminant validity.

Section	CA	IC	RE	SA	PU	PC	CUI
Context-based affordability (CA)	0.919						
Immediacy of connection (IC)	0.290 ***	0.863					
Reliability (RE)	0.257 ***	0.377 ***	0.897				
Safety (SA)	0.083	0.198 ***	0.294 ***	0.933			
Perceived usefulness (PU)	0.381 ***	0.615 ***	0.376 ***	0.346 ***	0.869		
Perceived convenience (PC)	0.478 ***	0.437 ***	0.297 ***	0.107 *	0.635 ***	0.864	
Continuous use intention (CUI)	0.212 ***	0.272 ***	0.346 ***	0.274 ***	0.413 ***	0.445 ***	0.816

The square root of AVE is shown in bold letters. /* $p < 0.05$ *** $p < 0.001$.

4.2. Analysis Results of Structural Model

As presented in Table 6 and as a result of the analysis of structural model fit, χ^2 (p) was 523.599 (0.000) and χ^2 /degree of freedom was 3.117. Goodness-of-Fit-Index (GFI) value was 0.872, Normal Fit Index (NFI) 0.921, Adjusted Goodness-of-Fit-Index (AGFI) 0.872, Root Mean Square residual (RMR) 0.026, and Root Mean Square Error of Approximation

(RMSEA) 0.078. Therefore, fair component values were significant. Although not affected by the samples, the comparative fit index (CFI) indicating the model's explanation power was 0.945, and Tucker-Lewis Index (TLI) judging the structural model's explanation power was 0.931; therefore, the basic model was analyzed to be suitable.

Table 6. Results of hypothesis test.

	Hypothesis (Path)	Standard Path Coefficient	t-Value	Status of Adoption	R ²
H1	Context-based affordability→Perceived usefulness	0.223	5.051 ***	Adopted	0.574
H2	Immediacy of connection→Perceived usefulness	0.537	10.102 ***	Adopted	
H3	Reliability→Perceived usefulness	0.047	0.992	Rejected	
H4	Safety→Perceived usefulness	0.244	5.512 ***	Adopted	
H5	Context-based affordability→Perceived convenience	0.383	7.218 ***	Adopted	0.400
H6	Immediacy of connection→Perceived convenience	0.349	5.993 ***	Adopted	
H7	Reliability→Perceived convenience	0.072	1.273	Rejected	
H8	Safety→Perceived convenience	0.018	0.370	Rejected	
H9	Perceived usefulness→Continuous use intention	0.264	3.238 ***	Adopted	0.291
H10	Perceived convenience→Continuous use intention	0.320	3.893 ***	Adopted	

Structural model fit: χ^2 (df) 523.599, χ^2 /degree of freedom 3.117, RMR 0.026, GFI 0.872, AGFI 0.824, NFI 0.921, TLI 0.931, CFI 0.945, RMSEA 0.078/*** $p < 0.001$.

As shown in Table 6 and as a result of hypotheses verification through a path analysis of the structural equation model, 3 out of 10 hypotheses were rejected. Among the medical information factors, the O2O platform service quality components are context-based affordability (5.051, $p < 0.001$), immediacy of connection (10.102, $p < 0.001$), and safety (5.512, $p < 0.001$), which showed a positive (+) effect on the perceived usefulness. Meanwhile, reliability was rejected; therefore, it did not affect the perceived usefulness. Context-based affordability (7.218, $p < 0.001$) and immediacy of connection (5.993, $p < 0.001$) had a positive (+) effect on the perceived convenience, and reliability and safety did not. Perceived usefulness (3.238, $p < 0.001$) and perceived convenience (3.893, $p < 0.001$) had a positive (+) effect on the continuous use intention and, thus, they were adopted.

