STRADA Jurnal Ilmiah Kesehatan
DOI: 10.30994/sjik.v10i1.672
ISSN: 2252-3847 (print); 2614-350X (online) Vol.10 No.1 May 2021 Page. 561-576

Examining the Implementation of the Android Based Outpatient Online Queuing System

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ABSTRACT
This study aims to determine the implementation of the android-based online outpatient queuing system at the UPTD Bali Mandara Eye Hospital. To achieve the research objectives, a qualitative method with a phenomenological approach through in-depth interviews was used. The interviews involved 12 informants consisting of two registration staff, eight patients or users of online queues, the Head of the SIMRS Unit, and the Head of the SIMRS Subdivision and Hospital Reporting as well as triangulation. The informants were chosen based on the Purposive Sampling technique. This study uses a modified Technology Acceptance Model (TAM) theory. The data were analyzed through the coding process, determining the theme, and visualizing the data assisted by Nvivo software to help researchers understand the study context. Based on the results of this study, it can be seen that the use of the online queuing system is still not optimal. It is because there are not many patients who know about the system, and they are not interested in using the online queuing system. After all, most of the patients who seek treatment are elderly who do not understand the technology, and many prospective patients come from rural areas that have some difficulty with an internet connection, moreover, the community has a habit of registering for the services manually. These factors make the existence of an online registration system insignificant. The findings of this study can be used as a valuable reference for hospital management to understand the factors that need to be considered to achieve a more effective application of an online queuing system. Although this research was conducted in the context of the hospital, the proposed model has the potential to be applied to other types of industries that have efforts to implement an online queuing system.

Keywords: Online Queue, Outpatient, Android, TAM Theory, Nvivo

Received January 13, 2021; Revised February 25, 2021; Accepted March 25, 2021

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ISSN: 2252-3847 (print); 2614-350X (online) Vol.10 No.1 May 2021 Page. 561-576

BACKGROUND

Today, almost everyone asks for more productive public services, one of which is health services in hospitals. Hospitals as health service providers must be able to follow the growing demands of the community by providing good health services. Currently, the phenomenon that occurs in the community is that the level of public awareness of the importance of health is getting higher, the public awareness of using existing health facilities provided by health service providers is increasing, and now people want everything to be fast. So far, the conventional queuing system is considered to be less effective and less efficient. Queuing conventional methods forces prospective patients to come to the hospital early in the morning to pick up the queue number and immediately register at the registration counter. Long queues do not only cause inconvenience for patients because they have to wait for a long time to be called according to their queue number, but it can also cause inconvenience for officers who are serving the patients.

The advancement of science and technology, especially information technology, has an important function for hospitals. The information system of hospitals can encourage the increase of efficiency and effectiveness of services in hospitals. The convenient access to information provided by the hospital will increase patient satisfaction. Hospitals must continue to prepare themselves to adjust to the changing times and take opportunities by making innovations. Hospitals must also be able to use existing technology to compete with other hospitals. The minimum hospital service standard states that the outpatient waiting time should not be more than 1 hour (Minister of Health Decree Number: 129 / Menkes / SK / II / 2008).

The research conducted by (Laeliyah (2017), Torry (2016), and Bustani (2015) stated that the queuing waiting time in the conventional queuing system greatly affects the level of patient service satisfaction. It cannot be denied that conventional queuing systems tend to cause inconvenience to the patients who need treatment. Therefore, the existence of this online queuing system can help to make queues more organized and fun, and it can be accessed from cellphones.

The UPTD of Bali Mandara Eye Hospital has begun implementing an online-based outpatient registration application service to ease the work of the registration officers and to make it easier for prospective patients who need treatment at the hospital. The technology is used to make work becomes easier, faster, more precise, and so that it can reduce the existing problems. One of the problems that often arise in the medical record section is the length of time for registration, resulting in the accumulation of patients (Solihan, A.A & Budi, S.C 2018). The use of the online queuing system at the UPTD Bali Mandara Eye Hospital is expected to be the answer to the problem of accumulating patients at the registration counter.

This research was conducted from December 2020 to January 2021 and it aims to determine how the implementation of the Android-based outpatient online queuing system at the Bali Mandara Eye Hospital is expected to provide an overview, to provide input and evaluation regarding the implementation of the Android-based outpatient online queuing system.