4.3. Mediated Effect

As shown in Table 7, 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, context-based affordability was confirmed to affect continuous use intention with the mediation of perceived usefulness (0.059, $p < 0.05$) and perceived convenience (0.123, $p < 0.01$). In terms of immediacy of connection, a mediated effect was shown on the continuous use intention by the perceived usefulness (0.142, $p < 0.05$) and the perceived convenience (0.112, $p < 0.05$). Meanwhile, a mediated effect was not shown on the perceived usefulness and convenience by reliability in user behaviors. As for safety, a mediated effect of perceived usefulness (0.064, $p < 0.05$) was confirmed on the continuous use intention, but a mediated effect was not revealed by the perceived convenience on the continuous use intention.

Table 7. Results of mediated effect.

Dependent Variable	Explanatory Variable	Direct Effect	Indirect Effect	Total Effect
Context-based affordability	Perceived usefulness	0.223 ***		0.223
	Perceived convenience	0.383 ***		0.383
	Perceived usefulness→Continuous use intention		0.059 *	0.059
	Perceived convenience→Continuous use intention		0.123 **	0.123
Immediacy of connection	Perceived usefulness	0.537 ***		0.537
	Perceived convenience	0.349 ***		0.349
	Perceived usefulness→Continuous use intention		0.142 *	0.142
	Perceived convenience→Continuous use intention		0.112 *	0.112
Reliability	Perceived usefulness	0.047		0.047
	Perceived convenience	0.072		0.072
	Perceived usefulness→Continuous use intention		0.013	0.013
	Perceived convenience→Continuous use intention		0.023	0.023
Safety	Perceived usefulness	0.244 ***		0.244
	Perceived convenience	0.018		0.018
	Perceived usefulness→Continuous use intention		0.064 *	0.064
	Perceived convenience→Continuous use intention		0.006	0.006
Perceived usefulness	Continuous use intention	0.264 ***		0.264
Perceived convenience	Continuous use intention	0.320 ***		0.320

* $p < 0.05$ ** $p < 0.01$. *** $p < 0.001$.

5. Discussions

This study defined the medical information O2O platform service quality components as four factors, namely context-based affordability, immediacy of connection, reliability, and safety. The study also analyzed the impact relations of the factors on continuous use intention with the mediation of perceived usefulness and perceived convenience. The following analysis results could be drawn;

First, reliability did not affect perceived usefulness and perceived convenience. Safety did not affect perceived convenience. As Choi and Choi [65] insisted, reliability is an essential property in an online transaction, and it is a conflicting result of a study result that reliability increases customers' repurchasing intention. Moon and Armstrong [71,72] emphasized that reliability is the most significant factor affecting customer satisfaction. Because of medical service features, medical personnel's knowledge, function, and experience are pivotal factors for the formation of reliability and satisfaction. In many previous studies dealing with reliability in the medical sector, reliability is explained as affecting use intention and behavior [73,74].

On the contrary, reliability did not significantly affect perceived usefulness and convenience in this study's medical information O2O platform service. The result can be connected to the result that the physical environmental quality that a medical institution maintains at a certain level does not significantly affect customer satisfaction and reliability,

as Yang et al. [30] and Pan et al. [75] stated. Reliability in the medical O2O platform, unlike the medical service researched based on existing offline service, means reliability on a platform handling medical appointments or information offering. For this reason, the sensitivity or importance of reliability may be lower.

As Tsai et al. [76] mentioned, reliability in the app service is based on technology and service result accuracy, rather than the meaning of reliability on service content or quality. Reliability in the medical information O2O app does not mean reliability on medical quality, such as medical personnel, medical institution, and treatment level to consumers. Although the app is a medical service, it is confirmed to be connected to technical evaluation factors on the app used. Consequently, it was ascertained that there is a need to consider technical and contextual service quality reinforcement in the platform or online service handling medical services like the platforms in such industries as accommodation and restaurants.

Second, personal information management and outflow safety significantly affected perceived usefulness but did not affect perceived convenience. This reveals that consumers do not connect personal information protection and exposure risk with convenience in using online services related to medical information. Safety of medical information O2O platform is recognized as usefulness-based service value by the users, and the safety can affect continuous use intention when service usefulness is perceived in terms of safety.