METHODS

To answer research questions, semi-structured and in-depth interviews were conducted with 12 informants. The informants consist of two registration staff, eight patients or users of the online queuing system, the Head of the SIMRS Unit and the Head of the SIMRS Subdivision and Hospital Reporting as well as triangulation. The informants were chosen based on the purposive sampling technique. The list of interview questions was built based

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on the Theory of Acceptance Model. Generally, the questions asked about the perceptions of the usability, perception of the convenient use of the current system, the intention to use an online queuing system, facilities and infrastructure, obstacles that are often faced, and follow-up efforts made to overcome the obstacles to implementing the online queuing system. The questions intend to explore the extent of the informants' experience in implementing the online queuing system. Interviews were conducted with an average duration of 30 minutes, recorded, and then the audio data were transcribed.

Data collection to answer research questions was carried out using the triangulation method through various methods such as in-depth interviews, observation, and studying hospital documents. The participatory observation method was carried out with the researcher that was involved in the daily activities of the person being observed or who is used as a source of research data. While making observations, researchers participate in doing what the data sources are doing and feel the joy and sorrow (Sugiyono (2020: 106)).

In this study, the process of collecting and processing data was assisted by using the qualitative research data analysis software, namely Nvivo. All data is inputted into the Nvivo application, then the data is coded and grouped according to major themes to describe the issues under study. Nvivo helps guide researchers to understand data by visualizing the research attributes with existing features, meanwhile, in presenting the research result, it displays important quotes as references. According to Bandur (2016), the qualitative data management process in NVivo is very important to analyze qualitative data effectively and efficiently. The process of collecting and processing data using QSR Nvivo software are (1) transcription; (2) data organization; (3) Coding (Coding) and Nodes; (4) Frame Work Matrices.

RESULTS

The results obtained eight themes describing the implementation of an android-based online outpatient queuing system at Bali Mandara Eye Hospital, including: (1) System usefulness of 15.44%, (2) System Ease of Use (ease of use of the system).) 14.14%, (3) System Implementation (system implementation) of 13.71%, (4) Online Application (online application) of 13.42%, (5) Actual System Use (actual system use) of 12 , 27%, (6) Behavioral Intention to Use is 10.82%, (7) Facilities and Infrastructure is 10.53%, (8) Obstacle is 9, 67%. The following is an explanation of each theme as shown in Figure 2, the following data nodes can be explained:

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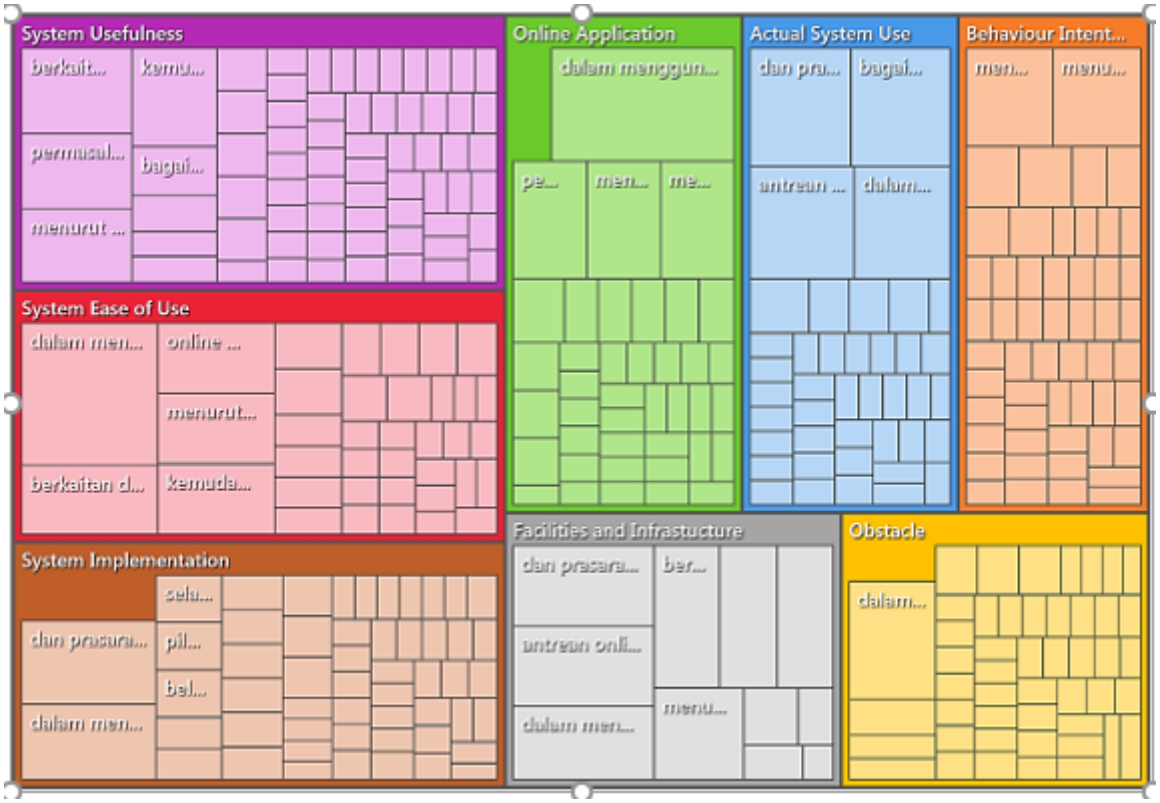