As Celik [46] pointed out, security among the app service quality factors is insignificant in terms of the effect on consumer satisfaction. The reason can be that the safety or security issue is not emerging as a considerable issue to mobile-based platform users, as the 'Privacy Protect Act' is reinforced worldwide and the security system for app service use is consolidated. If the inconvenience of app use is not high due to the security and information protection problem, consumers tend not to connect platform service safety with user convenience [52,56]. From this aspect, it can be confirmed that service quality factors affect perceived usefulness rather than convenience in the case of medical information O2O platform service.

Lastly, among the medical information O2O platform service quality components, the immediacy of connection strongly affects consumers' perception of convenience and usefulness. Service quality standards differ according to application service nature and use purpose [48,51]. Because a medical information platform is a service linked with medical treatment activities, the immediacy of connection can emerge as significant. In the case of medical treatment, an emergency can be requested.

In many cases, offline medical institutions are designated rather than selected. Due to the feature, the issue of service being connected to the place and time that a consumer picks can be a crucial factor to users in using medical information platforms. Zhang and Wang [26] mentioned that features that can immediately handle distance and time when an emergency occurs become the most essential medical service factor [12,77]. In conclusion, the highest priority can be placed on the immediacy of the connection factor to users, namely the appointment with a doctor and connection service to the offline medical system in the medical information O2O platform service.

6. Conclusions

6.1. Research Implications

Since the COVID-19 pandemic and the reinforcement of the O2O platform service in various industries, studies on consumers and marketing have been actively performed. However, studies on the medical information O2O platform service are lacking. This study is meaningful in that it emphasizes the importance of the medical information O2O platform, defines specific service quality factors and empirical study results, and relates the effects of the service quality factors on consumers' perceived value and use intention. Based on these, the following implications can be presented.

In the academic approach this research is significant in that the context-based affordability and immediacy of connection were analyzed as essential factors in the medical information O2O platforms. Medical information O2O platform services have recently

begun to spread. Accordingly, the usability of commercial platforms is being studied in various aspects but research on market and customer usability on medical service-based platforms is still insufficient. Therefore, this study is significant because the factors influencing the use and sustainability of the medical information platform were empirically presented. In particular, it found that the O2O platform service is the most important factor in the medical service market. Accordingly, it was confirmed that the speed of access services is more important than anything else in medical platform services, unlike other platform services.

This research also confirmed the conclusion of previous studies that perceived usefulness and convenience significantly affect use behaviors. This result suggests that developing a medical information system that can more conveniently and usefully provide an individual's health information management and retention for a healthy life can be considered by proposing a new method to use the medical information more from the consumers' perspective. Beyond the service at startups-based medical information provision, if the medical service institutions relying on existing offline services develop various contents and services using the medical information they have and carry out app services, they can be connected to business expansion in the medical sector.

In the managerial approach this study's results showed that reliability was not significant because it is inherent. It was confirmed that reliability does not affect perceived usefulness and perceived convenience in terms of the feature of the medical information O2O platform, not a study targeting medical institutions. The focus of the medical service platform management should be placed on the maximum expansion of the number of medical institutions that consumers can use through a medical information O2O platform rather than the medical institution's reliability verification offered from the medical information O2O platform. There is also a need to consider reliability and consumers' loyalty to minimize technical errors of platforms connected on and offline.

6.2. Research Limitations and Future Plans

This study has the following limitations. First, this study targeted two leading Korean medical information O2O platform users. Although the two platforms may have representativeness, as the users take up quite a large portion of the medical information O2O platform users, compared to the total Korean population, the available medical institutions can be limited. As only the features of consumers using the Korean medical service market are reflected, there is a limitation in the generalization of the study results. Therefore, there is a need to expand to extensive medical information O2O platforms with more available medical institutions targeting significant countries.

Second, this study has a limitation in that features of the medical information O2O platform services have not been diversely reflected because the medical information O2O platform service quality factors were defined as context-based affordability, immediacy of connection, reliability, and safety. A further study empirically discussing use behaviors can be performed by discovering various features of the medical information O2O platforms' service factors. In addition, the scope of the study was limited for platform users to study the intention to continue using. However, in future studies, it will be possible to analyze the factors affecting the improvement of the intention and attitude of non-users through a study comparing the users of the medical information platform.

Finally, additional study is required regarding offline service quality factors of medical institutions used through the medical information O2O platforms and online service quality for the invigoration of the medical information O2O platforms. If the remote treatment domain becomes an issue due to COVID-19, a study on the relationship between the medical information O2O platforms and remote treatment platforms will be necessary.

Author Contributions: Conceptualization, J.M.; methodology, J.M.; software, J.M.; validation, B.K.; formal analysis, J.M.; investigation, J.M.; resources, J.M.; data curation, J.M.; writing-original draft preparation, J.M. and B.K.; writing-review and editing, B.K.; visualization, B.K.; supervision, B.K.; project administration, B.K.; funding acquisition, J.M. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable for studies not involving humans or animals.

Informed Consent Statement: Not applicable for studies not involving humans.

Data Availability Statement: Not applicable for data availability.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. He, B.; Mirchandani, P.; Shen, Q.; Yang, G. How should local Brick-and-Mortar retailers offer delivery service in a pandemic World? Self-building Vs. O2O platform. *Transp. Res. Part E Logist. Transp. Rev.* **2021**, *154*, 102457. [\[CrossRef\]](#)
2. Lee, O.J.; Yang, D.W. A study on the effect of O2O service quality on user satisfaction and intention of reuse. *J. Digit. Converg.* **2017**, *15*, 165–178. [\[CrossRef\]](#)
3. Shen, C.W.; Chen, M.; Wang, C.C. Analyzing the trend of O2O commerce by bilingual text mining on social media. *Comput. Hum. Behav.* **2019**, *101*, 474–483. [\[CrossRef\]](#)
4. Xiao, L.; Mi, C.; Zhang, Y.; Ma, J. Examining consumers' behavioral intention in O2O commerce from a relational perspective: An exploratory study. *Inf. Syst. Front.* **2019**, *21*, 1045–1068. [\[CrossRef\]](#)
5. Selvaraj, S.; Sundaravaradhan, S. Challenges and opportunities in IoT healthcare systems: A systematic review. *SN Appl. Sci.* **2020**, *2*, 1–8. [\[CrossRef\]](#)
6. Gu, W.; Bao, P.; Lee, J.H. A Study on the continuance intention of O2O fresh agricultural products E-commerce. *Int. J. Ind. Distrib. Bus.* **2019**, *10*, 35–44. [\[CrossRef\]](#)