Figure 1. Themes of the result of study

1. System usefulness

In general, there are three main codes identified regarding the perceptions of the usefulness of the online queuing system by informants, namely: making work easier, making work faster, increasing effectiveness, and improving work quality.

Make works easier

Informants in this study tend to identify the use of online queuing systems to simplify work. As stated by informant 1 as follows:

> *"Yes, online queuing can make my job easier, because before online queuing was implemented, all patient registrations went through the registration counters, so patients piled up, and the line was long at the registration counter. now with this online queue, most patients are already using online queues to register, so it is reducing the long queues at registration counters "(RSL).* A similar statement was also conveyed by Informant 2 *"My job has become lighter because the online queuing system can reduce long queues at registration counters" (AWD).*

Make works faster

Given a large number of patient visits every day, it is not surprising that patient registration officers say the online queuing system makes work much faster, such as the following statements from Informant 1 and Informant 2:

> *"Yes, of course, it can speed up our work, because the registration does not need to go through the registration counter, they are already divided. The patients just have to choose whether they want to use the online queue, register at an independent office, or register via the counter. However, for new patients, surgery patients, inpatients, and LASIK patients still have to go through the registration counter*

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"(RSL). Informant 2 also felt making work faster, as stated below: *"Yes, because before the implementation of online queuing system the work was rather slow because when there were many patients, all registering processes had to go through the counter and that was where the officers felt overwhelmed, causing long patient waiting times. However, after this online queuing system exists, the work can be lighter because some patients have chosen to use the online queuing system and independent platforms provided by the hospital "(AWD).*

Increase effectiveness

The impact of the implementation of the online queuing system was explained by the registration officer, they mentioned that the online queuing system could increase effectiveness. As explained by Informant 1;

"The application of online queues is very effective because it speeds up the work of officers in registering patients and shortens patient waiting times" (RSL). The same thing was conveyed by informant 2 as follows *"Yes, it is very effective because it helps officers in registering patients so that patients do not have to wait long" 2 (AWD)*

Increase work quality

With the perceived convenience, such as being able to see patient data who will visit the hospital before they come to the polyclinic, and being able to prepare the patient's medical record file earlier before the patient arrives, it certainly provides a better quality of work for the respondent, as conveyed by informant 1 below:

"The online queuing system is very useful in my job because it can reduce patient queues, speed up the patient registration process, shorten patient waiting times, and medical record files can be prepared in advance so patients don't have to wait long" (RSL).

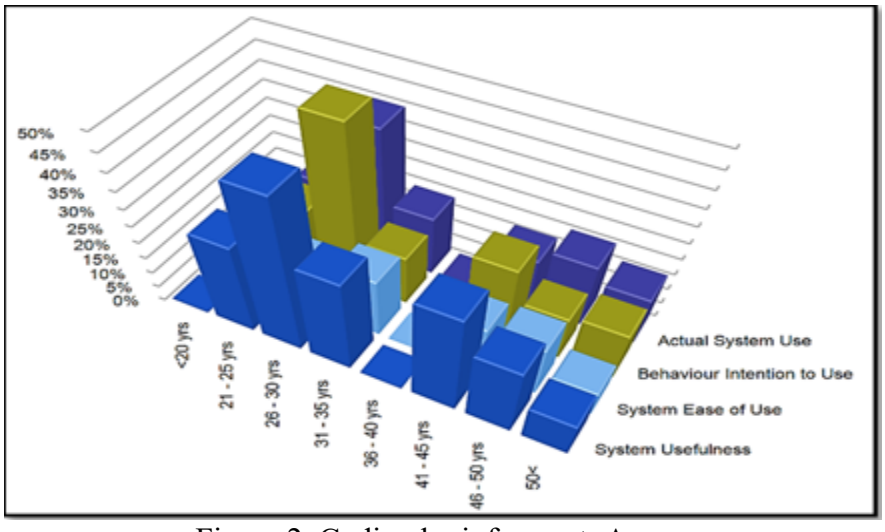

Figure 2. Coding by informant: Age

Figure 3 above shows that the majority of informants provide more statements or information about the benefits obtained in using the online queuing application system. The age of the informants who provided the most information about the perceived benefits of using the online application was from the ages of 21 to 30 years. This is reasonable because