7. Kang, M.J.; Wu, Z.; Hwang, H.J. A study on the mediating effect of customer orientation between O2O service quality and customers' perceived service satisfaction. *J. Distrib. Sci.* **2021**, *19*, 37–44.
8. Ram, J.; Manoharan, A.; Sun, S. O2O adoption benefits: A managerial perspective of customer benefits. *Electron. J. Inf. Syst. Eval.* **2020**, *23*, 65–78. [\[CrossRef\]](#)
9. Zhao, J. Will the community O2O service supply channel benefit the elderly healthcare service supply chain? *Electron. Commer. Res.* **2020**, 1–34. [\[CrossRef\]](#)
10. Park, J.Y.; Park, D.W. Global O2O matching platform research based on clinics. *J. Korea Inst. Inf. Commun. Eng.* **2016**, *20*, 1517–1523.
11. Du, Y.; Tang, Y. Study on the development of O2O E-commerce platform of China from the perspective of offline service quality. *Int. J. Bus. Soc. Sci.* **2014**, *5*, 308–312.
12. D'Souza, R.S.; D'Souza, S.; Strand, N.; Anderson, A.; Vogt, M.N.; Olatoye, O. YouTube as a source of medical information on the novel coronavirus 2019 disease (COVID-19) pandemic. *Glob. Public Health* **2020**, *15*, 935–942. [\[CrossRef\]](#)
13. Chung, K.; Park, R.C. PHR open platform based smart health service using distributed object group framework. *Clust. Comput.* **2016**, *19*, 505–517. [\[CrossRef\]](#)
14. Gao, F.; Su, X. Omnichannel retail operations with buy-online-and-pick-up-in-store. *Manag. Sci.* **2017**, *63*, 2478–2492. [\[CrossRef\]](#)
15. Chen, C.C.; Hsiao, K.L.; Hsieh, C.H. Understanding usage transfer behavior of two-way O2O services. *Comput. Hum. Behav.* **2019**, *100*, 184–191. [\[CrossRef\]](#)
16. Evans, D.S.; Schmalensee, R. Markets with two-sided platforms. *Issues Compet. Law Policy* **2008**, *28*, 667–693.
17. Gao, H.N.K.; Trung, B.; Truong, B.Q. Outbound service quality at Wan Hai Lines. *J. Asian Financ. Econ. Bus.* **2019**, *6*, 177–185. [\[CrossRef\]](#)
18. Rožman, N.; Corn, M.; Požrl, T.; Diaci, J. Distributed logistics platform based on Blockchain and IoT. *Procedia CIRP* **2019**, *81*, 826–831. [\[CrossRef\]](#)
19. Van Alstyne, M.W.; Parker, G.G.; Choudary, S.P. Pipelines, platforms, and the new rules of strategy. *Harv. Bus. Rev.* **2016**, *94*, 54–62.
20. Jadczyk, T.; Kiwic, O.; Khandwalla, R.M.; Grabowski, K.; Rudawski, S.; Magaczewski, P.; Henry, T.D. Feasibility of a voice-enabled automated platform for medical data collection: Cardio Cube. *Int. J. Med. Inform.* **2019**, *129*, 388–393. [\[CrossRef\]](#)
21. Li, S.H.; Wang, C.Y.; Lu, W.H.; Lin, Y.Y.; Yen, D.C. Design and implementation of a telecare information platform. *J. Med. Syst.* **2012**, *36*, 1629–1650. [\[CrossRef\]](#)
22. Lee, S.Y.; Chun, S.Y.; Park, H. The impact of COVID-19 protocols on the continuity of care for patients with hypertension. *Int. J. Environ. Res. Public Health* **2022**, *19*, 1735. [\[CrossRef\]](#)
23. Wu, X.; Zhang, Y.; Wang, A.; Shi, M.; Wang, H.; Liu, L. MNSSp3: Medical big data privacy protection platform based on Internet of things. *Neural Comput. Appl.* **2020**, *22*, e201351. [\[CrossRef\]](#)