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this age is categorized as the age that is most receptive to the development of internet technology. Those vulnerable at this age who have not used the application also indicate their strong desire to use the application, this is stated in the nodes "Behavior Intention to Use" a green colored block where this node is the second node with the largest percentage, which is 26% from the total of the four nodes. Furthermore, the nodes with the third-largest percentage are the "Actual System Use" nodes where informants provide direct information about how to use the online application system.

2. System Ease to Use

Regarding the ease of use of the system felt by informants as users of the online queuing system, they could experience the ease of learning and ease of use.

Ease of learning

The user feels the ease of learning when using this online queuing system application as conveyed by the following informant 6:

"The application is very easy to learn, especially because every day you are used to using an Android cellphone" (RYN). The same thing was conveyed by informant 7 as follows: *"yes, it is very easy to learn and it is very practical, especially if you are familiar with using an android cellphone" (NNS)).*

Ease of use

Ease of use application online queue is perceived by informants as conveyed Informant 3 below:

"It's very easy because I often use an Android phone to try applications other than online queues" (ISN).

Similar information also conveyed by Informant 4:

"It's very easy, the users only need to understand and become familiar with it. Especially about the convenience obtained from how to use the application, this is the most important "(AEA). Informants 10 also mentions *"Yes simple application is very easy to learn and use" ((PAS).*

3. System Implementation

The implementation of the online queuing system at the UPTD Bali Mandara Eye Hospital is intended for people who will visit the eye polyclinic, both new and old patients. The goals of implementing this online queuing system are following the statement conveyed by informants 11 as follows:

"All people who will visit the eye polyclinic, both new and old patients" (KUSI).

For new patients, after making online bookings, prospective patients must still return to the registration counter to complete patient social data, provide an explanation of general consent and make a medical record by the registration officer. Registration of new patients is done at a different counter to the old patient so that new patients can be served immediately. For the old patients, since the hospital already has a history of disease records, both identity and others, so the officers can process the registration faster than registration for new patients.

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4. Online Application

The presence of this online queuing application helps to speed up the patient registration process. This is following what was conveyed by informant 1 as follows:

> *"The online queuing system is very useful in my job because it can reduce patient queues, speed up the patient registration process, shorten patient waiting times, and medical record files can be prepared in advance so the patients don't have to wait for long" (RSL).*

The presence of an online queuing application helps users of online queues in registering because it can shorten service time, the patients don't have to wait for too long to register, and the registration can be performed everwhere. This is following what was conveyed by informant 2 as follows:

> "*Yes, because the online queuing system can shorten the service time of the first patient for patients who have high mobility" (AWD).* This is also in line with what was conveyed by Informant 4: *"Time efficiency because it greatly reduces waiting time" (AEA).*

However, the use of the online queuing system at the UPTD Bali Mandara Eye Hospital has not been optimal. This can be seen from the number of uses of Hidok or the online queuing system from the start of its implementation in August 2020 to January 2021 that is still small. This can be seen from the following table:

Table 1. Number of Online Queuing System Usage

Month	Total Visits	Visits using Hidok/ *Online Queuing*	Percentage of Hidok / Online Queueing Usage (%)
August	2236	82	3.67
September	1951	12	0.62
October	2455	433	17.64
November	2507	360	14.36
December	2643	756	28.60
January	2624	666	25.38
TOTAL	14.416	2.309	6.24

Source: UPTD Medical Records Unit Bali Mandara Eye Hospital

Actual System Use

The flow of using the online queuing system starts from potential users downloading the Hidok application on the Android mobile play store. The flow of the use of this queuing system refers to the standard operating procedures (SOP) in the UPTD Bali Mandara Eye Hospital, as conveyed by informant 2 as follows:

> *"The way to use the online queuing system is by downloading the Hidok application via the Playstore on an Android cellphone, make online bookings from D-7 to H-1 before 12.00 WIB, choose the BPJS / non-BPJS (Healthcare and Social Security) payment method, select the name of the hospital, enter the card number / Referral number for BPJS patients, choose the name of the intended doctor according to the schedule, the patient will get a barcode, arrive at the hospital The patient scans the*