24. Hermes, S.; Riasanow, T.; Clemons, E.K.; Böhm, M.; Krcmar, H. The digital transformation of the healthcare industry: Exploring the rise of emerging platform ecosystems and their influence on the role of patients. *Bus. Res.* **2020**, *13*, 1033–1069. [\[CrossRef\]](#)
25. Song, X.; Liu, X.; Wang, C. The role of telemedicine during the COVID-19 epidemic in China—Experience from Shandong province. *Critical Care* **2020**, *24*, 178. [\[CrossRef\]](#)
26. Zhang, X.; Wang, Y. Research on intelligent medical big data system based on Hadoop and blockchain. *EURASIP J. Wirel. Commun. Netw.* **2021**, *7*, 1–21. [\[CrossRef\]](#)
27. Bricon-Souf, N.; Anceaux, F.; Bennani, N.; Dufresne, E.; Watbled, L. A distributed coordination platform for home care: Analysis, framework and prototype. *Int. J. Med. Inform.* **2005**, *74*, 809–825. [\[CrossRef\]](#) [\[PubMed\]](#)
28. Torkkeli, M.; Tuominen, M. The contribution of technology selection to core competencies. *Int. J. Prod. Econ.* **2002**, *77*, 271–284. [\[CrossRef\]](#)
29. Kim, J.C.; Chung, K. Mining health-risk factors using PHR similarity in a hybrid P2P network. *Peer-Peer Netw. Appl.* **2018**, *11*, 1278–1287. [\[CrossRef\]](#)
30. Yang, C.T.; Liu, J.C.; Chen, S.T.; Lu, H.W. Implementation of a big data accessing and processing platform for medical records in cloud. *J. Med. Syst.* **2017**, *41*, 149. [\[CrossRef\]](#)
31. Pierce, G.; El-Khattabi, A.R.; Gmoser-Daskalakis, K.; Chow, N. Solutions to the problem of drinking water service affordability: A review of the evidence. *Wiley Interdiscip. Rev. Water* **2021**, *8*, e1522. [\[CrossRef\]](#)
32. Russell, J.; Greenhalgh, T. Affordability as a discursive accomplishment in a changing National Health Service. *Soc. Sci. Med.* **2012**, *75*, 2463–2471. [\[CrossRef\]](#) [\[PubMed\]](#)
33. Nalepa, G.J.; Kutt, K.; Bobek, S. Mobile platform for affective context-aware systems. *Future Gener. Comput. Syst.* **2019**, *92*, 490–503. [\[CrossRef\]](#)
34. Nayak, B.; Bhattacharyya, S.S.; Goswami, S.; Thakre, S. Adoption of online education channel during the COVID-19 pandemic and associated economic lockdown: An empirical study from push–pull–mooring framework. *J. Comput. Educ.* **2022**, *9*, 1–23. [\[CrossRef\]](#)
35. Faranda, W.T. The effects of instructor service performance, immediacy, and trust on student–faculty out-of-class communication. *Mark. Educ. Rev.* **2015**, *25*, 83–97. [\[CrossRef\]](#)
36. Parise, S.; Guinan, P.J.; Kafka, R. Solving the crisis of immediacy: How digital technology can transform the customer experience. *Bus. Horiz.* **2016**, *59*, 411–420. [\[CrossRef\]](#)
37. Perez-Vega, R.; Waite, K.; O’Gorman, K. Social impact theory: An examination of how immediacy operates as an influence upon social media interaction in Facebook fan pages. *Mark. Rev.* **2016**, *16*, 299–321. [\[CrossRef\]](#)