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barcode on the bridge machine (Kios-K), then the patient goes straight to the destination polyclinic/doctor "(AWD). A similar statement was also conveyed by informant 11 as follows: *the online queue flow, namely the patient downloads the Hidok application in the play store, open the Hidok application, select BPJS / General, for BPJS Patients: Input the name of the hospital, Input the BPJS Card Number then select the date of the plan to visit, for General patient: Input the name of the hospital and select the Polyclinic and select the date of the planned visit, then select the intended doctor, the patient gets the booking code, QR Code, and queue number "(KUSI).*

5. Behavior intention to use

The number of conveniences obtained from using an online queuing system such as its easy and practical use, saving time and energy, no need to queue for a long time so the users who have used this online queuing system can choose to continue using the online queuing system if they will visit the polyclinic at UPTD Bali Mandara Eye Hospital. This is following what was conveyed by informant 4 as follows:

"The online queuing system is a new way and a very good breakthrough for dealing with heavy queues when everyone (the patients) is coming at the same time. The first time I used this online queuing system during a check-up at a private hospital, and it proved to be very efficient, because I didn't have to come too early, and I didn't have to wait for the long queue, because the service flow was very efficient. Because of this experience, I went to the Eye Hospital (Eye Hospital) and chose to use an online queue, because it was simple, practical, effective, no need to wait long for treatment "(AEA).

The behavioral intention to continue to choose to use the online queuing system when the patients revisit or for the subsequent control to the UPTD Bali Mandara Eye Hospital can be seen from the statement of informant 4 as follows:

"I have been around for the last 3 years in a private hospital, in here in the eye hospital, I have used it for about 10 times, starting from the first time I checked here until I got surgery and control using online queues "(NNS). The same thing was conveyed by informant 8 as follows: *"I have used this online queue for control for the fifth time" (NKA)*

6. Facilities and Infrastructure

To implement the online queuing system, adequate facilities and infrastructure are needed to support the smooth implementation process. Based on the results of interviews with 12 (twelve) informants, all informants stated that they needed an android mobile phone, data package, and internet network to register online as mentioned by informant 1 as follows:

"*Facilities: Android mobile phone, mobile data, internet network, hidok application, leaflet, banner, infrastructure: Hospital building, independent platform machine, online queue usage manual (SOP)*" (RSL). The same thing was also conveyed by informant 2, "*Facilities: Android mobile phone, have the hidok application (online queue), leaflet, mobile data, internet network available, medical cards and Bpjs card and referral. Infrastructure: independent platform/ Kiosk-K machine*" *(AWD).* A similar opinion was also conveyed by informant 7, who requires "*Android mobile phone, hidok apps, signal, and of course mobile data*" (NNS*).*

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7. Obstacle

In the practice of the online queuing system, several obstacles were found to be the resistor of the use of the online queuing application, namely that most of the patients seeking treatment were elderly who did not understand how to make an online booking and patients who went to the UPTD Rumah Sakit Mata Bali Mandara mostly came from rural areas constrained by the internet network. The obstacles and the problems that were often faced by registration officers related to the use of the online queuing system application are as follows as conveyed by informant 1:

> "*There are several obstacles such as patients who do not know their medical record number registering through the online queuing system using new registration; the data in the application filled by the patient is incomplete so that the patient does not get a booking number; the patient does not know the name of the doctor they met before; and for BPJs patients, referrals of the patient did not match the subdivision or the name of the previous doctor so that the barcode scan at the platform is failed. Besides that, there are obstacles in the community, they are do not understand how to use technology related to the internet. Most of the patients at the Rumah Sakit Mata Bali Mandara are elderly who are no longer able to use technology to register online so that there are often errors on the online registration*". (RSL). The same thing was also expressed by Informant 2 as the registration officer: "*The patient does not know the name of the doctor they met before so that when registering for the next check-up, the patient randomly choose the available doctor in the online queue system; the data filled by patients in hidok apps are not complete so that they do not receive the booking number so that when the patient arrives at the hospital the barcode scan at the standalone platform fails/error; the BPJS patient referral is not in accordance with the intended subdivision; and not many patients know about the online queuing system* "*Hidok*"*; and there are many patients who do not understand how to use the online queuing system because most of the patients seeking treatment at the Rumah Sakit Mata Bali Mandara are elderly who cannot use technology to make online bookings* " (AWD).

Project Map Obstacle Nodes

Based on the results of the project map from the nvivo 12 plus program, which is focused on the main obstacle nodes, several sub-nodes are found. They are really influencing factors in hindering the implementation of the online/hidok queuing application system as shown below.

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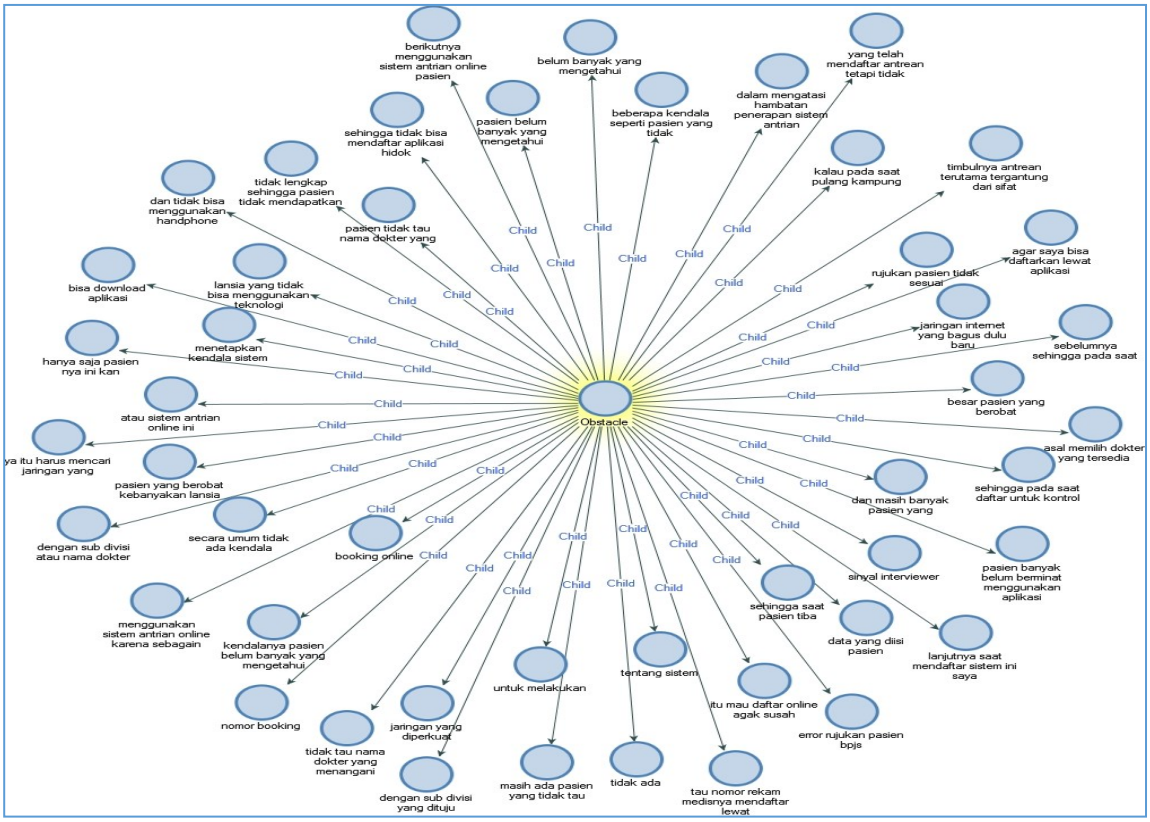

Figure 3. Project Map of Obstacle Nodes

Based on the results of interviews with users of the online queuing system related to problems in using the online queuing system from 8 (eight) informants, there were 4 (four) informants who experienced problems using this online queuing system, as mentioned by informant 6 as follows:

> "*Sometimes when I return to my hometown, it is rather difficult to register online because it is constrained by the internet network. I need to find a good internet network first, then I can register*" (RYN). The same thing was conveyed by informant 7 "*Yes, there is no signal available*" *(NNS).*

Besides the problem of the internet network or the poor signal, some informants stated that the patient did not have an Android mobile phone as conveyed by the informant 9:

> "*The problem is I don't have an Android mobile phone so I can't register through the Hidok application*" *(FAR).* The same thing was conveyed by informant 10 as follows: "*In general there are no problems, it's just that my uncle is elderly and cannot use a mobile phone so when he wants check-up, I register him. Fortunately, now this online queuing system is available, it really helped me to register him*" (PAS).

Based on the results of the interview with informants as managers and person in charge of the online queuing system, they were stated that there are still many patients who did not understand the online queuing system as conveyed by the informant 11:

> "*Not many patients know about Hidok and many are not interested in using the online booking application*" *(*KUSI*).* The same thing was also conveyed by informant 12 as the Head of the Sub Division of Reporting and Hospital Management Information

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System (SIMRS) as well as data triangulation that "*The problem is that many patients do not understand about Hidok or this online queuing system and there are still many patients who have not been able to download the Hidok application at playstore because most of the patients are elderly*" *(KSBSI).*

Based on the results of the text search query above, it can be seen that in the process of implementing and accepting the use of online queuing applications, the researcher focuses on the variables that affect the technology acceptance model. These variables are System Ease of Use, System Usefulness, Behavior intention to use, and Actual system use which are the dominant main nodes obtained from internal and external sources and can be seen in the explore comparison diagram in Figure 5 below.