38. Tucker, I.M.; Lavis, A. Temporalities of mental distress: Digital immediacy and the meaning of ‘crisis’ in online support. *Sociol. Health Illn.* **2019**, *41*, 132–146. [\[CrossRef\]](#) [\[PubMed\]](#)
39. Riapina, N. Clarity and immediacy in technology mediated communication between teachers and students in tertiary education in Russia. *Commun. Stud.* **2021**, *72*, 1017–1033. [\[CrossRef\]](#)
40. Burns, S.; Gross, G. Value of service reliability. *IEEE Trans. Power Syst.* **1990**, *5*, 825–834. [\[CrossRef\]](#)
41. Kim, S.; Frangopol, D.M. Multi-objective probabilistic optimum monitoring planning considering fatigue damage detection, maintenance, reliability, service life and cost. *Struct. Multidiscip. Optim.* **2018**, *57*, 39–54. [\[CrossRef\]](#)
42. Chen, X.; Yu, L.; Zhang, Y.; Guo, J. Analyzing urban bus service reliability at the stop, route, and network levels. *Transp. Res. Part A Policy Pract.* **2009**, *43*, 722–734. [\[CrossRef\]](#)
43. Faust, O.; Lei, N.; Chew, E.; Ciaccio, E.J.; Acharya, U.R. A smart service platform for cost efficient cardiac health monitoring. *Int. J. Environ. Res. Public Health* **2020**, *17*, 6313. [\[CrossRef\]](#) [\[PubMed\]](#)
44. Currie, G.; Waring, J.; Finn, R. The limits of knowledge management for UK public services modernization: The case of patient safety and service quality. *Public Adm.* **2008**, *86*, 363–385. [\[CrossRef\]](#)
45. Jeeradist, T.; Thawesaengskulthai, N.; Sangsuwan, T. Using TRIZ to enhance passengers’ perceptions of an airline’s image through service quality and safety. *J. Air Transp. Manag.* **2016**, *53*, 131–139. [\[CrossRef\]](#)
46. Celik, M. Designing of integrated quality and safety management system (IQSMS) for shipping operations. *Saf. Sci.* **2009**, *47*, 569–577. [\[CrossRef\]](#)
47. Petrick, J.F. Development of a multi-dimensional scale for measuring the perceived value of a service. *J. Leis. Res.* **2002**, *34*, 119–134. [\[CrossRef\]](#)
48. Ishaq, I.M. Perceived value, service quality, corporate image and customer loyalty: Empirical assessment from Pakistan. *Serb. J. Manag.* **2012**, *7*, 25–36. [\[CrossRef\]](#)
49. Davis, F.D.; Bagozzi, R.P.; Warshaw, P.R. User acceptance of computer technology: A comparison of two theoretical models. *Manag. Sci.* **1989**, *35*, 982–1003. [\[CrossRef\]](#)
50. Zeithaml, V.A. Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *J. Mark.* **1988**, *52*, 2–22. [\[CrossRef\]](#)
51. He, H.; Li, Y. Key service drivers for high-tech service brand equity: The mediating role of overall service quality and perceived value. *J. Mark. Manag.* **2010**, *27*, 77–99. [\[CrossRef\]](#)
52. Akter, S.; Babu, M.M.; Hossain, M.A.; Hani, U. Value co-creation on a shared healthcare platform: Impact on service innovation, perceived value and patient welfare. *J. Bus. Res.* **2022**, *140*, 95–106. [\[CrossRef\]](#)