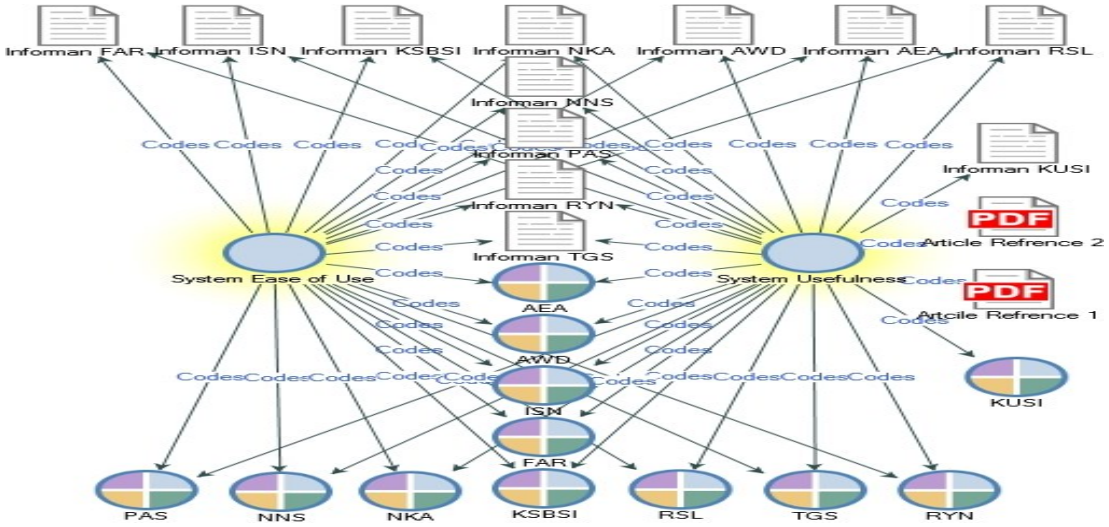

Figure 4. *Project Map of Obstacle Nodes*

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DISCUSSION

This study indicates that patients as users of the online queuing system have a positive perception of the use of this online queuing system. From the explanations given by the informants regarding the use of this queuing system, they described the implementation of the Android-based outpatient online queuing system could provide useful benefits such as how this online queuing system could make work easier, make work faster, could increase effectiveness, and improve quality of work. The results are similar to research conducted by (Davis 1989) where perceived benefits are the degree to which a person believes that particular use of technology will improve the person's work performance. Thompson (1991) in Jin (2003) states that individuals will use information technology if they know the positive benefits of its use.

The age of the informants who provide the most information about the perceived benefits of using the online application was from the ages of 21 to 30 years. This is reasonable because this age is categorized as the age that could accept the development of internet technology and at this range of age, those who have not used this online queuing application also have a strong desire to use the application for their next visit.

The informants of this study also mentioned that the use of the online queuing system provides many benefits and convenience in using the online queuing system at the UPTD Rumah Sakit Mata Bali Mandara. The convenience includes ease of learning and ease of use. This is in compliance with research conducted by (Davis, 1989), which states that perceived ease of use is the level at which someone believes that technology is easy to understand. According to Cresswell et al., (2013) technology must be able to be used by users in the sense that it does not inconvenience the patient or the user and there are special benefits for patients, the technology also does not slow down service delivery to patients. This is in compliance with research conducted by (Alharbi & Drew, 2014), where when users think technology is easy to use, they will develop a positive attitude to take advantage of it.

With the online-based queuing system that is connected to SIMRS, prospective patients will be able to access this online queue via website or Android-based mobile phone, anywhere. This is very helpful for patients in carried out registering because patients do not need to come directly to the hospital to take a queue number and register, patients do not need to wait long so that patients can use the time to do other activities. The same thing was conveyed in the study conducted by (Nugroho, B.S, Hariani, D. (2018)) which stated that the services obtained by patients using online queues were claimed to be better than patients who registered offline. This is in compliance with the principle of transparency, where a public service must be open and easy to use by the recipient of innovation, the community.