53. Zhu, Y.; Wei, Y.; Zhou, Z.; Jiang, H. Consumers' continuous use intention of O2O E-commerce platform on community: A value co-creation perspective. *Sustainability* **2022**, *14*, 1666. [\[CrossRef\]](#)
54. Jeong, Y.J.; Song, Y.U. A study on the factors affecting the intention to use O2O services. *J. Inf. Technol. Serv.* **2016**, *15*, 125–151. [\[CrossRef\]](#)
55. Ha, H.Y.; Kitchen, P.J. Positive crossover loyalty shifts or negative temporal changes? The evolution of shopping mechanism in the O2O era. *Eur. J. Mark.* **2020**, *54*, 1383–1405. [\[CrossRef\]](#)
56. Lin, M.; Ma, L.; Ying, C. Matching daily home health-care demands with supply in service-sharing platforms. *Transp. Res. Part E Logist. Transp. Rev.* **2021**, *145*, 102177. [\[CrossRef\]](#) [\[PubMed\]](#)
57. Ferhatoglu, M.F.; Kartal, A.; Ekici, U.; Gurkan, A. Evaluation of the reliability, utility, and quality of the information in sleeve gastrectomy videos shared on open access video sharing platform YouTube. *Obes. Surg.* **2019**, *29*, 1477–1484. [\[CrossRef\]](#) [\[PubMed\]](#)
58. Ozturk, A.B.; Bilgihan, A.; Nusair, K.; Okumus, F. What keeps the mobile hotel booking users loyal? Investigating the roles of self-efficacy, compatibility, perceived ease of use, and perceived convenience. *Int. J. Inf. Manag.* **2016**, *36*, 1350–1359. [\[CrossRef\]](#)
59. Won, J.; Kang, H.; Kim, B. The effect of food online-to-offline (O2O) service characteristics on customer beliefs using the technology acceptance model. *Culin. Sci. Hosp. Res.* **2017**, *23*, 97–111.
60. Berry, L.L.; Seiders, K.; Grewal, D. Understanding service convenience. *J. Mark.* **2002**, *66*, 1–17. [\[CrossRef\]](#)
61. Teo, A.C.; Tan, G.W.H.; Ooi, K.B.; Hew, T.S.; Yew, K.T. The effects of convenience and speed in m-payment. *Ind. Manag. Data Syst.* **2015**, *115*, 311–331. [\[CrossRef\]](#)
62. Lai, P.C.; Liew, E.J. Towards a cashless society: The effects of perceived convenience and security on gamified mobile payment platform adoption. *Australas. J. Inf. Syst.* **2021**, *25*. [\[CrossRef\]](#)
63. Rasidi, W.A.R.; Tiarawati, M. The effect of convenience and trust on online purchasing decision. *J. Bus. Manag. Rev.* **2021**, *2*, 531–543. [\[CrossRef\]](#)
64. Choi, S.G.; Choi, H.G. The effect of O2O platform quality on relationship quality and personal behavior value. *Int. J. Adv. Cult. Technol.* **2019**, *7*, 86–95.
65. Ren, J.; Yang, J.; Zhu, M.; Majeed, S. Relationship between consumer participation behaviors and consumer stickiness on mobile short video social platform under the development of ICT: Based on value co-creation theory perspective. *Inf. Technol. Dev.* **2021**, *27*, 697–717. [\[CrossRef\]](#)
66. Chi, Y.; Kang, M.; Han, K.; Choi, J. A study on the discontinuance intention on O2O commerce: With a focus on the mediating effects of perceived risk and user resistance. *Int. J. U- E- Serv. Sci. Technol.* **2016**, *9*, 207–218. [\[CrossRef\]](#)
67. Pei, Y.; Xue, W.; Yang, Y.; Li, D.; Li, Y. The Impacts of user experience on user loyalty based on O2O innovation platform. *J. Electron. Commer. Organ.* **2019**, *17*, 79–87. [\[CrossRef\]](#)
68. Chun, Y.K.; Kim, M.J.; Ko, S.J.; Lee, S.K. Effects of sports O2O platform's service quality on platform attitude, satisfaction, and behavioral intention of platform users. *J. Korean Soc. Sports Sci.* **2019**, *28*, 463–478.
69. Lee, J.K.; Choi, Y.; Lim, E.; Kim, Y.; Ahan, S.; Kim, M. A Study on Factors Affecting Vender's Continuous Use Intention in O2O Delivery App Platform Service. *J. Inf. Technol. Serv.* **2021**, *20*, 13–31.
70. Xin Ding, D.; Hu, P.J.H.; Verma, R.; Wardell, D.G. The impact of service system design and flow experience on customer satisfaction in online financial services. *J. Serv. Res.* **2010**, *13*, 96–110. [\[CrossRef\]](#)
71. Choudhury, V.; Karahanna, E. The relative advantage of electronic channels: A multidimensional view. *MIS Q.* **2008**, *1*, 179–200. [\[CrossRef\]](#)
72. Moon, Y.; Armstrong, D.J. Service quality factors affecting customer attitudes in online-to-offline commerce. *Inf. Syst. E-Bus. Manag.* **2020**, *18*, 1–34. [\[CrossRef\]](#)
73. Byeon, S.H. A Study on the consumer disputes and protection measures of the digital healthcare market and O2O service. *J. Arbitr. Stud.* **2020**, *30*, 121–138.
74. Satti, F.A.; Ali, T.; Hussain, J.; Khan, W.A.; Khattak, A.M.; Lee, S. Ubiquitous Health Profile (UHP): A big data curation platform for supporting health data interoperability. *Computing* **2020**, *102*, 2409–2444. [\[CrossRef\]](#)
75. Pan, Y.; Wu, D.; Olson, D.L. Online to offline (O2O) service recommendation method based on multi-dimensional similarity measurement. *Decis. Support Syst.* **2018**, *103*, 1–8. [\[CrossRef\]](#)
76. Tsai, T.M.; Yang, P.C.; Wang, W.N. Pilot study toward realizing social effect in O2O commerce services. *LNCS* **2013**, *8238*, 268–273.
77. Gupta, A.K.; Mann, K.S. Sharing of medical information on cloud platform—A review. *IOSR J. Comput. Eng.* **2014**, *16*, 8–11. [\[CrossRef\]](#)