Directorate General of Health Services (Ditjen Yankes) has developed an online or mobile-based queuing system. This system is useful in helping people to get queue numbers via Android-based mobile phones. The flow of patient registration at the hospital is divided into 3 lines, patients coming directly, reservation via SMS gateway, and online reservation via android or website. The flow of the online queuing system at the UPTD Rumah Sakit Mata Bali Mandara is not much different from the technical guidelines from the Directorate General of Health Services, the patient registers according to the guarantee used. Registration is divided into two, National Health Insurance (JKN) patients and general patients. General patients and JKN send the format and other requirements as needed.

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This research strengthens previous research conducted by Nugroho, BS, Hariani, D. (2018) at RSUD K.R.M.T Wongsonegoro, Semarang City, which states that there are still administrative barriers that come from citizens who still do not understand how to input personal data and other things needed to online registration and many do not understand this online registration innovation because there are several citizens who do not understand technology use related to the internet. Most of the registrants are elderly who are no longer able to use internet technology to register online. The majority of patients at the UPTD Rumah Sakit Mata Bali Mandara are elderly who are no longer able to use technology to make online bookings so that errors in online bookings often occur, and when the patient arrives at the hospital barcode scanning at the standalone platform is failed because the data filled by patients in the online queue application is incomplete so the patient does not receive a booking number, not many patients know about the online queuing system and some patients don't understand how to use the online queuing system.

Although the results of interviews with users of the online queuing system state that the use of the online queuing system provides many benefits and ease of use, in general, this study illustrates that the implementation of the Android-based outpatient online queuing system at the UPTD RS Mata Bali Mandala has not been optimal. This is because not many patients know about the online queuing system and many are not yet interested in using online booking applications. This could be seen from the low number of patient visits using the online queuing system. The community is accustomed to registering manually by coming directly to the hospital rather than carrying out various service activities through the online system provided by the hospital. This is in compliance with research conducted by Afdoli, A.A & Malau, H. (2019) states the lack of public knowledge about the use of the online queuing system is due to the lack of public knowledge about outpatient online queuing system services. The habit of manual registering services makes the existence of an online registration system not too significant. This could be seen from the many queues at the patient registration counters. Whereas, the online outpatient queuing system will facilitate registration activities at the hospital. Some people, especially the elderly, are still reluctant to switch to online services because manual registration has become a habit.

According to Nugroho, B.S, Hariani, D. (2018), with the provision of independent platforms and means for conducting promotions related to online registration innovations, such as making brochures, promotion via TV screens in the hospital waiting room, and social media owned by RSUD K.R.M.T Wongsonegoro, Semarang City could reduce long line at registration counters. The same thing was conducted in this study where the provision of independent platforms is very effective in helping prospective patients who come directly to the hospital to register to reduce queues at the registration counter. In addition, direct socialization in the patient waiting room, socialization using loudspeakers and tv screens in the patient waiting room or through social media such as Facebook, Instagram, website owned by the UPTD Rumah Sakit Mata Bali Mandara, making brochures and banners related to the use of the online queuing system, also as a follow-up effort carried out by the hospital regarding current problems, with the hope that this method could grow the intention of prospective patients at the UPTD Rumah Sakit Mata Bali Mandara to switch from a conventional queuing system to the online one to reduce long line at the registration counter.

CONCLUSION

This study indicates the importance of implementing an online queuing system implemented in hospitals, especially during the Covid 19 pandemic today to reduce long lines and crowds of prospective patients at registration counters, to improve the quality

DOI: 10.30994/sjik.v10i1.672
ISSN: 2252-3847 (print); 2614-350X (online) Vol.10 No.1 May 2021 Page. 561-576

standards of outpatient registration, and increase patient satisfaction. The findings on the application of this online queuing system were that the use of an online queuing system was not optimal, because not many patients were aware of and were not interested in using an online queuing system because most of the patients were elderly who do not understand technology; and many prospective patients come from rural areas that constrained by the poor internet network; and the habit of manual registration services make the existence of an online registration system not too significant.

This research has a contribution to hospitals that are currently implementing an online queuing system in their operations. To increase understanding in the application of the online queuing system, it requires support from users of the online queuing system and the hospital, both leaders and staff, regarding this online queuing system.

Efforts to conduct socialization on social media, counseling in patient waiting rooms, and making brochures and banners about the online queuing system to make it easier for prospective patients to understand the use of this online queuing system are expected to foster the behavioral intention of prospective patients to choose the online queuing system when visiting a hospital and helping the hospital to increase their rate of success in implementing online queuing systems.

CONFLICTS OF INTEREST

The authors have no conflicts of interest to disclose.

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